Primary Six
Examination Papers

2016

Mathematics

1	**Nanyang Primary School**	CA1	SA1	SA2
2	**Nan Hua School**	CA1	SA1	SA2
3	**Rosyth School**	CA1	SA1	SA2
4	**Chij St Nicholas Girls' School**	CA1	SA1	SA2
5	**Anglo Chinese School**	CA1	SA1	SA2
6	**Raffles Girls' Primary School**		SA1	SA2
7	**Tao Nan School**		SA1	
8	**Henry Park Primary School**		SA1	SA2
9	**Catholic High School**		SA1	SA2
10	**Red Swastika School**		SA1	SA2
11	**Singapore Chinese Girls' School**		SA1	SA2
12	**Pei Hwa Presbyterian Primary School**		SA1	SA2
13	**Methodist Girls School**			SA2
14	**Christian Brothers' School**			SA2
15	**Pei Chun Public School**			SA2
16	**St. Hilda's School**			SA2

NANYANG PRIMARY SCHOOL

FIRST CONTINUAL EXAMINATION 2016

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	/ 20
Booklet B	/ 20

Paper 1 Total:
/ 40

Name: _____ (   )

Class: Primary 6 (   )

Date: <u>3 March 2016</u>

Any query on marks awarded should be raised by <u>11 March</u>. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's Signature: _____

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.

YOU ARE **NOT** ALLOWED TO USE A CALCULATOR.

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

1   Simplify $8a + 17 - 3a - 12$.

    (1) $5a - 5$

    (2) $5a + 5$

    (3) $5a + 29$

    (4) $11a + 5$

2   What is the value of $200 \div 2000$?

    (1)   1

    (2)   0.1

    (3)   0.01

    (4)   0.001

3   What is the value of $49 - 9 \times 2 + (16 + 24 + 8)$?

(1)   36

(2)   47

(3)   50

(4)   85

4   Which one of the following fractions is an equivalent fraction of $\frac{8}{6}$?

(1) $\frac{6}{5}$

(2) $\frac{10}{8}$

(3) $\frac{12}{9}$

(4) $\frac{15}{10}$

2

5 Find the value of $\dfrac{2}{5} - \dfrac{1}{3}$.

(1) $\dfrac{1}{15}$

(2) $\dfrac{3}{8}$

(3) $\dfrac{1}{2}$

(4) $\dfrac{11}{15}$

6 Find the value of $\dfrac{5}{9} \times 4$.

(1) $\dfrac{5}{36}$

(2) $\dfrac{9}{20}$

(3) $\dfrac{36}{5}$

(4) $\dfrac{20}{9}$

3

7   Find the value of 60.9 – 4.38.

   (1)   55.62

   (2)   56.52

   (3)   56.68

   (4)   65.28

8   Express $28 as a percentage of $7000.

   (1)   0.004 %

   (2)   0.04 %

   (3)   0.4 %

   (4)   4 %

9   Find the average of the following numbers.

   $$45 \quad , \quad 0 \quad , \quad 45 \quad , \quad 38 \quad , \quad 12$$

   (1)   28

   (2)   35

   (3)   38

   (4)   45

4

10   A bottle contained $\frac{2}{9}$ litre of syrup. All the syrup was poured equally into 3 empty cups. How much syrup was there in each cup?

(1) $\frac{2}{27}$ litre

(2) $\frac{2}{3}$ litre

(3) $1\frac{1}{2}$ litres

(4) $3\frac{2}{9}$ litres

11   Find the value of $16 \div 40 \times 200$.

(1)   0.002

(2)   0.008

(3)   20

(4)   80

12 The table below shows the marks obtained by 4 pupils in Test 1 and 2.

Name	Test 1	Test 2
Tarita	80	92
Gwen	80	68
Olivia	80	60
Si Hui	80	100

Which pupil has her marks increased by 25% in Test 2 as compared to Test 1?

(1) Tarita

(2) Gwen

(3) Olivia

(4) Si Hui

13 Nasreen and Kavita baked 4 cakes each. $1\frac{1}{12}$ kg of flour was used for baking each cake. What was the total mass of flour used by both girls?

(1) $1\frac{1}{3}$ kg

(2) $1\frac{2}{3}$ kg

(3) $4\frac{1}{3}$ kg

(4) $8\frac{2}{3}$ kg

6

14   Ronin bought 3 green and 6 red apples.   The average mass of the 9 apples was 80 g.   The average mass of the 3 green apples was 60 g. Find the total mass of the 6 red apples.

(1)   20 g

(2)   90 g

(3)   540 g

(4)   660 g

15   P and Q are whole numbers.   P is the product of all the common factors of 12 and 20.   Q is the first common multiple of 3 and 8   What is the value of Q + P?

(1)   24

(2)   12

(3)   3

(4)   8

Name: _____(   )   Class: Pr 6 (   )

PAPER 1 (BOOKLET B)

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

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16   Find the value of $10m - \dfrac{4m}{2}$ when $m = 5$.

Ans: _____

---

17   Find the value of $99 \times 6 + 105 + 5$.

Ans: _____

---

18   Round off 49 985 to the nearest thousand.

Ans: _____

8

19 Find the value of $\dfrac{9}{10} \times \dfrac{5}{12}$.

Give your answer as a fraction in its simplest form.

Ans: _____

20 Find the value of $42 \div \dfrac{4}{7}$.

Give your answer as a mixed number in its simplest form.

Ans: _____

21 Which digit in 456.789 is in the tenths place?

Ans: _____

22 Find the value of $540.09 \div 3$.

Ans: _____

23   X is a whole number. 743 is added to X to get 5092. What is the value of X?

Ans: _____

24   There were 600 men and 200 women who took part in a marathon. What percentage of these participants were men?

Ans: _____ %

25   Samad bought a tank. 25% of the capacity of the tank is 350 cm^3. What is the capacity of the tank?

Ans: _____ cm^3

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

26   On a Sunday, Mrs Pang spent 50% of her time at home doing housework. She spent 20% of the remaining time at home baking a cake. She spent 5 h doing housework. How much time did she spend on baking the cake?

Ans: _____ h

27   A jug weighs $\frac{2}{3}$ as heavy as a tank. The tank weighs w kg heavier than the jug. What is the total mass of the jug and the tank in terms of w?

Ans: _____ kg

28 The average mass of Darren and Elvin is 40 kg. The average mass of Darren and Fandi is 36 kg. Find the difference between the mass of Elvin and Fandi.

Ans: _____ kg

29 $\frac{2}{3}$ of a whole number is 20 more than $\frac{2}{5}$ of the same number. Find the number.

Ans: _____

30 One woman can peel 2 apples in 3 minutes. How many apples can 2 women peel in 30 minutes?

Ans: _____

NANYANG PRIMARY SCHOOL

FIRST CONTINUAL EXAMINATION
2016

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	/ 60
GRAND TOTAL	/ 100

Name: _____ ( )

Class: Primary 6 ( )

Date: 3 March 2016

Any query on marks awarded should be raised by 11 March. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's Signature: _____

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PAPER 2

Questions 1 to 5 carry 2 marks each.   Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

---

1   The usual price of a pair of earrings was $1000.   Mrs Lee bought it at a discounted price of $860. What was the percentage discount?

Ans: _____ %

---

2   Mr Lim sold $27\frac{1}{8}$ kg of meat on Monday.   He sold $\frac{3}{4}$ kg less meat on Tuesday than on Monday.   How many kilograms of meat did he sell on Tuesday?

Ans: _____ kg

---

3   Mei bought a ribbon that is 77 cm long.   She cut the ribbon into two pieces such that the length of the longer piece is thrice the length of the shorter piece.   Find the length of the shorter piece of ribbon.

Ans: _____ cm

1

4   A wall measured $\frac{36}{5}$ m by $\frac{15}{8}$ m. $\frac{2}{7}$ of the wall was painted yellow. Find the area of the wall that was painted yellow. Leave your answer as a mixed number.

Ans: _____ m²

5   Leroy has some chocolates. He can choose to give 3 chocolates to each friend and he will have 25 chocolates left. He can also choose to give 9 chocolates to each friend and he will have 1 chocolate left. How many friends does he have?

Ans: _____

2

For questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided.

The number of marks available is shown in brackets [   ] at the end of each question or part-question.

(50 marks)

8   A group of 5 girls competed in a race.   The time taken by each girl to complete the 200-metre race is shown in the table below.

Name of girl	Time taken (s)
Jaya	40.27
Kimberly	33.55
Lynn	38.18
Meera	30.96
Ning	32.14

(a) Round off the time taken, in seconds, by the fastest girl to one decimal place.

(b) Find the difference in the time taken by the girl who came in 3rd and the girl who came in 4th.   Round off this difference to the nearest second.

Ans: (a) _____ [1]

         (b) _____ [2]

3

7   3 erasers cost $2q and 4 pencils cost $4 more than the cost of 3 erasers.
    Kumar bought 6 such erasers and 12 such pencils.

    (a) If $q = 0.6$, what was the total cost of 3 such erasers and 4 such
        pencils?

    (b) Express the total cost of 6 such erasers and 12 such pencils in
        terms of q.

                                        Ans: (a) _____ [2]

                                              (b) _____ [1]

8   Weiming had some pens. He paid an average of 160¢ for the pens.
    He then bought another pen from a stationery store for 240¢ and the
    average cost of all the pens became 180¢. How many pens did he
    have at first?

                                        Ans: _____ [3]

4

9   Mrs Tan bought an oven and was given a discount of 15%. Mr Wong
     bought the same type of oven but was given a discount of 29%. Mrs
     Tan paid $147 more than Mr Wong. The original price of the ovens
     was the same. What was the original price of the oven?

Ans: _____ [3]

10   Cindy had a box of pupilA box contained some apples, oranges and
     pears. There were twice as many oranges as pears. There were 25
     pears. She removed 5 pears and some oranges from the box. The
     number of oranges remained twice as many as the pears. The number
     of apples became three times as many as the oranges. What was the
     total number of fruits in the box at first?

Ans: _____ [3]

11   Mrs Lim bought $5\frac{1}{2}$ kg of nuts. She gave $\frac{5}{6}$ of the nuts to her friends and packed the rest equally into as many small packets as possible. Each small packet contained $\frac{1}{8}$ kg of nuts. What was the mass of the nuts that was left unpacked?

Ans: _____ [4]

12 Mr Muthu worked 40 hours in a certain week and earned a sum of
    money. He gave the entire sum of money to his 15 grandchildren to
    share equally among themselves. One of the grandchildren bought a
    toy car which cost $22.80 with his share of the money and had $47.80
    left.

    (a) How much did each grandchild receive?

    (b) Given that Mr Muthu was paid a fixed salary for each hour of
         work, how much was his hourly pay?

Ans: (a) _____ [1]

      (b) _____ [3]

13   Nora bought some magnets and notebooks. She bought 2 more notebooks than magnets. However, she paid $25.20 less for the notebooks than for the magnets. Each magnet cost $2 more than each notebook. Each notebook cost $2.40.

(a) How many magnets did Nora buy?

(b) How many notebooks did Nora buy?

Ans: (a) _____ [3]

(b) _____ [1]

14 At a fruit stall, Kim paid a total of $21.20 for 600 g of cherries and 500 g of blueberries. Lee paid a total of $9.20 for 200 g of cherries and 300 g of blueberries. Mel bought 300 g of cherries and 100 g of blueberries. How much did Mel pay?

Ans: _____ [4]

15   At first, the ratio of the number of men to the number of women in a fun fair was 4 : 5. When 36 women and some men joined in the fun fair, there was a 12% increase in the number of women and the total number of people was increased by 20%.

(a) How many men were there at first?

(b) What was the percentage increase in the number of men after 36 women and some men joined in the fun fair?

Ans: (a) _____ [2]

(b) _____ [2]

10

16 Mr Raj gave $\frac{2}{9}$ of his salary to his wife and paid $1040 for the household bills. After he gave $\frac{3}{4}$ of the remaining salary to his five children to share equally, he had $\frac{1}{7}$ of his salary left.

(a) Find Mr Raj's salary.

(b) Find the amount of money he had left.

Ans: (a) _____ [3]

(b) _____ [2]

11

17 Amy and Sofia had a total of 450 stamps. Amy gave 40% of her stamps to Sofia. Sofia then gave 25% of her total number of stamps to Amy. In the end, Amy had 270 stamps. How many stamps did Amy have at first?

Ans: _____ [5]

18 At a 2-day workshop, each participant was charged $55 per day. On Day 1, the number of male participants was 60 fewer than the number of female participants. On Day 2, the number of female participants decreased by 20% while the male participants increased by 30%. There were 573 participants on Day 2.

(a) How many participants attended the workshop on Day 1?

(b) All participants were given a 10% discount. What was the total amount paid by all the participants on both days?

Ans: (a) _____ [3]

(b) _____ [2]

END OF PAPER

EXAM PAPER 2016

SCHOOL :NANYANG

SUBJECT :P6 MATHEMATICS

TERM : CA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	2	3	3	1	4	2	3	1	1
Q11	Q12	Q13	Q14	Q15					
4	4	4	3	3					

16)40   17)615   18)50000   19)3/8   20)73½

21)7   22)180.03   23)4349   24)75%   25)1400cm₃

26)1h   27)5W kg   28)8kg   29)75   30)40

Paper 2

1)$1000 – $860 = $140

  $140/$1000 x 100% = 14%

2)T→27$\frac{1}{8}$ – ¾ = 26$\frac{3}{8}$ kg

3)3 + 1 = 4

  77 ÷ 4 = 19.25 cm

4)Total→36/5 x 15/8 = 13½

 Yellow→13½ x 2/7 = $3_{6/7}$ m₂

5)Friends : 1 2 3 <u>4</u> 5 6

    3   : 3 6 9 12 15 18

  +25   28 31 34 <u>37</u> 40 43

    9   : 9 18 27 36 45 54

  -1   10 19 28 <u>37</u> 46 55

     Ans : 4

6)a)30.96 ≈ 31.0 seconds

 b)38.18 – 33.55 = 4.63

   4.63 ≈ 5 seconds

7)a)3e→$2q

  4p→$2q + $4

  3e + 4p→$2q+$2q+$4 = $(4q+4)

  $0.60 x 4 = $2.40

  $2.40 + $4 = $6.40

 b)6e→$2q x 2 = $4q

  12p→($2q+$4) x 3 = $(6q+12)

  6e +12p→$4q+$6q +12 = $(10q+12)

8)180c – 160c 20c

  240c – 180 = 60c

  60c ÷ 20c = 3 pens

9) Mr Tan (pay) → 100 % – 15% – 85%

Mr Wong (pay) → 100% –29% = 71%

$147 → 85% – 71% = 14%

1% → $147 ÷ 14 = $10.50

100% → $10.50 x 100 = $1050

10) Remaining (P) → 25 – 5 = 5

Remaining (O) → 20 x 2 = 40

Apple → 40 x 3 = 120

Orange → 25 x 2 = 50

At first → 50 + 120 + 25 = 195

11) 1 – 5/6 = 1/6

5¼ x 1/6 = 11/12

11/12 ÷ 1/8 = 7

1/8 x 7 = 7/8

11/12 – 7/8 = 1/24 kg

12) a) 1 share → $22.80 + $47.60 = $70.40

b) Total money → $70.40 x 15 = $1056

1h → 1056 ÷ 40 = $26.40

13) N → $2.40

    M → $2.40 + $2 = $4.40

    $25.20 + $2.40 × 2 = $30

    M → $30 ÷ $2 = 15

    N → 15 + 2 = 17

    a) 15 magnets.   b) 17 notebooks.

14) 600g C + 500g B → $21.20

    200g C + 300g B → $9.20

    600g C + 900g B → $9.20 × 3 = $27.60

    400g B → $27.60 − $21.20 = $6.40

    100g B → $6.40 ÷ 4 = $1.60

    $1.60 × 3 = $4.80

    200g C → $9.20 − $4.80 = $4.40

    100g C → $4.40 ÷ 2 = $2.20

    300g C → $2.20 × 3 = $6.60

    300g C + 100g B → $6.60 + $1.60 = $8.20

15) a) 100% + 12% = 112%

    36W → 12% of W

    100% of W → 26/12 × 100 = 300

    300 ÷ 5 = 60

    (at first) → 60 × 4 = 240 men

15)b)Total (at first)→300 + 240 = 540

540/100 x 20 = 108

Men (join)→108 – 36 = 72

72/240 x 100% = 30%

16) ¼ of remaining = 1/7 salary

4/4 of remaining = 4/7 of salary

4/7 = 36/63

2/9 = 14/63

$1040→1 – 36/63 – 14/63 = 13/63

1/63→$1040 ÷ 13 = $80

a)Salary →$80 x 63 = $5040

b)left →$5040 ÷ 7 = $720

17)S (end)→540 – 270 = 180

100% – 25% = 75%

180/75 x 100 = 240

240/100 x 25 = 60

270 – 60 = 210

100% – 40% = 60%

210/60 x 100 = 350 stamps.

18) $60/100 \times 20 = 12$

$60 - 12 = 48$

$573 - 48 = 525$

$10 - 2 = 8$

$10 + 3 = 13$

$13 + 8 = 21$

$525 \div 21 = 25$

$10 + 10 = 20$

$25 \times 20 = 500$

Day 1 → $500 + 60 = 560$

$100\% - 10\% = 90\%$

After dis → $55/100 \times 90 = \$49.50$

Day 1,2 → $560 + 573 = 1133$

$\$49.50 \times 1133 = \$56083.50$

Ans :a)560

b)$56083.50

2

NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 1 – 2016
PRIMARY 6

MATHEMATICS

Paper 1

Section A: 15 Multiple Choice Questions (20 marks)

Section B: 15 Short Answer Questions (20 marks)

Total Time for Paper 1: 50 minutes

INSTRUCTION TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided for Questions 1-15.
6. You are <u>not allowed</u> to use calculator for Paper 1.

Marks Obtained

Paper 1	Booklet A		/ 40
	Booklet B		
Paper 2			/ 60
Total			/ 100

Name : _____ ( )

Class : 6_____

Date : _____   Parent's Signature : _____

Section A (20marks)

Questions 1 to 10 carry 1 mark each.
Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Look at the number line below. What is the value of X?

   (1)   84.7

   (2)   85.2

   (3)   85.4

   (4)   86.6
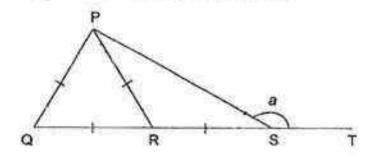
2. Express $\frac{1}{3}$ as a percentage.

   (1) $\frac{1}{3}\%$

   (2) $3\frac{1}{3}\%$

   (3) $33\frac{1}{3}\%$

   (4) $333\frac{1}{3}\%$

1

3. Which one of the following is the same as $\frac{3}{7} \div 4$?

   (1) $\frac{3}{7} \times 4$

   (2) $4 \times \frac{7}{3}$

   (3) $3 \times \frac{7}{4}$

   (4) $\frac{3}{7} \times \frac{1}{4}$
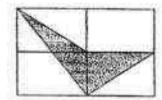
4. At a concert, $\frac{2}{7}$ of the audience are children. What is the ratio of the number of adults to the number of children?

   (1) 5 : 2

   (2) 5 : 7

   (3) 7 : 2

   (4) 7 : 5

5. There are 6 rotten apples and 24 good apples in a basket. What fraction of all the apples is rotten?

   (1) $\frac{1}{5}$

   (2) $\frac{1}{4}$

   (3) $\frac{3}{4}$

   (4) $\frac{4}{5}$

6. What is the value of 10 ÷ 200?

   (1) 20

   (2) 2

   (3) 0.5

   (4) 0.05

7. Amy, Bala and Chin shared a box of chocolates in the ratio 4 : 3 : 2 respectively. If Bala received 60 chocolates, how many chocolates did Chin receive?

   (1) 20

   (2) 30

   (3) 40

   (4) 80

8. Mr Tan bought a luggage for $60. In addition, he had to pay 7% GST. How much did he pay for the luggage after GST?

   (1) $55.80

   (2) $64.20

   (3) $67.00

   (4) $102.00

9. The figure below is not drawn to scale. PQR is an equilateral triangle, PRS is an isosceles triangle and QT is a straight line. Find ∠a.

(1) 30°

(2) 60°

(3) 120°

(4) 150°

10. The figure below is made up of 4 similar rectangles.
What fraction of the figure is shaded?

(1) $\frac{1}{2}$

(2) $\frac{1}{4}$

(3) $\frac{3}{4}$

(4) $\frac{3}{8}$

4
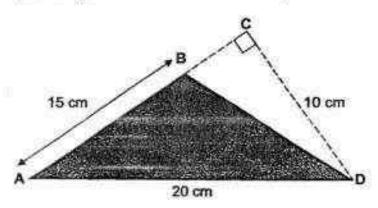
11. Hazel spent $\frac{1}{4}$ of her money on a pencil case and $\frac{1}{6}$ of the remainder on some erasers. She spent $90 altogether. How much money had she left?

    (1) $128

    (2) $150

    (3) $216

    (4) $240

12. $\frac{3}{4}$ of Fuhua's stamps is equal to $\frac{2}{5}$ of Rajesh's stamps. Find the ratio of the number of Rajesh's stamps to the number of Fuhua's stamps.

    (1)   2 : 3

    (2)   3 : 2

    (3)   8 : 15

    (4)   15 : 8

13. 6 pupils sat for a Mathematics test and the lowest score obtained was 12 out of 60. Find the highest possible average score of these 6 pupils.

    (1)   10

    (2)   36

    (3)   52

    (4)   60

14. A pair of shoes and socks cost $60. The cost of the socks is 20% of the total cost of the shoes and socks. Find the cost of the pair of shoes.

    (1) $12

    (2) $36

    (3) $48

    (4) $72

15. For every 3 glasses of rose syrup, Lihua mixes 7 glasses of milk to make some bandung. If the capacity of each glass is 100 ml, how many glasses of milk are needed to make 6 litres of bandung?

    (1)   18

    (2)   21

    (3)   42

    (4)   60

Section B (20 marks)

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided.
For questions which require units, give your answers in the units stated.
[10 marks]

16. What fraction of 1 hour is 25 minutes?
Give your answer in the simplest form.

Ans:_____

17. The length of a piece of ribbon is 16 m. Sandra used $\frac{1}{4}$ of the ribbon to tie a present. Find the length of the ribbon that is left.

Ans:_____ m

7

18. What is the area of the shaded triangle ABD?
    (The triangle below is not drawn to scale)

Ans: _____ cm²

19. Joe does his daily exercise by climbing up and down the stairs in his block. He always starts on the floor where his flat is. He goes up 5 floors, down 7 floors and then up 4 floors, to finish on the 9th floor. On what floor is Joe's flat?

Ans: _____ th floor

8
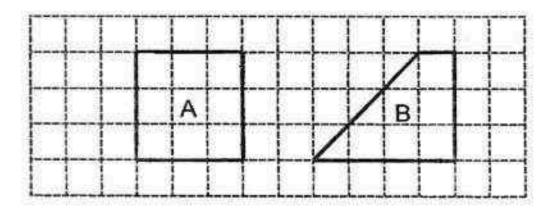
20. Aaron increased his savings from $40 last month to $80 this month. Find the percentage increase in his savings.

Ans: _____ %

21. Michelle's age is $\frac{3}{5}$ of the total age of Katherine and herself. Katherine is 20 years old. How old is Michelle?

Ans: _____ years old

22. A glass is 36% filled with water. All the water is then poured into an empty jar which has a capacity thrice that of the glass. What percentage of the jar is filled with water?

Ans: _____ %

23. Each shape on this square grid has interior angles that are 45°, 90° or 135°. Complete the table below.
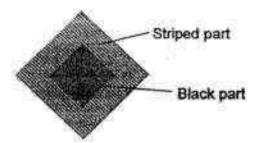
	A	B
Number of 45° angles	0	
Number of 90° angles	4	
Number of 135° angles	0	

24. I am thinking of two decimals. Each decimal is in 1 decimal place. When I add them, the answer is 1. When I multiply them, the answer is 0.09. What are the two decimals?

Ans: _____ and _____

25. Nurul has a necklace as shown below.

What is the least number of black beads and the least number of white beads Nurul needs to add to the necklace to make the ratio of black beads to white beads 3 : 2?

Ans: Black_____

White_____

11

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For each questions which require units, give your answers in the units stated.   [10 marks]

26. Shirley counted 50 flamingos at the bird park. Some of the birds are standing on two legs. Some are standing on one leg. She counted a total of 79 standing legs. How many flamingos are standing on one leg?

Ans: _____

27. There are 325 pupils in an Art Club at first. If the number of boys increases by 25 and the number of girls decreases by 5%, the number of pupils in the Art Club will become 341. How many girls are there in the Art Club at first?

Ans: _____
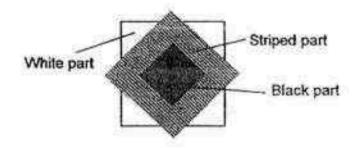
28. In the figure below, the ratio of striped part to black part is 3 : 1. The area of the striped part of the figure is 12 cm².

The above figure is then placed on another white square to form a new design.
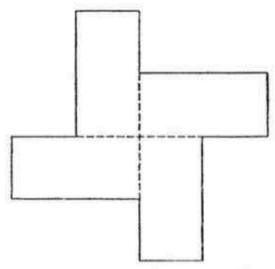
In the new design, 60% of it is striped and the rest is black and white.

What is the total area of the striped and white parts in the new design?

Ans : _____ cm²

29. The figure below is made up of 4 identical rectangles.
The figure is not drawn to scale

The length of each rectangle is twice the breadth of the rectangle. If the perimeter of the figure is 80 cm, what is the area of the figure?

Ans : _____ cm²

30. The ratio of boys to girls in the hall is 3 : 7. An equal number of boys and girls left the hall to return to the classroom. If there are 200 pupils in the hall at first, what is the difference between the number of boys and girls in the hall in the end?

Ans: _____

------------END OF PAPER------------

NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 1 – 2016
PRIMARY 6

MATHEMATICS

Paper 2

Total Time for Paper 2: 1 hour 40 minutes

5 Short Answer Questions   **(10 marks)**

13 Structured / Long Answer Questions (50 marks)

<u>INSTRUCTION TO CANDIDATES</u>

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully
4. Answer all questions and show your workings clearly.
5. You are allowed to use a calculator.

Marks Obtained

Total		/ 60

Name : _____(   )

Class : 6_____

Date : _____   Parent's Signature : _____

Paper 2 (60 marks)

Questions 1 to 5 carry 2 marks each. Show your workings clearly in the space below it and write your answer in the space provided. Give your answers in the units stated.

1. The table below shows whether pupils in a class walk to school.
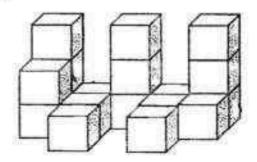
	Walk to school	Do not walk to school
Boys	2	8
Girls	5	10

(a) What percentage of all the boys walk to school?

(b) What fraction of the pupils in the class walk to school?

Ans: (a) _____ %

(b) _____

2. The figure below is made up of 1-cm cubes. Find the volume of the figure.

Ans: _____ cm³

1

3. Devi has 4 m of ribbon. She cuts as many $\frac{3}{4}$ m of ribbon from it.

(a) How many such pieces of ribbon will she get?
(b) What is the length of ribbon that is left over?

Ans: (a) _____ _____

(b) _____ m

4. The table below shows some exchange rates.

| 1 Singapore dollar = 0.7 American dollar |
| 1 Singapore dollar = 3 Malaysian ringgit |

Use the exchange rates to answer the following questions.

(a) How many American dollars would you get for 500 Singapore dollars?
(b) How many Singapore dollars would you get for 150 Malaysian ringgit?

Ans: (a) _____ American dollars

(b) _____ Singapore dollars

2

5. A square of area 64 cm² is cut along the dotted line to make two rectangles, A and B.

If the area of B is $\frac{1}{3}$ of A, find the perimeter of B?

Ans : _____ cm

3

For each question from 5 to 18, show your workings clearly in the space below it and write your answer in the space provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. Remember to include the units wherever possible.

6. The ratio of the number of marbles Michael had to the number of marbles Tom had was 2 : 1. After Michael gave 42 marbles to Tom, the ratio became 1 : 5. How many marbles did Tom have at first?

Do not write in this space

Ans: _____ [3]

7. Sally has some balloons. 10% of the balloons are red. The number of red balloons is $\frac{1}{5}$ the number of blue balloons. The remaining balloons are green. If there are 60 green balloons, how many balloons does Sally have altogether?

Ans: _____ [3]

4

8. Mrs Cheng bought some pens and rulers. Each ruler cost 40¢ and each pen cost twice as much as a ruler. She bought 10 more pens than rulers. If she paid $20 for the pens and rulers, how many rulers did she buy?

Ans: _____ [3]

5

9. Nelson had 1500 sweets and 50 goodies bags. He put 1 sweet in the first goodie bag, 2 sweets in the second goodie bag, 3 sweets in the third goodie bag and so on until all the 50 goodie bags were filled with sweets. How many sweets had he left when he had filled all the 50 goodies bags with sweets?
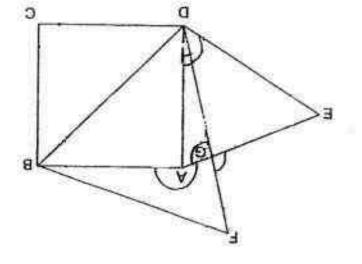
Ans: _____ [3]

6

12. Mr Choo wants to buy some identical boxes of chocolate for $160.
A discount of 20% is given to him on the chocolates. As a result,
Mr Choo is able to buy 8 more such boxes of chocolate with exactly
$160. What is the price of one box of chocolate before the
discount?

Ans: _____ [4]

9

13. Jun Wei had $100 more than Ali at first. After Jun Wei's money had decreased by $120 and Ali's money had increased by $200, Ali had 3 times as much money as Jun Wei. What was the total amount of money they had at first?

Ans: _____ [4]

10

14. Elaine had some twenty-cent coins and fifty-cent coins in a box.
The percentage of the number of twenty-cent coins was 40% of the total number of coins she had.
She took out 10 fifty-cent coins and put in twenty-cent coins of the same value. In the end, she had the same number of twenty-cent coins and fifty-cent coins left.
What was the amount of money in the box?

Ans:_____[4]

15. 3 girls, Amy, Beth and Cloe divided some crystals amongst themselves. Amy took 4 crystals and $\frac{1}{4}$ of the remaining crystals.

Next, Beth took 4 crystals and $\frac{1}{4}$ of the remaining crystals. Finally Cloe took the remaining 24 crystals. How many crystals were there at first?

Ans: _____ [5]

16. Green Earth Company had a water tank that was full in the morning. The company then used 10% of the water in the afternoon and 500 litres in the evening. In the end, the water left in the tank was 20 litres less than half of the capacity of the tank. How much water was left in the tank in the end?

Ans: _____ [5]

13

17. A bag contains some red and blue balls. If Jane removes 1 red ball from the bag, then $\frac{1}{7}$ of the remaining balls in the bag are red. If, instead of 1 red ball, Jane removes 2 blue balls from the bag, then $\frac{1}{5}$ of the remaining balls in the bag are red. How many balls are there in the bag at first?

Ans: _____ [5]

14
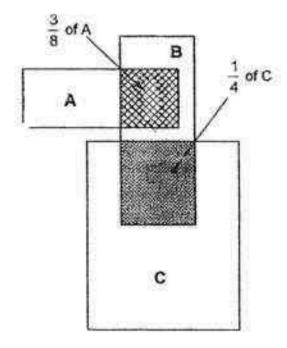
18. A figure is made up of 3 overlapped rectangles, A, B and C.

The area of rectangles A, B and C is in the ratio 4 : 5 : 10.

$\frac{3}{8}$ of A overlaps B and $\frac{1}{4}$ of C overlaps B. What fraction of the

figure is shaded?

Ans: _____ [5]

--------------End-of-Paper--------------

15

SCHOOL   :   NAN HUA PRIMARY SCHOOL
LEVEL   :   PRIMARY 6
SUBJECT   :   MATH
TERM   :   CA1

CONTACT :

PAPER 1 BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	3	4	1	1	4	3	2	4	2

Q 11	Q12	Q13	Q14	Q15
2	4	3	3	3

PAPER 1 BOOKLET B

Q16) $\dfrac{25}{60} = \dfrac{5}{12}$

Ans : $\dfrac{5}{12}$

Q17) $1 - \dfrac{1}{4} = \dfrac{3}{4}$

$\dfrac{3}{4} \times 16 = 12$

Ans 12 m

Q18) $\dfrac{1}{2} \times 15 \times 10 = 75$

Ans: 75 cm^2
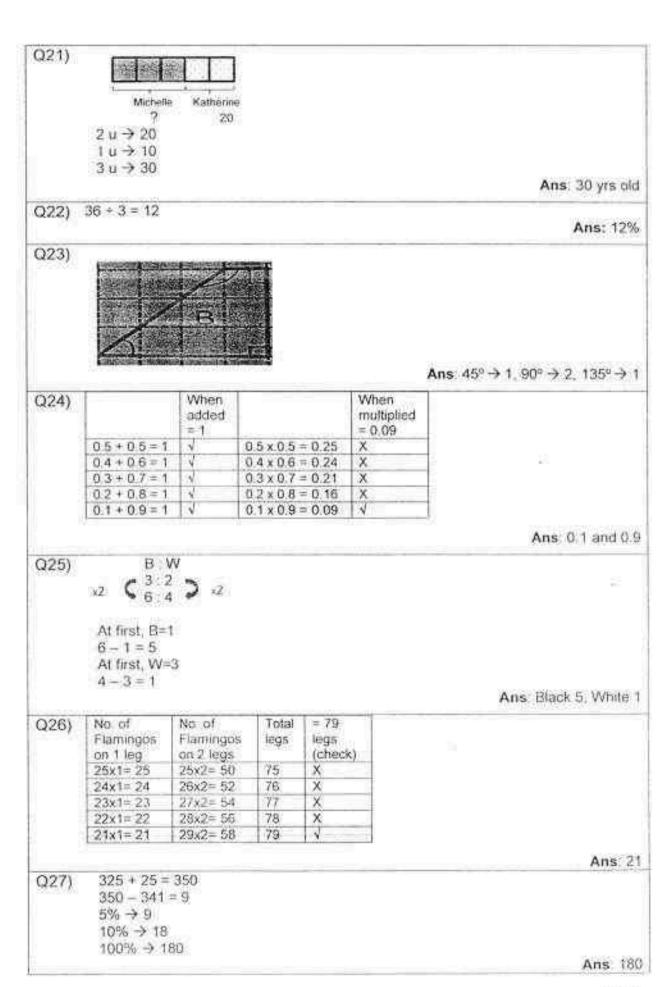
Q19) $9 - 4 = 5$
$5 + 7 = 12$
$12 - 5 = 7$

Ans : 7th floor

Q20) $80 - 40 = 40$

$\dfrac{40}{40} \times 100\%$

Ans : 100%

Q21)

Michelle ?   Katherine 20

$2 \text{ u} \rightarrow 20$

$1 \text{ u} \rightarrow 10$

$3 \text{ u} \rightarrow 30$

Ans: 30 yrs old

Q22) $36 \div 3 = 12$

Ans: 12%

Q23)

Ans: $45° \rightarrow 1, 90° \rightarrow 2, 135° \rightarrow 1$

Q24)

	When added = 1		When multiplied = 0.09
0.5 + 0.5 = 1	√	0.5 x 0.5 = 0.25	X
0.4 + 0.6 = 1	√	0.4 x 0.6 = 0.24	X
0.3 + 0.7 = 1	√	0.3 x 0.7 = 0.21	X
0.2 + 0.8 = 1	√	0.2 x 0.8 = 0.16	X
0.1 + 0.9 = 1	√	0.1 x 0.9 = 0.09	√

Ans: 0.1 and 0.9

Q25)

B : W
3 : 2
6 : 4

x2   x2

At first, B=1

$6 - 1 = 5$

At first, W=3

$4 - 3 = 1$

Ans: Black 5, White 1

Q26)

No. of Flamingos on 1 leg	No. of Flamingos on 2 legs	Total legs	= 79 legs (check)
25x1= 25	25x2= 50	75	X
24x1= 24	26x2= 52	76	X
23x1= 23	27x2= 54	77	X
22x1= 22	28x2= 56	78	X
21x1= 21	29x2= 58	79	√

Ans: 21

Q27)

$325 + 25 = 350$

$350 - 341 = 9$

$5\% \rightarrow 9$

$10\% \rightarrow 18$

$100\% \rightarrow 180$

Ans: 180

Q28)	$\begin{array}{ll} & S : B : W \\ {\scriptstyle \times 20}\left(\begin{array}{l}3 : 1 \\ 60:20:20\end{array}\right){\scriptstyle \times 20}\end{array}$	
	$S + W = 80\%$	
	$60\% \rightarrow 12$	
	$1\% \rightarrow 0.2$	
	$80\% \rightarrow 16$	
		Ans: 16cm²
Q29)	4 lengths $\rightarrow$ 2u x 4 = 8u	
	8 breadths/half-lengths $\rightarrow$ 1u x 8 = 16u	
	16 u $\rightarrow$ 80	
	1u $\rightarrow$ 5 (breadth)	
	2u $\rightarrow$ 10 (length)	
	Area of 1 rect = 10 x 5 = 50	
	Area of figure = 50 x 4 = 200	
		Ans: 200cm²
Q30)	200 ÷ 10 = 20	
	7 – 3 = 4	
	20 x 4 = 80	
		Ans: 80

PAPER 2

Q1)	(a) $\frac{2}{10}$ x 100% = 20%	
	(b) 2 + 5 + 8 + 10 = 25	
	 2 + 5 = 7	
		Ans: (a) 20%
		(b) $\frac{7}{25}$
Q2)	Vol of each cube = 1 cm x 1 cm x 1 cm = 1 cm³	
	No. of cubes = 18	
	18 x 1 = 18	
		Ans: 18 cm³
Q3)	(a) $4 + \frac{1}{4} = 5\frac{1}{3}$	
	(b) $\frac{1}{4}$ x 5 = 3.75	
	 4 – 3.75 = 0.25	
		Ans: (a) 5
		(b) 0.25 m
Q4)	(a) 500 x 0.7 = 350	
	(b) 150 ÷ 3 = 50	
		Ans: (a) 350 American dollars
		(b) 50 Singapore dollars
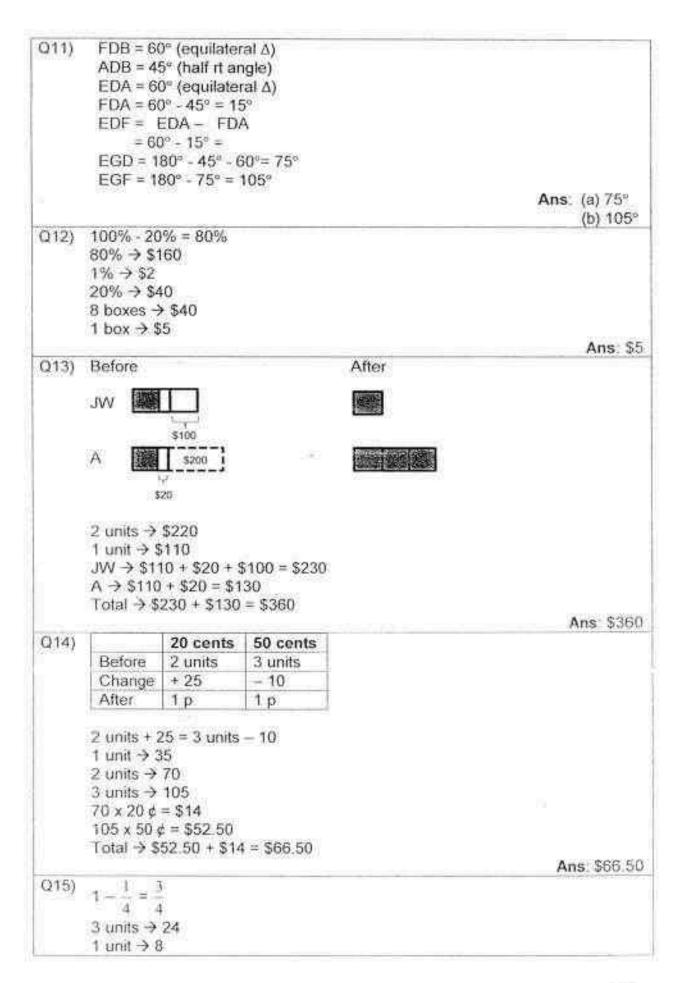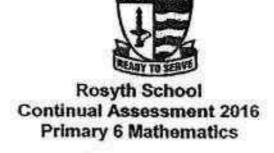
Q5)	$8 \times 8 = 64 \text{ cm}^2$ 1 side = 8 cm A : B 1 : 4 → 4 parts 8 ÷ 4 = 2 → breadth of B 2 + 2 + 8 + 8 = 20 **Ans: 20 cm**

Q6)	Before M : T 2 : 1 8 : 4 8 – 2 = 6 6u → 42 1u → 7 4u → 28	After M : T 1 : 5 2 : 10 **Ans: 28**

Q7)	R : B 1 : 5 10 : 50 40% → 60 20% → 60 ÷ 2 = 30 100% → 30 x 5 = 150	R : B : G 10 : 50 : 40 → 100% **Ans: 150**

Q8)	Ruler → $0.40 Pen → $0.40 x 2 = $0.80 $0.80 x 10 = $8 $20 - $8 = $12 $12 ÷ $1.20 = 10	$1.20 per set **Ans: 10**

Q9)	50 + 1 = 51 51 x 25 = 1275 1500 – 1275 = 225 **Ans: 225**

Q10)	Before After A F F → 9 x 4 = 36 A → 5 36 + 5 = 41 41 u → 820 Type equation here 1 u → 20 5 u → 100 **Ans: $100**

Q11)	FDB = 60° (equilateral Δ)

FDB = 60° (equilateral Δ)
ADB = 45° (half rt angle)
EDA = 60° (equilateral Δ)
FDA = 60° - 45° = 15°
EDF = EDA – FDA
       = 60° - 15° =
EGD = 180° - 45° - 60°= 75°
EGF = 180° - 75° = 105°

<div align="right">

Ans: (a) 75°
(b) 105°
</div>

Q12)
100% - 20% = 80%
80% → $160
1% → $2
20% → $40
8 boxes → $40
1 box → $5

<div align="right">Ans: $5</div>

Q13)

Before   After

JW

$100

A $200

$20

2 units → $220
1 unit → $110
JW → $110 + $20 + $100 = $230
A → $110 + $20 = $130
Total → $230 + $130 = $360

<div align="right">Ans: $360</div>

Q14)

	20 cents	50 cents
Before	2 units	3 units
Change	+ 25	– 10
After	1 p	1 p

2 units + 25 = 3 units – 10
1 unit → 35
2 units → 70
3 units → 105
70 x 20 ¢ = $14
105 x 50 ¢ = $52.50
Total → $52.50 + $14 = $66.50

<div align="right">Ans: $66.50</div>

Q15)
$1 - \dfrac{1}{4} = \dfrac{3}{4}$
3 units → 24
1 unit → 8

4 units → 32
32 + 4 = 36
3 units → 36
1 unit → 12
4 units → 48
Total → 48 + 4 = 52

Ans: 52 crystals

Q16) 500ℓ − 20ℓ = 480ℓ
50% − 10% = 40%
40% → 480ℓ
10% → 120ℓ
50% → 600ℓ
Left → 600ℓ − 20ℓ = 580ℓ

Ans: 580ℓ

Q17)

	Red	Blue
Before	1 unit + 1	6 units
Change	− 1	
After	1 unit	6 units

	Red	Blue
Before	1 p	4 p + 2
Change		− 2
After	1 p	4 p

1 p → 1 unit + 1
4 p → 4 units + 4
6 units → 4 p + 2 → 4 units + 4 + 2 → 4 units + 6
2 units → 6
1 unit → 3
Total → 1 unit + 1 + 6 units → 7(3) + 1 = 22

Ans: 22 balls

Q18) A : B : C
×2 $\begin{pmatrix} 4 : 5 : 10 \\ 8 : 10 : 20 \end{pmatrix}$

$\frac{3}{8}$ × 8 units = 3 units (A overlaps B)

$\frac{1}{4}$ × 20 units = 5 units (C overlaps B)

Total shaded parts → 3 units + 5 units = 8 units
Total figure → (8 − 3) + 10 + (20 − 5) = 30 units
Shaded fraction → $\frac{8}{30} = \frac{4}{15}$

Ans: $\frac{4}{15}$

3

Rosyth School
Continual Assessment 2016
Primary 6 Mathematics

Name: _____   Register No. _____

Class: Pr 6 - _____

Date: 26 February 2016   Parent's Signature: _____

Total Time for Booklets A and B : 50 minutes

PAPER 1
(Booklet A)

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.

2. Follow all instructions carefully.

3. Shade your answers in the Optical Answer Sheet (OAS) provided.

4. You are **not** allowed to use a calculator.

5. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet A)	20	

* This booklet consists 7 printed pages (including this cover page)

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

All diagrams in this paper are not drawn to scale.

(20 marks)
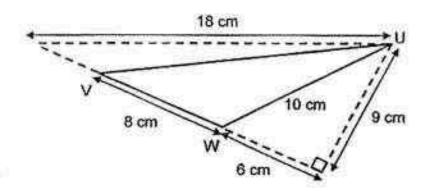
1. In the numeral 642 051 , the value of digit 2 is _____.

   (1) 20
   (2) 200
   (3) 2000
   (4) 20 000

2. $$\frac{21}{28} = \frac{12}{\boxed{?}}$$

   What is the missing number in the box?

   (1) 16
   (2) 19
   (3) 24
   (4) 32

3. Express 1.2 as a percentage.

   (1) 0.12%
   (2) 1.2%
   (3) 12%
   (4) 120%

4. Find the area of triangle UVW.

(1) 36 cm²
(2) 40 cm²
(3) 63 cm²
(4) 72 cm²
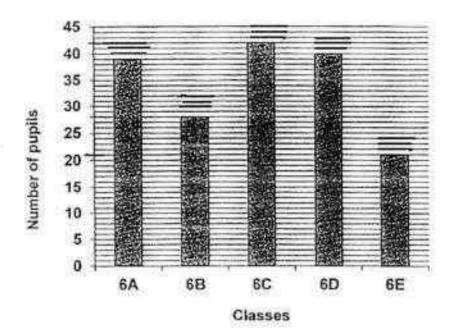
5. Given that the ratio of a : b = 2 : 3, b : c = 4 : 7, find the ratio of a : c.

(1) 2 : 7
(2) 8 : 21
(3) 6 : 21
(4) 6 : 28

6. What is the percentage decrease when a number is reduced from 25 to 20?

(1) 20%
(2) 25%
(3) 80%
(4) 125%
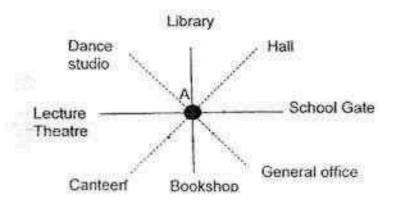
7. The bar graph below shows the total number of Primary 6 pupils enrolled in the different classes in ASPIRE Primary School.

Which two classes has the number of pupils in the ratio of 1 : 2?
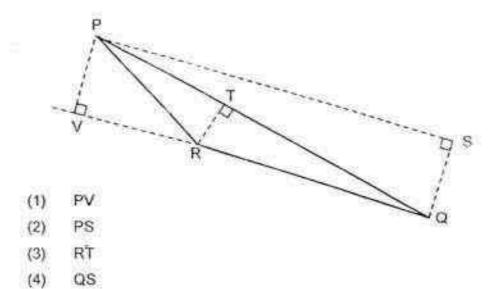
(1) 6B : 6D

(2) 6E : 6C

(3) 6B : 6A

(4) 6E : 6A

8. A rectangle has an area of $24n$ cm^2. Its length is 6 cm. Calculate its perimeter.

(1) $4n$ cm

(2) $(4n + 6)$ cm

(3) 20 cm

(4) $(8n + 12)$ cm

(Go on to the next page)

9. In the figure below, Charlie is standing at the point marked A. He is facing the school gate. What will he face when he turns 135° clockwise?
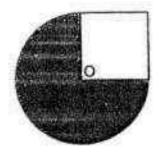
(1) Canteen

(2) Dance studio

(3) General office

(4) Hall

10. The base of triangle PQR is PQ.
What is the corresponding height of triangle PQR?

(1) PV

(2) PS

(3) RT

(4) QS

5

(Go on to the next page)
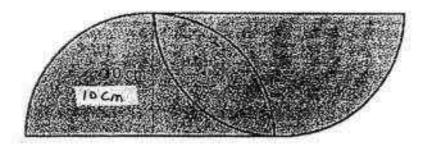
11. The figure is made up of a 28 cm square and three quarter of a circle. The centre of the circle is O. Find the area of the shaded part shown below.

(Use $\pi = \dfrac{22}{7}$)
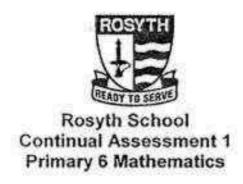
   (1)   176 cm^2

   (2)   188 cm^2

   (3)   1848 cm^2

   (4)   2464 cm^2

12. $\dfrac{2}{3}$ of Sophia's money is equal to $\dfrac{3}{4}$ of Benny's. Express Benny's money as a fraction of the total sum of money.

   (1) $\dfrac{8}{17}$

   (2) $\dfrac{9}{17}$

   (3) $\dfrac{17}{8}$

   (4) $\dfrac{17}{9}$

13. Carol, Shirley and Julia shared $500 in the ratio 2 : 5 : 3. Shirley spent $120 of her share of money. How much money had she left?

   (1) $100

   (2) $130

   (3) $150

   (4) $250

14. The figure is made up of 2 identical semi-circles of radius 10 cm. O is the centre of one of the semi-circle as shown below. Find the perimeter of the figure in terms of π.

(1) $(10\pi + 20)$ cm
(2) $(10\pi + 40)$ cm
(3) $(20\pi + 20)$ cm
(4) $(20\pi + 40)$ cm

15. A maximum capacity for 14 adults or 21 children can enter a lift at a time. After 2 adults and 15 children have entered the lift, what is the maximum number of children who can still enter the lift?

(1)   6
(2)   12
(3)   3
(4)   18

7   (Go on to Booklet B)

Rosyth School
Continual Assessment 1
Primary 6 Mathematics

Name: _____   Register No. _____

Class: Pr 6 - _____

Date: 26 February 2016   Parent's Signature: _____

Total Time for Booklets A and B : 50 minutes

PAPER 1
(Booklet B)

<u>Instructions to Pupils:</u>

1. Do not open this booklet until you are told to do so.

2. Follow all instructions carefully.

3. You are **not** allowed to use a calculator.

4. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet B)	20	

* This booklet consists of 9 printed pages (including this cover page).

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.
(10 marks)

Do not write in this space

All diagrams in this paper are not drawn to scale unless stated otherwise.
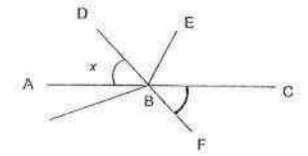
16. Find the quotient when 6024 is divided by 6.

Ans: _____

17. Find the value of $\frac{7}{9} \div 5$.

Ans: _____

18. In the figure below, ABC is a straight line and DBF are straight lines. Name the angle which has the same value as angle x.
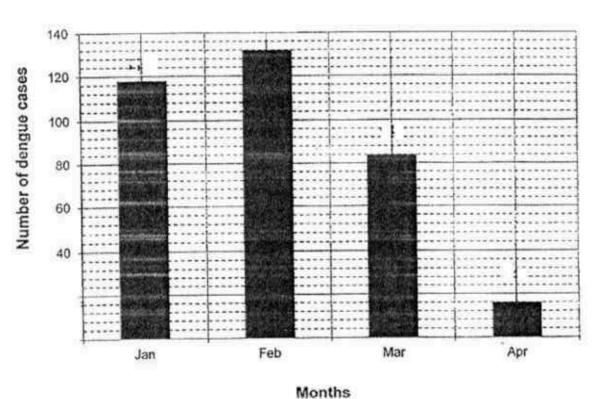
Ans: _____

2

19. Express 20 min as a fraction of 3 hours.
    Give your answer in the simplest form.

Ans: _____

20. There are some red and blue marbles in a box. There are $\frac{3}{5}$ as many red marbles as blue marbles. Find the ratio of the number of red marbles to the total number of marbles.

Ans: _____

21. Sean's luggage weighs 12.3 kg.
    Muthu's luggage is 940 g lighter than Sean's.
    What is the mass of Muthu's luggage?
    Express your answer in kilogrammes and grams.

Ans: _____ kg _____ g

3

(Go on to the next page)

22. The average of 3 numbers is 3y. One of the numbers is y and another number is 5. Express the third number in terms of y in the simplest form.

Ans: _____

23. Express 4.5% as a decimal.

Ans: _____

24. The 2 figures shown have a line of symmetry XY. Shade the minimum number of squares such that the 2 figures are symmetrical to each other.

4

(Go on to the next page)

25. The graph below shows the number of dengue cases in Lorong Lew Lian from January 2015 to April 2015. What is the difference in the number of dengue cases between February and March?
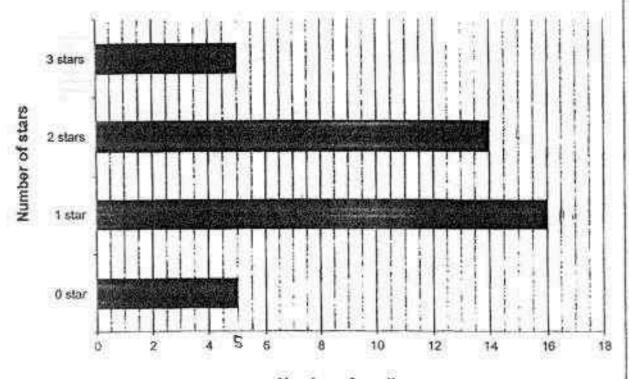
Months

Ans: _____

(Go on to the next page)

Questions **26** to **30** carry 2 marks each. Show your workings clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

All diagrams in this paper are not drawn to scale unless stated otherwise.

26. The graph shows the number of stars Mr Wong gave to the pupils in his class during week 1 of school. What was the total number of stars Mr Wong gave to his class?

Number of pupils

Ans: _____

(Go on to the next page)

27. Rosemary paid $7.20 for 6 pencils and a number of erasers. Each pencil cost w cents and each eraser cost twice as much. How much did she pay for the erasers? Give the answer in terms of w in the simplest form.

Ans: _____ cents

28. The figure below shows 2 identical equilateral triangles CDE and FGH which overlapped each other. The length DF, FE and EH are equal. The area of the figure is 49 cm². Find the area of the triangle CDE.

Ans: _____ cm²

(Go on to the next page)

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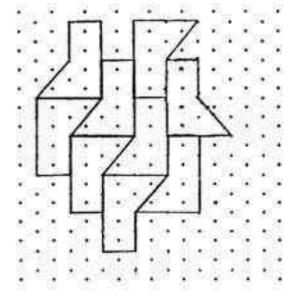
29. The shape ⌐ can be tessellated.
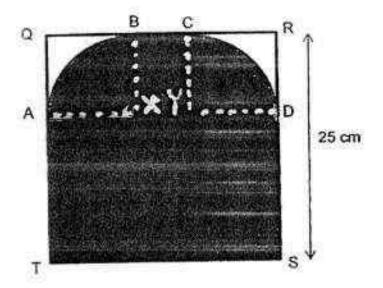
One of the shapes does not fit into the tessellation shown below. Shade it.

(Go on to the next page)

30. In the figure below, the shaded and unshaded parts form a square QRST of side 25 cm. XAB and YCD are quadrants of radius 10 cm.

Find the area of the shaded part. (Take π = 3.14)

25 cm

Ans : _____ cm²

End of paper. Have you checked your work?

9

(Go on to the next page)

Rosyth School
Continual Assessment 2016
Primary 6 Mathematics

Name: _____ Register No. _____

Class: Pr 6 - _____

Date: 26 February 2016   Parent's Signature: _____

Time: 1h 40min

PAPER 2

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. **Show your workings clearly** as marks are awarded for correct working.
4. Write your answers in this booklet.
5. You are allowed to use a calculator.
6. Answer all questions.

Questions	Maximum Mark	Marks Obtained
Q 1 to 5	10	
Q 6 to 18	50	

Section	Maximum Mark	Marks Obtained
Paper 1	40	
Paper 2	60	
Total	100	

* This booklet consists of 15 printed pages (including this cover page)

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

All diagrams in this paper are not drawn to scale unless stated otherwise.

Do not write in this spac

1. In the number line below, S represents $\frac{2}{5}$, U represents $\frac{2}{3}$. ST = TU.

What fraction is represented by T?

Ans: _____

2. The figure is made up of 4 semi-circles of different radius as shown in the diagram. The line AB is 20 cm. Find the perimeter of the figure.
(Take π = 3.14)

Ans: _____ cm

(Go on to the next page)

3. Kim, Melinda and Noel share some beads in the ratio 7 : 4 : 2. Kim has 65 more beads than Noel. How many beads does Melinda have?

Ans: _____

4. In the figure not drawn to scale, AC and DF are straight lines. Find ∠FBC.

Ans: _____ °

3
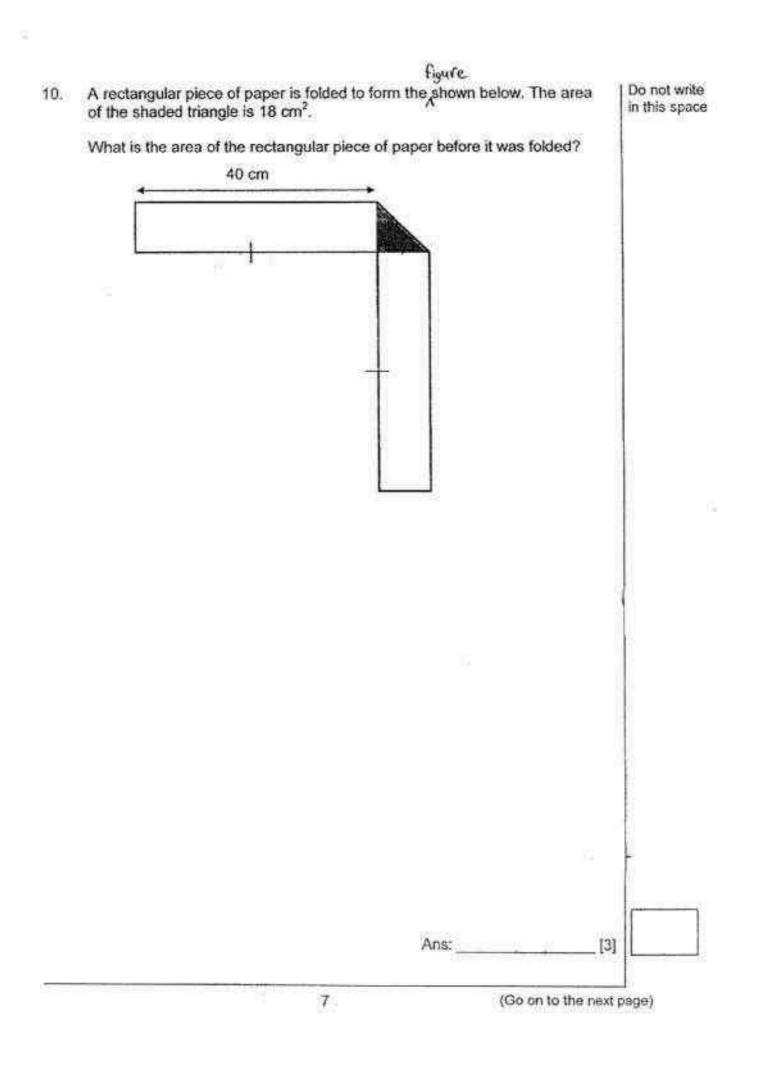
5. The figure below is made up of a square and a triangle. The triangle has an area of 128 cm². Find the perimeter of the square.
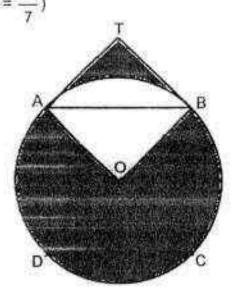
Ans: _____ cm

(Go on to the next page)

For Questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in brackets [   ] at the end of each question or part-question. For questions which require units, give your answers in the units stated.

All diagrams in this paper are not drawn to scale unless stated otherwise.

(50 marks)

6. Siti rented a car for 2 days. She was charged $160 per day and $2 for every kilometre that she travelled. She paid $548. What was the total distance she travelled for the 2 days?

Ans: _____ [3]

7. The chairs in a school hall were arranged in rows. There were 14 rows of 3w chairs in each row and there were 5 remaining chairs.

    (a) Express the total number of chairs in the school hall in terms of w.

    (b) If w = 9, how many chairs are there in the hall?

Ans: (a) _____ [1]

(b) _____ [2]

5   (Go on to the next page)

8. During a sale, Keith bought a laptop at a discount of 15%. The usual price of a laptop was $2 890. The GST was 7% of the discounted price. How much GST did Keith pay?
Round off your answer to the nearest 10-cent.

Usual Price
$2 890

Ans: _____ [3]

9. The figure below is made up of a rectangle ABCD and a semi-circle.
E and F are mid-points of AD and BC respectively.
The line BC is 16 cm and EO is half of EF.
Find the area of the shaded part of the figure. (Take π = 3.14)

Ans: _____ [3]

6   (Go on to the next page)

10. A rectangular piece of paper is folded to form the shown below. The area
of the shaded triangle is 18 cm².

What is the area of the rectangular piece of paper before it was folded?

Ans: _____ [3]

(Go on to the next page)

11. The figure below, not drawn to scale, shows a circle with centre O, with a diameter of 14 cm. ABCD and AOBT are squares. Find the total area of the shaded portions of the figure. (Take $\pi = \dfrac{22}{7}$)

Ans: _____ [4]

12. Jesse and Murni went shopping with a total amount of $237.
Jesse spent twice as much as Murni. The amount Murni had left was $23 more than what she had spent. She had twice as much money left as Jesse.

(a) How much money did Jesse spend?
(b) How much money did Murni have at first?

Ans (a): _____ [2]

(b): _____ [2]

(Go on to the next page)

13. A pattern was formed by arranging matchsticks in the manner shown below.

Row 1

Row 2

Row 3

Row 4

(a) How many matchsticks are there in row 7?
(b) Which row will have 40 matchsticks?
(c) How many matchsticks will I need altogether to form a total of 15 rows?

Ans (a): _____ [1]

(b): _____ [1]

(c): _____ [2]

14. The figure below shows two square ABCD and DEFG. The figure CDEF has an area of 150 cm². The length AE = ED. KJ is 8 cm and KL is 12 cm. Find the area of the shaded parts.

Ans: _____ [4]

(Go on to the next page)

15. The value of $2 notes in Alynna's wallet is equal to the value of $5 notes in Si Qi's wallet. Si Qi spent $60 and the ratio of the number of notes in Alynna's wallet to the number of notes in Si Qi's wallet became 25 : 6. How much money was in Alynna's wallet?

Ans: _____ [4]

(Go on to the next page)

16. ABC bakery sells cupcake at $2.80 each. For every 10 cupcakes bought, a 10% discount will be given.

(a) Eunike bought 10 cupcakes. How much discount did she get?

(b) Si Qi bought some cupcakes from the bakery. She paid $149.80 inclusive of the 7% GST for all her cupcakes. How many cupcakes did she buy altogether?

Ans: (a) _____ [1]

(b) _____ [4]

(Go on to the next page)

17. Candy had some sweets. She gave $\frac{3}{10}$ of them to Harley and $\frac{2}{5}$ of the remainder to Kumar. She had 252 sweets left.

(a) How many sweets did Candy have at first?

(b) Candy packed all the sweets she wanted to give to Kumar into bags of 12 each. How many bags would she need to pack all the sweets?

Ans: (a) _____ [3]

(b) _____ [2]

(Go on to the next page)

18. In a shop, apples are packed in bags of 8, oranges in bags of 5 and pears in bags of 3.

Jermaine, Karen and Linda each bought an equal number of bags of fruits.
Jermaine and Karen bought both apples and pears while Linda bought oranges only.

a(i) Jermaine bought 2 more bags of pears than apples while Karen bought 2 more bags of apples than pears. Who bought more fruits in total?

(ii) How many more?

(b) Linda counted all her oranges and Jermaine counted all her apples and pears. Linda had 2 more fruit than Jermaine. How many bags of fruits did the 3 girls buy in all?

Ans: (i) _____ [1]

(ii) _____ [1]

(b) _____ [3]

End of Paper

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	1	4	1	2	1	2	4	1	3

Q11	Q12	Q13	Q14	Q15
3	1	2	2	3

16)1004   17)7/45   18) $\angle$ CBF   19)1/9   20)3:8
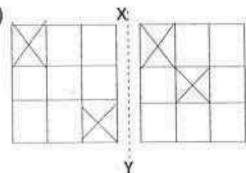
21)11kg 360 g   22)8y – 5   23)0.045

24)

25)132 – 84 = 48

26)(5x3)+(14x2)+16 = 59

27)(7020 – 6w)

28)49 $\div$ 7 = 7

$\frac{1}{2}$ x 14 x 7 = 7x 7 = 49cm$_3$

29)

30) 582cm²

Paper 2

1) 2/5 + 2/3 ÷ 2 = 8/15

2) Perimeter of figure → 20cm x 3.14 = 62.8cm

3) Kim : Melinda : Noel

    7 :   4   :   2

   7 units − 2 units = 65

   5 units = 65

   4 units = (65 ÷ 5) x 4 = 52°

4) ∠FBE = 180° − 35° − 80° − 65°

   ∠FBC = 180° − 65° = 115°

5) Area of square → 128cm² x 2 = 256cm²

   Length of square → √256 cm = 16cm

   Perimeter of square → 16cm x 4 = 64cm

6) $160 \times 2 = 320$

$548 - 320 = 228$

$228 \div 2 = 114$km

7) a) Total no. of chairs → $(14 \times 3w) + 5 = 42w+5$

b) $w = 9$

$42w = 9 \times 42 = 378$

$278 + 5 = 383$

8) $85\% \times 2890 = 2456.50$

$7\% \times 2456.50 = 171.955 = \$172.00$

9) $\frac{1}{4} \times \Pi \times r \times r = \frac{1}{4} \times 3.14 \times 8 \times 8 = 50.24$

$\frac{1}{2} \times B \times L = \frac{1}{2} \times 8 \times 4 = 16$

$50.24 + 16 = 66.24$cm$_2$

10) 18cm$_2$ $\times 2 = 36$cm$_2$

$\sqrt{36}$cm $= 6$cm

$(40$cm $\times 2) + 6$cm $= 86$cm

6cm $\times 86$cm $= 516$cm$_2$

11) $\frac{1}{2}$ Circle → $\frac{1}{2} \times 7 \times 7 \times 22/7 = 115.5$

$\frac{1}{4}$ Circle → $\frac{1}{4} \times 7 \times 7 \times 22/7 = 38.5$

$49 - 38.5 = 10.5$

Total shaded parts → $10.5 + 115.5 = 126$cm$_2$

12)a)9u → 237 + ($23 x 3)= 237 + 69 = 306

  1u → $306 ÷ 9 = 34

  4u → 34 x 4 = 136

  $136 − $23 − $23 = $90

  b)4u + $23 = $90 + $23 = $113

13)a)10+3+3+3 = 19

  b)7 8 9 10 11 12 13 14

  19+3+3+3+3+3+3+3 = 40

  c)1+4+7+10+13+16+19+22+25+28+31+34+37+40+43 = 330

14)$\triangle$ABC = 150 ÷ 3 x 4 = 200

  $\triangle$ABC = $\triangle$ABC = 200

  $\triangle$AEF = 150 ÷ 3 = 50

  Rect = 12 x 8 = 96

  Shaded Area = 50 + 200 − 96 = 154cm$_2$

15)4u → 12 notes

  1u → 12 ÷ 4 = 3

  25 x 3 = 75 notes

  75 x 2 = $150

16)a) $10 \times 2.80 = 28$

$10/100 \times 28 = \$2.80$

b) NO. Of cc $\rightarrow 14 \div 2.80 = 5$

5 sets + 5 cc = $5 \times 10 + 5 = 55$

17)a) $21u \rightarrow 252$

$1u \rightarrow 252 \div 21 = 12$

$12 \times 50 = 600$

b) 2/5 of remainder = $84 \times 2 = 168$

$168 \div 12 = 14$ bags

18)i) Karen

ii) 600

iii) 18 fruits

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2016 Continual Assessment One

Paper 1

Booklet A

1 March 2016

15 QUESTIONS
20 MARKS
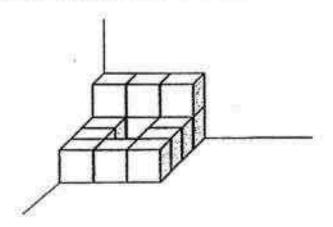
TOTAL TIME FOR BOOKLET A & B : 50 MINUTES

<u>INSTRUCTIONS TO CANDIDATES</u>
DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.
THE USE OF CALCULATORS IS <u>NOT</u> ALLOWED.

This booklet consists of 8 printed pages including the cover page.

1) What is the value of 350 x 4000?

(1) 1400

(2) 14 000

(3) 140 000

(4) 1 400 000

2) The figure below is not drawn to scale. Talia made the solid below using 1-cm cubes. What was the total volume of the solid?

(1) 11 cm³

(2) 12 cm³

(3) 13 cm³

(4) 15 cm³

2

3) $\frac{1}{8}$ of a log was sawed into 5 equal pieces. What fraction of the log was each piece?

(1) $\frac{7}{40}$

(2) $\frac{1}{40}$

(3) $\frac{5}{8}$

(4) $1\frac{3}{5}$

4) Which of the following is likely to be the total mass of five twenty-cent coins?

(1) 2.25 g

(2) 22.5 g

(3) 225 g

(4) 2250 g
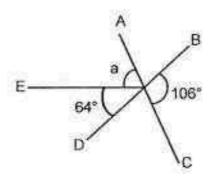
5) Find the value of $144 - 36 \div 4 + 8$.

(1) 9

(2) 35

(3) 127

(4) 143

3

6) Eva and Janis collected 1728 stamps altogether. For every 2 stamps Eva collected, Janis collected 7 stamps. How many more stamps did Janis collect than Eva?

(1) 192

(2) 384

(3) 960

(4) 1344

7) Amber paid $140 for a necklace and a watch. The price of the necklace is $\frac{1}{4}$ of the price of the watch. How much did Amber pay for the watch?

(1) $28

(2) $35

(3) $105

(4) $112

8) Express 0.15 as a decimal.

(1) 0.15%

(2) 1.5%

(3) 15%

(4) 150%

4

9) The length of a box is 30 cm. The length is 3 times its breadth and the height is the same as the breadth. What is the volume of the box?

length

(1) 50 cm³

(2) 210 cm³

(3) 9000 cm³

(4) 243 000 cm³

10) The figure below is not drawn to scale. AC and BD are straight lines. Find ∠a.

(1) 10°

(2) 26°

(3) 42°

(4) 53°

5

11) Look at the number line below.

What is the value of Z?

(1) $1\frac{3}{25}$

(2) $1\frac{12}{25}$

(3) $1\frac{14}{25}$

(4) $1\frac{16}{25}$

12) Jeremy spent 28% of his pocket money on Thursday. On Friday, he spent $\frac{1}{4}$ of the remainder. What percentage of his pocket money did he spend on Thursday and Friday?

(1) 54%

(2) 53%

(3) 47%

(4) 46%

6
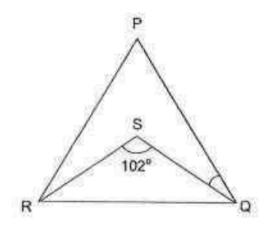
13) Greg had 18 ℓ of paint. After pouring some of it into 5 identical containers, he had w ℓ of paint left. Express the volume of paint in each container in terms of w.

(1) $(18 - \frac{w}{5})\ \ell$

(2) $(\frac{18w}{5})\ \ell$

(3) $(\frac{18 + w}{5})\ \ell$

(4) $(\frac{18 - w}{5})\ \ell$

14) PQR is an equilateral triangle. QRS is an isosceles triangle with SR = SQ. Find ∠PQS.

(1) 21°

(2) 39°

(3) 42°

(4) 78°

15) Whitney had $\frac{3}{8}$ as many cookies as Layla. She then gave half of her cookies to Layla. What would be the new ratio of the number of Whitney's cookies to the number of Layla's cookies?

(1) 3 : 19

(2) 3 : 22

(3) 8 : 19

(4) 19 : 22

End of Booklet A

8

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2016 Continual Assessment One

Paper 1

Booklet B

1 March 2016

15 questions
20 marks

TOTAL TIME FOR BOOKLET A & B : 50 MINUTES

<u>INSTRUCTIONS TO CANDIDATES</u>
DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.
THE USE OF CALCULATORS IS <u>NOT</u> ALLOWED.

This booklet consists of 8 printed pages including the cover page.

Questions **16 to 25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

16) Express 20.4 m in cm.

Ans : _____ cm

17) Simplify the expression $58 + 11g - 26 - 4g$

Ans : _____

18) Lena packed 10.2 kg of chicken wings into 30 packets equally. What is the mass of each packet?

Ans : _____ g

2

19) Bernice bought a pair of roller skates at $250. She had to pay an additional 7% GST. How much was the GST?
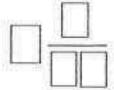
Ans : $_____

20) Express $12\frac{1}{9}$ as a decimal. Leave your answer correct to 1 decimal place.

Ans : _____

21) Use the digits 1, 4, 5 and 7 to form the largest possible fraction.

Ans : _____

3
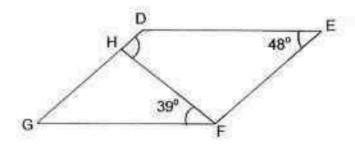
22) Pineapple tarts are sold at 50 pieces for $16. How much does Elaine have to pay for 400 pieces?

Ans : $ _____

23) DEFG is a parallelogram. Find ∠ FHD.

Ans : _____

4

24) A jug was filled with $\frac{5}{8}$ ℓ of milk. Melanie poured all the milk equally into some cups. Each cup contained $\frac{1}{16}$ ℓ of milk. How many cups were there?

Ans: _____

25) What is the value of $\frac{20w + 21}{11}$ when w = 5?

Ans: _____

5

Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

26) Study the number pattern below. 8 is in column B. The dots mean that the numbers continue in the same manner. Which column will 25 be in?

A	B	C	D	E
1	2	3		
		6	5	4
7	8	9		
		12	11	10

Ans : _____

27) Pond A had 160 fish. Pond B had 112 fewer fish than Pond A. What percentage of the fish from Pond A must be transferred to Pond B so that both the ponds had the same number of fish?

Ans : _____ %

6
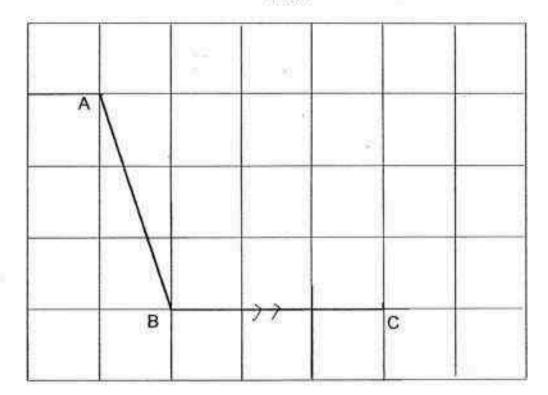
28) A bowl of mushroom soup cost $e. A plate of pasta cost $8 more than a bowl of mushroom soup. Keagan bought 3 bowls of mushroom soup and a plate of pasta. He had $7e left after paying for the meal. How much money did he have at first?

Ans : $_____

29) A box of cards was shared equally among a group of 33 pupils. 9 of them gave all their cards to the rest of the pupils. As a result, the rest of the pupils received 3 more cards each. How many cards were there in the box at first?

Ans : _____

7

30) In the square grid, AB and BC are straight lines that form two sides of a
trapezium ABCD. AD is parallel to BC and ∠ CDA = 90°. Label point D and
complete the drawing of trapezium ABDC.

ABCD

End of Paper 1

8

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2016 Continual Assessment One

Paper 2
1 March 2016

Paper 1	40
Paper 2	60
Total	100

_____

Parent's Signature

18 QUESTIONS
60 MARKS

TOTAL TIME FOR PAPER 2 : 1 HOUR 40 MINUTES

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of an approved calculator is expected, where appropriate.

This booklet consists of 16 printed pages including the cover page.

1

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

1. There were 420 athletes at a sports carnival. 288 of them were men. What percentage of the athletes were women? Round off your answer to the nearest whole number.

Ans: _____ % [2]

2

2. Xylia is *p* years old and her mother is 35 years old. Zaini's age is half of the total age of Xylia and her mother. How old would Zaini be in 10 years' time? Express your answer in terms of *p*.

Ans: _____ years old [2]

3. Uncle Yong bought $9\frac{3}{4}$ kg of spinach. He gave $5\frac{1}{3}$ kg of the spinach to his son.

He cooked $\frac{2}{5}$ of the remaining spinach. How much spinach was left?

Ans: _____ kg [2]

3
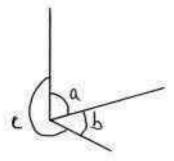
4. Joan and Kelly collected some saga seeds. After Kelly gave Joan $\frac{1}{8}$ of her saga seeds, they each had 679 saga seeds. How many saga seeds did Joan have at first?

    Ans: _____ [2]

5. Aretha bought some apples at 4 for $1. She also bought an equal number of pears at 3 for $1. She paid $2 less for the apples than for the pears. How many pears did she buy?

    Ans: _____ [2]

4

For questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

[50 marks]

6. The figure below is not drawn to scale. $\angle b$ is $\frac{2}{3}$ of $\angle a$. $\angle c$ is twice of the sum of $\angle a$ and $\angle b$. Find $\angle c$.

Ans: _____ [3]

5

7. The table below shows the parking charges at a car park.

First hour	Free
Second hour	$1.50
Every subsequent $\frac{1}{2}$ hour or part thereof	$0.60

Licia parked her car at the car park and paid $4.50 in parking charges. For how long did she park her car at the car park?

Ans: _____ [3]

8. Book P had 280 pages and Book Q had 427 pages. Polly read $\frac{4}{5}$ of Book P and $\frac{2}{7}$ of Book Q. How many pages were left unread in both Book P and Book Q altogether?

Ans: _____ [3]

6

9. Sue-Ann spent $\frac{1}{3}$ of her money on lunch. She spent $30 more than $\frac{1}{3}$ of her remaining money on groceries. She had $74.40 left. How much money did she spend on groceries?

Ans: _____ [3]

7
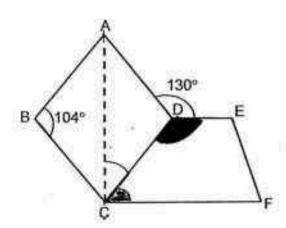
10. 1 kg of prawns cost $17.80 and 1 kg of salmon cost $40.85. Dawson bought $2\frac{1}{2}$ kg of prawns and 0.6 kg of salmon. He gave the cashier $100. How much change did he receive?

Ans : _____ [3]

8

11. A massage chair was sold at $3020. During a sale, there was a discount of 15%. The first 50 customers were given an additional 5% discount off the discounted price. Celia was the 49th customer. How much did she pay for the massage chair in the end?

Ans: _____ [3]

9

12. The figure below is not drawn to scale. ABCD is a rhombus. CDEF is a trapezium.
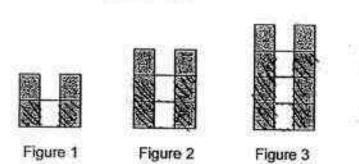
a) Find ∠ACD.
b) Find ∠DCF.

Ans : (a) _____ [2]

(b) _____ [2]

10

13.

The figures below are formed using rectangular cards.

| Figure 1 | Figure 2 | Figure 3 | Figure 4 |
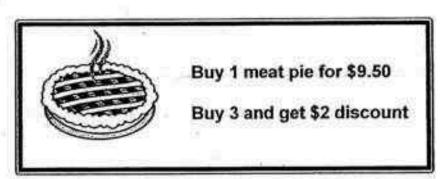
a) How many rectangles are there in Figure 5?
b) How many grey rectangles are there in Figure 35?
c) Which figure is made up of a total of 362 rectangles?

Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [2]

11

14. A cafe was having the following promotion on meat pies. Auntie Mae bought some meat pies and paid a total of $257.50. How many meat pies did she have altogether?
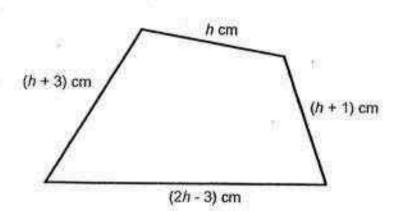
Buy 1 meat pie for $9.50

Buy 3 and get $2 discount

Ans: _____ [4]

12

15. There was 6ℓ of oil. Harold poured 75% of the oil into some 250-mℓ and 500-mℓ bottles. He used 3 more 250-mℓ bottles than 500-mℓ bottles. What was the total number of bottles Harold used to pour the oil into?

Ans:_____ [5]

13

16. At first, there was 24ℓ of water in a cubical tank of edge 40 cm. Then the tank was filled with water running from a tap. The tank was completely filled after 5 minutes. What was the volume of water that flowed from the tap per minute?

Ans : _____ [5]

14

17. Tiana had 206 cm of wire. She used some of it to make the figure, as shown below.

   a) How much of the wire did Tiana use to make the figure? Leave your answer in terms of h.

   b) If $h = 17$, express in ratio, the length of wire used to the length of wire that was not used to make the figure.

h cm

$(h + 3)$ cm

$(h + 1)$ cm

$(2h - 3)$ cm

Ans : (a) _____ [2]

(b) _____ [3]

15

18. In a hall, the ratio of the number of adults to the number of children was 3 : 4. The ratio of the number of men to the number of women is 4 : 5.

   a) Find the ratio of the number of men to the number of women to the number of children.

   b) After some children left the hall, $\frac{3}{11}$ of the remaining people in the hall were children. There were 432 adults in the hall. How many children had left the hall?

Ans : (a) _____ [1]

(b) _____ [4]

End of Paper 2

16

YEAR : 2016
LEVEL : PRIMARY 6
SCHOOL : CHIJ ST NICHOLAS GIRLS'
SUBJECT : MATHEMATICS
TERM : CA1

Paper 1

Q1	4	Q4	2	Q7	4	Q10	3	Q13	4
Q2	3	Q5	4	Q8	3	Q11	4	Q14	1
Q3	2	Q6	3	Q9	3	Q12	4	Q15	1

Q16   2040 cm

Q17 $58 + 11g - 26 - 4g \rightarrow 58 - 26 + 11g - 4g$
$\Rightarrow \underline{(32 + 7g)}$

Q18 $10.2 + 30 \rightarrow 0.34$
$0.34 \text{ kg} \Rightarrow \underline{340 \text{ g}}$

Q19 $7\% = \frac{7}{100}$
$250 \times \frac{7}{100} \rightarrow \frac{35}{2} \rightarrow 17\frac{1}{2} \Rightarrow \underline{\$17.50}$

Q20 $12 + 0.1 \Rightarrow \underline{12.1}$

Q21 $7\frac{5}{14}$

Q22 $400 + 50 \rightarrow 8$
$8 \times 16 \Rightarrow \underline{\$128}$

Q23 $\angle DGF = \angle DEF = 48°$
$\angle GHF \rightarrow 180° - (48° + 39°) = 93°$
$\angle FHD \rightarrow 180° - 93° \Rightarrow \underline{87°}$

Q24 $\frac{5}{8} + \frac{1}{16} \rightarrow \frac{5}{8} \times \frac{16}{1} \Rightarrow \underline{10 \text{ cups}}$

Q25 $\frac{20w + 21}{11} = \frac{20 \times 5 + 21}{11} = \frac{100 + 21}{11} = \frac{121}{11} \Rightarrow \underline{11}$

Q26   A

Q27 $\frac{56}{160} \times \frac{100}{1} \Rightarrow \underline{35\%}$

Q28 $c \times 4 + 8 + 7c \rightarrow 4c + 8 + 7c$
$\rightarrow 4c + 7c + 8$
$\Rightarrow \underline{(11c + 8)}$

Q29
$33 - 9 = 24$
$24 \times 3 = 72$
$72 \div 9 = 8$
$8 \times 33 = \underline{264 \text{ cards}}$

Q30

Paper 2

Q1
$420 - 288 = 132$
$\frac{132}{420} \times 100 \approx 31.4 \approx \underline{31\%}$

Q2
$(p + 35) \div 2 + 10 = (\frac{p + 35}{2}) + 10 \text{ years old}$

Q3
$\frac{5}{5} - \frac{2}{5} = \frac{3}{5}$
$9\frac{3}{4} - 5\frac{1}{3} \rightarrow 4\frac{5}{12}$
$4\frac{5}{12} \times \frac{3}{5} \Rightarrow 2\frac{13}{20} \text{ kg}$

Q4
$\frac{8}{8} - \frac{1}{8} = \frac{7}{8}$
$7u \rightarrow 679$
$1u \rightarrow 679 \div 7 = 97$
$6u \rightarrow 97 \times 6 \Rightarrow \underline{582 \text{ saga seeds}}$

Q5
24 pears

Q6
$3u + 2u = 5u$
$5u \times 2 = 10u$
$10u + 3u + 2u = 15u$
$360° \div 15 \rightarrow 24°$
$24° \times 10 \Rightarrow \underline{240°}$

Q7
$4.50 - 1.50 = 3$
$3 \div 0.6 = 5$
$5 \times \frac{1}{2} = \frac{5}{2} = 2\frac{1}{2}$
$2\frac{1}{2} + 2 \Rightarrow 4\frac{1}{2} \text{ hours}$

Q8
$\frac{5}{5} - \frac{4}{5} = \frac{1}{5}$ (Book P) $\rightarrow 280 \times \frac{1}{5} = 56$
$\frac{7}{7} - \frac{2}{7} = \frac{5}{7}$ (Book Q) $\rightarrow 427 \times \frac{5}{7} = 305$
$56 + 305 \Rightarrow \underline{361 \text{ pages}}$

Q9
$2u \rightarrow 74.40 + 30 = 104.40$
$1u \rightarrow 104.40 \div 2 = 52.20$
$52.20 + 30 \Rightarrow \underline{\$82.20}$

Q10
$17.80 \div 2 = 8.90$
$17.80 \times 2 = 35.60$
$35.60 + 8.90 = 44.5$ (prawns)
$0.6 = \frac{6}{10}$
$40.85 \times \frac{6}{10} = 24.51$ (salmon)
$44.5 + 24.51 \rightarrow 69.01$
$100 - 69.01 \Rightarrow \underline{\$30.99}$

Q11
$100 - 15 = 85$
$3020 \times \frac{85}{100} = 2567$
$100 - 5 = 95$
$2567 \times \frac{95}{100} \Rightarrow \underline{\$2438.65}$

Q12a
$\angle ADC = \angle ABC = 104°$
$\angle ACD \rightarrow (180° - 104°) \div 2 \Rightarrow \underline{38°}$

Q12b
$\angle EDC \rightarrow 360° - 104° - 130° = 126°$
$\angle DCF \rightarrow 180° - 126° \Rightarrow \underline{54°}$

Q13a
$3 \times 5 + 2 \rightarrow 15 + 2 \Rightarrow \underline{17}$

Q13b
$35 \times 2 \rightarrow 70$
$70 + 2 \Rightarrow \underline{72}$

Q13c
$362 - 2 \rightarrow 360$
$360 \div 3 \Rightarrow \underline{\text{Figure 120}}$

Q14
$257.50 \div 26.50 = 9\frac{38}{53}$
$9 \times 26.50 = 238.50$
$257.50 - 238.50 = 19$
$19 \div 9.50 = 2$
$(9 \times 3) + 2 \rightarrow 27 + 2 \Rightarrow \underline{\text{29 meat pies}}$

Q15
$6 \times \frac{75}{100} = 4\frac{1}{2}$
$3 \times 250 = 750$
$4500 - 750 = 3750$
1 group $\rightarrow 250 + 500 = 750$
$3750 \div 750 = 5$
$5 \times 2 \rightarrow 10$
$10 + 3 \Rightarrow \underline{\text{13 bottles}}$

Q16
Cubical tank $\rightarrow 40 \times 40 \times 40 = 64000$
$64000 \text{ cm}^3 = 64000 \text{ ml} = 64 \ell$
5 min $\rightarrow 64 - 24 = 40$
1 min $\rightarrow 40 \div 5 \Rightarrow \underline{8 \ell}$

Q17a $h + h + 1 = h \times 2 + 1 = 2h + 1$

$2h + 1 + 2h - 3 \rightarrow 2h + 2h + 1 - 3 \rightarrow 4h - 2$

$4h - 2 + h + 3 \rightarrow 4h + h - 2 + 3 \Rightarrow \underline{(5h + 1) \, cm}$

Q17b When $h = 17$

$5h + 1 \rightarrow 5 \times 17 + 1 \rightarrow 86$

wire used	:	not used
+ { 86	:	120 } +
2 { 43	:	60 } 2

Answer ⟹ $\underline{43 : 60}$

Q18a $4 + 5 = 9$

	Adt	:	Chd	
x {	3	:	4	} x
3 {	9	:	12	} 3

Answer ⟹ $\underline{4 : 5 : 12}$

Q18b $8u \rightarrow 432$

$1u \rightarrow 432 \div 8 = 54$

$3u \rightarrow 3 \times 54 = 162$ (children in the end)

$9u \rightarrow 432$

$1u \rightarrow 432 \div 9 = 48$

$12u \rightarrow 48 \times 12 = 576$

$576 - 162 \Rightarrow \underline{414 \text{ children}}$

5

Anglo-Chinese School (Junior)

CONTINUAL ASSESSMENT 1 (2016)
PRIMARY 6
MATHEMATICS

Monday   7 March 2016   1 h 30 min

Name _____ ( )   Class: 6.( )

INSTRUCTIONS TO PUPILS

1.   Do not turn over the pages until you are told to do so.
2.   Follow all instructions carefully.
3.   Answer ALL questions.
4.   You are **not** allowed to use a calculator for this paper.
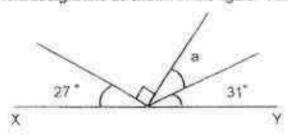
Section	Possible Marks	Marks Obtained
A	10	
B	15	
C	25	
Total	50	

This question paper consists of 14 printed pages (inclusive of cover page).

Section A

Questions **1 to 4** carry 1 mark each. Questions **5 to 7** carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the
Optical Answer Sheet (OAS). (10 marks)

---

1. David had $12. He spends $3m on a book and $2m on a file. How much
   money had he left?

   1) $5m

   2) $7m

   3) $(12 − 5m)

   4) $(12 − 6m)

2. XY is a straight line as shown in the figure. Find ∠a.

   1) 32°

   2) 42°

   3) 59°

   4) 63°

3. At a cinema, the number of adults to the number of children was 2 : 5. Of the adults, the ratio of the number of men to the number of women was 2 : 3. What was the ratio of the number of men to the number of children?

    1) 2 : 5
    2) 2 : 15
    3) 3 : 25
    4) 4 : 25

4. $4 \times 48 = 4 \times 42 + 4 \times$ _____

    1) 4
    2) 6
    3) 12
    4) 60

5. Which of the following fractions is smaller than $\frac{1}{3}$?

    1) $\frac{3}{12}$

    2) $\frac{4}{10}$

    3) $\frac{4}{9}$

    4) $\frac{3}{7}$

Sub-Total :

6. Donald has a collection of $1 and 50¢ coins in the ratio 3 : 4. The total value of all the coins is $70. Find the number of 50¢ coins Donald has.

1) 14
2) 30
3) 40
4) 56

7. In a group of 80 children, 48 of the children are girls. What percentage of the children are boys?

1) 32
2) 40
3) 60
4) 80

Sub-Total

Section B1
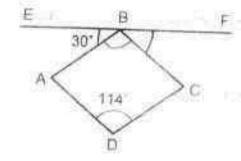
Questions **8** to **12** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(5 marks)

8. A tennis ball weighs m grams and a baseball weighs 200 g more. What is the weight of 3 tennis ball and 2 baseballs? Give your answer in grams.

Answer _____ g

9. In the figure below, ABCD is a rhombus. EBF is a straight line. $\angle EBA = 30°$ and $\angle ADC = 114°$. Find $\angle FBC$.

Answer : _____
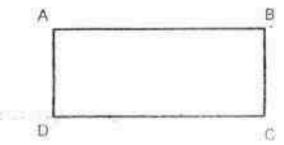
10. Find the value of $\frac{3}{7} \div 12$

Answer : _____

Sub-Total [   ]

11. Find the value of $30 + 90 \div 6 \times (15 - 8) + 2$.

Answer _____

12. In the figure below, ABCD is a rectangle. Its perimeter is 42 cm and AB is 15 cm. Find the length of BC.

Answer _____ cm
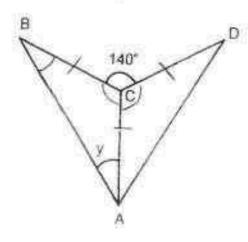
Sub-Total

Section B2

Questions **13** to **17** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

_____

(10 marks)

13.   In the figure below, ABC and ACD are triangles.   AC = CB = CD. Find ∠y.

Answer : _____

14.   30% of the books on a shelf are textbooks and the rest are reference books. Given that 30% of the reference books are in Chinese, what percentage of books on the shelf are non-Chinese reference books?

Answer : _____ %

Sub-Total : [   ]

15. A ruler costs y cents and a pen costs 50 cents more than a ruler. Ali wants to buy 1 pen and 2 rulers but he is short of 20 cents. How much money does he have? Give your answer in terms of y.

Answer _____ ¢

16. Harold uses $\frac{2}{3}$ minute to complete 1 set of exercise. He trained for $\frac{1}{3}$ hours without stopping. How many sets of exercise did he complete?

Answer _____
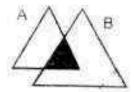
17. The ratio of the area of Triangle A to the area of the shaded portion is 5 : 2. The area of Triangle B is 2 times the area of Triangle A. What is the ratio of the shaded area to the total area of the figure?

Answer _____

Section C

For questions **18** to **24**, show your working clearly question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (25 marks)

18. There are cakes, buns and tarts in a bakery. $\frac{2}{5}$ of them are cakes. $\frac{5}{9}$ of the remainder are buns and the rest are tarts. There are 48 tarts. How many cakes, buns and tarts are there altogether?

Answer : _____ [3]

19. A piece of chicken wing costs $1. When Zachary buys 4 chicken wings he can get 1 chicken wing free. What is the greatest number of chicken wings that Zachary can buy with $40?

Answer : _____ [3]
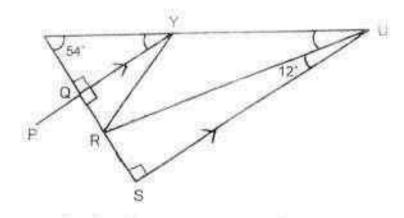
Sub-Total : [   ]

20. A rectangular tank is $\frac{1}{4}$ filled with water. Another 450cm³ of water is poured into the tank so that it is $\frac{1}{3}$ filled with water. How much more water is required to fill up the tank completely?

Answer _____ [3]

21. In the figure below, PY // SU and ∠RQY = 90°
Find
a) ∠TUR and
b) ∠TYQ

Answer (a) _____ [2]

(b) _____ [2]

22. Joanne had a total of 700 red, blue and green beads. $\frac{2}{5}$ of the beads were red and the rest were blue and green. She used an equal number of blue and green beads to make some necklace. In the end, she had $\frac{1}{3}$ of the blue beads and $\frac{1}{2}$ of the green beads left.

a) How many beads were blue and green?
b) What was the total number of beads left?

Answer: (a) _____ [1]

(b) _____ [3]

23. Lionel and Dennis each have some sweets. If Lionel gives 26 sweets to Dennis, both of them will have the same number of sweets. If Dennis gives 12 sweets to Lionel, the number of sweets that Lionel has to the number of sweets that Dennis has will be in the ratio 5 : 1. How many sweets does each boy have?

Answer :_____

24. John spent some money on 25 notebooks. He spent the same amount of money on 20 files. Each notebook cost $1 less than each file. How much did John spend altogether?

Answer _____ [4]

End of Paper

EXAM PAPER 2016
LEVEL   : PRIMARY 6
SCHOOL   : ANGLO CHINESE
SUBJECT : MATHEMATICS
TERM   : CA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7
3	1	4	2	1	4	2

Q8.
T ➜ 3×M=3M
B ➜ m+200g
B ➜ 2×m+200g
= (2m+400)g
Total ➜ 2m+400g+3m
= (5m+400)g

Q9. $180° - 114° - 30 = 36°$

Q10.
$$\frac{3}{7} \times \frac{1}{12} = \frac{1}{28}$$

Q11.
$30 + 90 \div 6 \times (15-8) + 2$
$= 30 + 90 \div 6 \times 7 + 2$
$= 30 + 15 \times 7 + 2$
$= 30 + 105 + 2$
$= 135 + 2$
$= 137$

Q12.
$42 - 15 - 15 = 12$
$12 \div 2 = 6$

Q13.
$360° - 140° = 220°$
$220° \div 2 = 110°$
$180° - 110° = 70°$
£y ➜ $70° \div 2 = 35°$

Q14.
$$\frac{70}{100} \times 70 = \frac{490}{10} = 49$$
$$\frac{30}{100} \times 70 = \frac{210}{10} = 21$$
Ans: 49

Q15.
(y + 50)¢ ➜ pen
ruler ➜ y¢
2 ruler ➜ 2×y = 2y
2y+y+50−20
= (3y+30) ¢

Q16.
⅓ min ➜ 40
⅓ hours ➜ 20 mins
20×60 = 1200
1200÷ 40= 30
Ans: 30 sets

Q17.
$10 - 2 = 8$
S : T
2 : 13

Q18.	Q19.
$4u \rightarrow 48$ $1u \rightarrow 48 \div 4 = 12$ $1u \rightarrow 15 \times 12 = 180$ There are 180 cakes buns and tars Altogether.	$4 \times 1 = 4$ $4 + 1 = 5$ $\$4 \rightarrow 5$ $\$40 \div 4 = 10$ $10 \times 5 = 50$ The greatest number of chicken wings that Zachary can buy with \$40 is \$50 Ans: 50 chicken wings

Q20.	Q21.
$\frac{3}{4} + 1350 \rightarrow 1$ $\frac{1}{4} \rightarrow 1350$ $\frac{1}{2} \rightarrow 1350 \times 2 = 2700$? much $\rightarrow 2700 + 900 = 3600$ Ans: $3600cm^3$	a) $360°$ $\angle TUS = 180° - 90° - 54° =$ $\angle TUR = 36° - 12° = 24°$ $\angle TUR \ 24°$ b) $\angle TYQ = 180° - 90° = 90°$ $\angle TYQ = 180° - 90° - 54° =$ $36°$ $\angle TYQ \ IS \ 36°$

Q22.	Q23.
a) $700 \div 5 = 140$ $1u \rightarrow 140$ $3u \rightarrow 3 \times 140 = 420$ b) $2p + 3u \rightarrow 420$ $2u = 1p$ $2 \times 2 = 4$ $7u \rightarrow 420$ $1u \rightarrow 420 \div 7 = 60$ $2u \rightarrow 2 \times 60 = 120$ $120 \times 2 = 240$ $700 - 240 = 460$ Ans: a) 420 beads b) 460 beads	$4u \rightarrow 26 + 26 + 12 + 12 = 76$ $1u \rightarrow 76 \div 4 = 19$ $D \rightarrow 19 + 12 = 31$ $L \rightarrow (19 + 12 + 26 + 26 = 83)$

Q24.	
5 notebooks $\rightarrow$ \$20 1 notebook $\rightarrow$ \$20 \div 5 = \$4 1 file = \$5 25 notebooks + 20file $= 25 \times 4 + 20 \times 5$ $= \$200$	

RAFFLES GIRLS' PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1
MATHEMATICS (PAPER 1)
PRIMARY 6

Name: _____ ( )

Form Class: P6 _____   Math Teacher: _____

Date: 9th May 2016   Duration: 50 min

Your Score	
Paper 1 (Out of 40 marks)	
Paper 2 (Out of 60 marks)	
Overall (Out of 100 marks)	

<u>INSTRUCTIONS TO CANDIDATES</u>

1. Do not turn over this page until you are told to do so.

2. Follow all instructions carefully.

3. Answer ALL questions and show all working clearly.

4. NO calculator is allowed for this paper.

Questions **1** to **10** carry 1 mark each. Question **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer (1, 2, 3 or 4) on the OAS provided. All diagrams are not drawn to scale.

---

1. In 397 062, the digit 9 is in the _____ place.

   (1)   hundreds

   (2)   thousands

   (3)   ten thousands

   (4)   hundred thousands

2. Arrange the following fractions from the smallest to the largest.

$$\frac{7}{11}, \quad \frac{5}{7}, \quad \frac{7}{10}$$
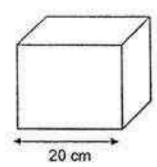
   (1) $\frac{5}{7}, \frac{7}{10}, \frac{7}{11}$

   (2) $\frac{7}{11}, \frac{7}{10}, \frac{5}{7}$

   (3) $\frac{7}{11}, \frac{5}{7}, \frac{7}{10}$

   (4) $\frac{7}{10}, \frac{7}{11}, \frac{5}{7}$

3. Melvin wants to fill the 20-cm cubic tank below to its brim using some 500-ml bottles of water.

500-ml bottle of water

How many bottles of water does he need to fill the tank to its brim?

(1) 8

(2) 16

(3) 160

(4) 520

4. If $k = 9$, what is the value of $4k - \dfrac{3+k}{2}$?

(1) 6

(2) 12

(3) 21

(4) 30

5. In a pet shop, $\frac{3}{4}$ of the pets are fish. The rest are either rabbits or puppies.

There are two times as many as rabbits as puppies.
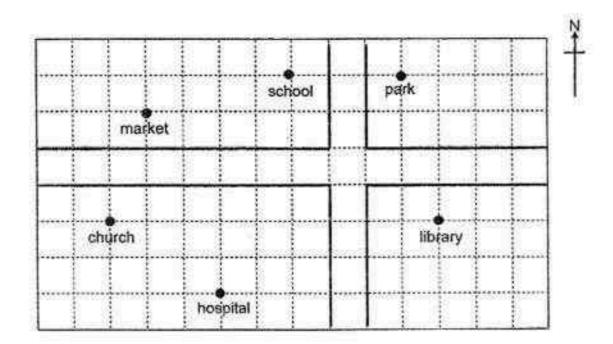
What is the ratio of the number of fish to the number of puppies?

(1) 3 : 1

(2) 3 : 2

(3) 9 : 1

(4) 9 : 2

6. What is the missing fraction in the box?

$$3\frac{4}{5} = \frac{13}{5} + \boxed{}$$

(1) $1\frac{1}{5}$

(2) $1\frac{2}{5}$

(3) $1\frac{3}{5}$

(4) $1\frac{4}{5}$

7. Express $2\frac{2}{5}$ as a decimal.

(1) 2.25

(2) 2.40

(3) 2.52

(4) 2.60
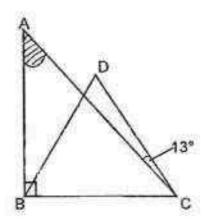
8. The diagram below shows the map of a town.

The school is North-West of the _____

(1)   park

(2)   library

(3)   church

(4)   market

9. In the figure below, ABC is a right-angled triangle and BCD is an equilateral triangle. ∠ACD = 13°. Find ∠BAC.

(1) 43°

(2) 45°

(3) 73°

(4) 77°

10. There were 40 pupils in class 6H and 28 of them were boys.
Find the percentage difference between the boys and girls in the class.

(1) 50%

(2) 20%

(3) 60%

(4) 40%

11. I am a number less than 40.

I am a common multiple of 6 and 9 and a factor of 54.

What number am I?

(1)   6

(2)   18

(3)   3

(4)   27

12. $4.875 = 4 + 8 \times \dfrac{1}{10} + 5 \times \dfrac{1}{100} + \boxed{} \times \dfrac{1}{1000}$

What is the number in the box?

(1)   5

(2)   7

(3)   25

(4)   75
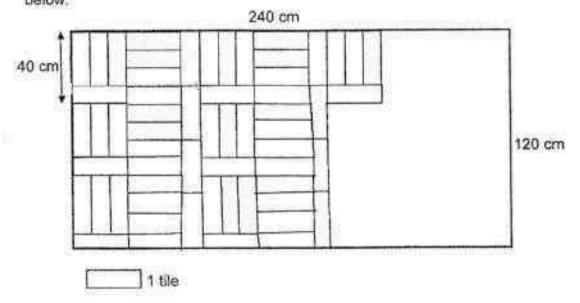
13. Chloe had a box of blue and red marbles. $\dfrac{2}{5}$ of the marbles were blue.

Her brother took away half of the blue marbles from the box.

Find the percentage of the red marbles in the end.

(1)   25%

(2)   20%

(3)   50%

(4)   75%

14. Mr. Lim covered a rectangular floor, measuring 240 cm long by 120 cm wide, completely with identical rectangular tiles by using the tiling pattern shown below.

How many tile did he use altogether?

(1) 18

(2) 32

(3) 64

(4) 96

15. The ratio of men to women at a party is 5 : 3. The ratio of children to women at the same party is 3 : 2. What is the ratio of the number of men to the number of children?

(1) 3 : 5

(2) 5 : 3

(3) 9 : 10

(4) 10 : 9

SECTION B (20 marks)

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided.
For questions which require units, give your answers in the units stated.
All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

16. The average score of Sally, Kenny and Yasmine is 35.

    The total score of Sally and Yasmine is 45.

    What is Kenny's score?

    Ans: _____

17. Find the value of $72 \div 6 \times 2 + (13 - 11)$.

    Ans: _____

18. Mrs Chan brought some fruits. $\frac{4}{9}$ of the fruits were apples and the rest were

pears. $\frac{7}{12}$ of the apples were red apples and the rest were green apples.

What fraction of the fruits were green apples?

Ans: _____

19. A green ribbon is $\frac{3}{5}$ m long. It is $\frac{1}{3}$ m longer than a yellow ribbon.

Find the total length of the 2 ribbons.

Ans: _____ m

20. Convert 37 042 g to kilograms.

Ans: _____ kg
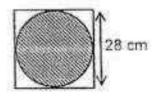
21. Express 1.375 as a mixed number in its simplest form.

Ans: _____

22. The diagram below is made up of a shaded circle and a square.

Find the circumference of the circle. (take $\pi = \frac{22}{7}$)

28 cm

Ans: _____ cm
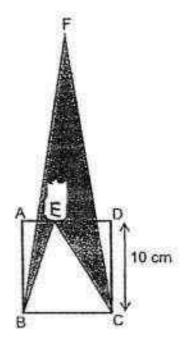
23. Mr Maju had $100. He bought 8 books at $x each. He donated half of his remaining money to charity. How much did he have left?

Ans : $_____

24. In a marathon, James ran a total distance of 42 km in 5 hours.
What was his average speed?

Ans: _____ km / h

25. Mei Fen and her friends watched a movie that lasted 127 minutes.
The movie ended at 11.04 p.m..
What time did the movie start? Express your answer in 24-hour clock.

Ans: _____

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the space provided.
For questions which require units, give your answers in the units stated.
All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

26. The figure below is made up of a square ABCD, triangle BCE and triangle BCF.

    The height of triangle BCF is 3 times the height of triangle BCE.

    The length of the square is 10 cm. Find the value of the shaded area.

Ans: _____ cm²
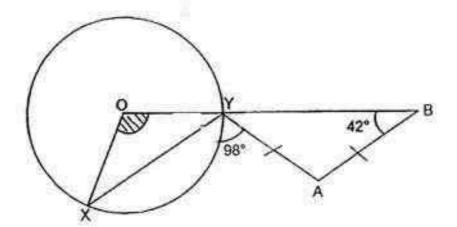
27. 44 lanterns were hung at an equal distance of 11 m apart from one another along a road. What is the distance between the 15th and 30th lantern?

Ans: _____ m

28. A tap takes a day to fill up a 2-m cube.
How long does it take 3 taps to fill up a 6-m cube when they are turned on at the same time, assuming that the rate of flow for the 3 taps is the same?

Ans: _____

29. May keeps the same number of 50-cent and 20-cent coins in a box.
The total value of money in the box is $ 9.80.
What is the total number of coins in the box?

Ans: _____

30. In the diagram below, O is the centre of the circle and OYB is a straight line. ABY is an isosceles triangle. ∠XYA = 98° and ∠ABY = 42° Find ∠XOY.

Ans: _____

RAFFLES GIRLS' PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1
MATHEMATICS (PAPER 2)
PRIMARY 6

Name: _____ ( )

Form class: P6 _____   Math Teacher: _____

Date: 9th May 2016   Duration: 1 h 40 min

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.

2. Follow all instructions carefully.

3. Answer ALL questions and show all working clearly.

4. The use of calculator is allowed for this paper.

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided.
Figures are not drawn to scale.
For questions which require units, give your answers in the units stated.   (10 marks)

1.   At a performance, there are 246 guests. There are 58 more women than men.

What is the ratio of the number of women to the number of men?

Ans: _____ [2]

2.   Germaine had $8y at first. She bought 3 books at $y each. Then her mother gave her $6. Finally, she bought 3 pens and had no money left.
What is the cost of each pen in terms of y?

Ans: $_____ [2]

3. Karen took $\frac{1}{3}$ h to walk from her house to her office. Her average speed was

45 m/min. What was the distance between her house and her office?
Express your answer in kilometres.

Ans: _____ km [2]

4. Claire has $241 more than Mary. $\frac{2}{3}$ of Claire's money is equal to $\frac{3}{4}$ of Mary's

money. How much money do they have altogether?

Ans: $_____ [2]

5.	Miss Pek bought a laptop at $1440.22 inclusive of 7% GST.
Find the amount of the GST.

Ans: $ _____ [2]

For questions **6** to **18**, show your working clearly in the space provided for each question and write your answers in the spaces provided.
Figures are not drawn to scale.
The number of marks available is shown in the brackets [ ] at the end of each question or part-question.

(50 marks)

6. The number of chairs is two times as many as the number of tables in a ballroom. After 147 chairs and 147 tables are added into the ballroom, the ratio of the number of chairs to the number of tables is 7 : 5.
How many tables are there in the end?

Ans : _____ [3]
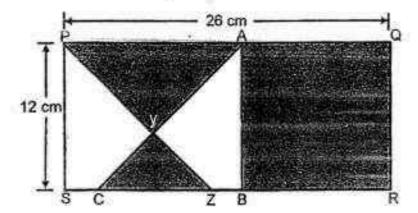
7. At a factory, the ratio of the number of bags to the total number of pouches and wallets produced in a day is 2 : 7. The ratio of the total number of bags and pouches to the number of wallets produced in a day is 5 : 1.

Given that 3454 pouches are produced, what is the total number of items produced at the factory in a day?

Ans: _____ [4]

8. A box can either contain 20 volleyballs or 15 basketballs.
When the box is packed with 12 volleyballs and 2 basketballs, how many more basketballs can be packed into the box?

Ans: _____ [3]

9. In rectangle PQRS below, triangles PSZ and ABC are identical.
The area of triangle CYZ is 28 cm². PS = SZ = AB = BC.
Find the area of the shaded parts.

Ans: _____ [3]

10. Jane ran a total distance of 96 036 m during a two-day charity run.

She ran 12% further on the 2nd day than on the 1st day.

Find the distance that Jane had run on the 2nd day.

Ans : _____ [3]

11. For the first $\frac{2}{3}$ of the journey, Mr Lim drove at a speed of 80 km/h.

For the remaining 30 km of the journey, he drove at a speed of 60 km/h.
What was his average speed for the whole journey?

Ans: _____ [3]

12. Study the patterns in the figures below.
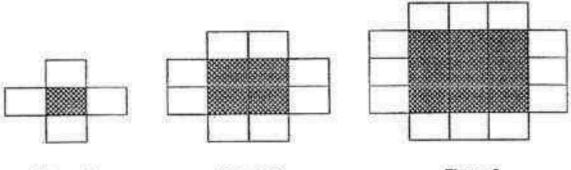
| Figure 1 | Figure 2 | Figure 3 |

Figure	Number of shaded boxes	Number of unshaded boxes	Total number of boxes
1	1	4	5
2	4	8	12
3	9	12	21
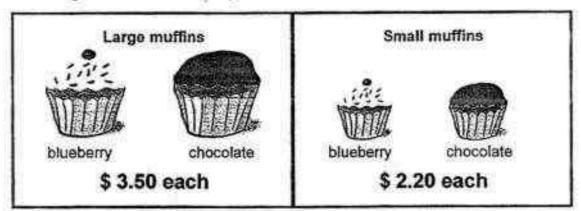
a) How many shaded boxes will there be in Figure 5?

b) Which figure will have 48 unshaded boxes?

c) What is the total number of boxes in Figure 15?

Ans: (a) _____ [1]

(b) Figure _____ [1]

(c) _____ [3]

13.   Some children were at a party. If 45 boys left the party, the ratio of the number of boys to the number of girls would become 5 : 3. If 38 girls left the party, the ratio of the number of boys to the number of girls would became 2 : 1.

How many children were at the party?

Ans: _____ [4]

14. Madam Koh paid $715 for some bowls and plates. She paid $533 more for the bowls than the plates. The number of bowls she bought was 4 times as many as the number of plates. Each plate cost $7.

Find the number of bowls Madam Koh bought.

Ans: _____ [4]

15. The diagram below shows the price of muffins of different sizes and flavours.

Large muffins	Small muffins
blueberry chocolate	blueberry chocolate
$ 3.50 each	$ 2.20 each
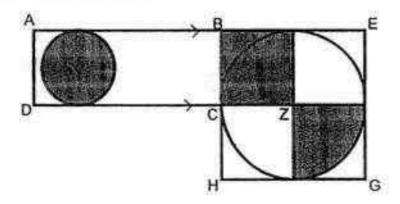
Mrs Khoo bought an equal number of large blueberry and large chocolate muffins and only some small chocolate muffins for her son's birthday party.
She bought 112 muffins altogether and paid $340 in total.

What was the difference in the number of large chocolate muffins and small chocolate muffins Mrs Khoo bought?

Ans: _____ [4]

16. The figure below is formed by a shaded circle Y, rectangle ABCD and square BEGH. AE and DZ are parallel to each other and Z is the centre of the circle in the square. The breadth of rectangle ABCD is $\frac{1}{3}$ of its length.

The area of square BEGH is 144 cm².

Find the following.

(a) Radius of circle Y

(b) Total area of the unshaded parts in the figure. (Take π = 3.14)

Ans: (a)_____[2]

(b)_____[3]

17. Elaine had prepared 4573 butter and chocolate cookies altogether for a sale. At the end of the day, 50% of the butter cookies and 60% of the chocolate cookies were sold. She was left with 2032 cookies.

How many chocolate cookies did Elaine prepare at first?

Ans:_____[4]

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18. Box A has 128 apples more than Box B.

Joel moved 25% of the apples from Box A to Box B.

Then, he moved $\frac{1}{8}$ of the apples in Box B to an empty Box C.

In the end, Box C will have 149 apples less than the remaining apples in Box A.

(a) Find the number of apples in Box C.

(b) Find the number of apples in Box A at first.

Ans : (a) _____ [4]

(b) _____ [1]

Setters : Darren Lau, Ho Kai Huat, Eliza Tang

EXAM PAPER 2016

SCHOOL : REFFLES GIRLS'

SUBJECT : MATHEMATICS

TERM : SA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	2	4	3	1	2	2	1	4
Q11	Q12	Q13	Q14	Q15					
2	3	4	4	4					

16) $60 + 45 = 105$

$105 \div 3 = 35$

$S + K + y = 35 \times 3 = 105$

$S + K = 45$

$K = 105 - 45 = 60$

17) $72 \div 6 \times 2 + (13 - 11)$

$= 72 \div 6 \times 2 + 2$

$= 12 \times 2 + 2$

$= 26$

18) $5/12 \times 1/9 = 5/27$

19) $G \rightarrow 3/5m = 9/15m$

$Y \rightarrow 3/5m - 1/3 m = 9/15m - 5/15m$

$= 4/15$

$9/15m + 4/15m = 13/15m$

20) 1kg = 1000g

37042 ÷ 1000 = 37.042kg

21) 1.375 = 1375/1000

= 175/200

= 115/40

= 13/8

22) 22/7 x 28 = 88cm

23) 8 x X = 8X

(100 − 8X) ÷ 2 = $(50 − 4X)

24) 42 ÷ 5 = 82/5

= 8.4km/h

25) 20 57

26) △BCF → ½ x 10 x 30 = 150

△BEC → ½ x 10 x 10 = 50

150 − 50 = 100cm₇

27) 180° − 98° − 42°

= 180° − 140° = 40°

180° − 40° − 40° = 100°

28) 30 − 15 = 15

15 x 11 = 15 x 10 + 15 x 1

= 150 + 15 = 165m

29) 6 x 6 x 6 = 216

3 x 1/3 = 1

216 ÷ 1 = 216 h

30) 0.5 + 0.2 = 0.7

9.8 ÷ 0.7 = 14

14 x 2 = 28

Paper 2

1) $246 - 58 = 188$

$188 \div 2 = 94$ (M)

$94 + 58 = 152$ (W)

   W : M

  152 : 94

   76 : 47

2) $3 \times y = 3y$

$8y - 3y = 5y$

$(5y + 6) \div 3 = \$(5y + 6/3)$

3) $1/3$ h = 20 mins

$20 \times 45 = 900$

$900m = 0.9$ km

4) $c = 9u$

$m = 8u$ $9u + 8u = 17u$

$9u - 8u = 1u$

$1u = 241$

$1u = 241$

$17u = 17 \times 241 = \$4097$

5) $107\% \rightarrow 1440.22$

$1\% \rightarrow 1440.22 \div 107 = 13.46$

$7\% \rightarrow 7 \times 13.46 = \$94.22$

6) $7u - 4u = 3u$

$3u = 147$

$1u = 147 \div 3 = 49$

$5u = 5 \times 49 = 245$

7) b : p : w

   12 : 33 : 9

   $5652 \div 18 = 314$

   $314 \times 11 = 3454$

   $54u - 12u - 9u = 33u$

   $3454 \div 33 = 104\,2/3$

   $54 \times 104\,2/3 = 5652$

8) $20v = 15b$ $\div 5$

   $4v = 3b$

   $12v = 9b$ $\times 3$

   $12v + 2b = 9b + 2b = 11b$

   $15b - 11b = 4b$

9) $\frac{1}{2} \times 12 \times 12 = 72$

   $72 - 28 = 44$

   $44 \times 2 = 88$

   $26 \times 12 = 312$

   $312 - 88 = 224cm_2$

10) $1^{st} \to 25u$ $28u + 25u = 53u$

   $2^{nd} \to 28u$

   $25u \times 112\% = 28u$

   $53u = 96036$

   $1u = 96036 \div 53 = 1812$

   $28u = 28 \times 1812 = 50736m$

11) 1/3 of D → 30

2/3 of D → 2 x 30 − 60

1st → 60 ÷ 80 = ¾

2nd → 30 ÷ 60 = ½ = 2/4

¾ + 2/4 = 5/4

= 1¼ (total time)

3 x 30 = 90 (Total distance)

90 ÷ 1¼ = 72km/h

12) a) 5 x 5 = 25

b) 48 ÷ 4 = 12

c) 15 x 15 = 225

15 x 4 = 60

225 + 60 = 285

13) 5u + 45 − 6u − 76

5u + 45 + 76 = 6u

5u + 121 = 6u

121 = 6u − 5u

121 = 1u ⎤ x8

968 = 8u ⎦

968 + 45 = 1013

14) 715 − 533 = 182

182 ÷ 2 = 91

7u → 91

1u → 91 ÷ 7 = 13

4u → 4 x 13 = 52

15) $112 \times 3.5 = 392$

$392 - 340 = 52$

$3.5 - 2.2 = 1.3$

$52 \div 1.3 = 40$ (s)

$112 - 40 = 72$ (L)

$72 \div 2 = 36$ (Large choco)

$40 - 36 = 4$

16)a) $\sqrt{144} = 12$ (2u)

$1u = 12 \div 2 = 6$ (diameter of circle y)

$6 \div 2 = 3$

b) total area of figure ➔ $3 \times 6 = 18$

$18 \times 6 = 108$

$108 + 144 = 252$

Total area of shaded ➔ $3.14 \times 3 \times 3 = 28.26$ (circle y)

$6 \times 6 = 36$

$\frac{1}{4} \times 3.14 \times 6 \times 6 = 28.26$

$28.26 + 36 + 28.26 = 92.52$

$252 - 92.52 = 159.48$ cm$_2$

17) $\frac{1}{2}B + 2/5C = 2032$

X2 $\left[\begin{array}{l} 2/2B + 5/5C = 4573 \\ 2/2B + 4/5C = 2032 \times 2 = 4064 \end{array}\right.$

$5/5C - 4/5C = 1/5C$

$1/5C = 4573 - 4064 = 509$

$C = 509 \times 5 = 2545$

18)A→(1u + 128) − (¼ u + 32) = ¾ u + 96

   B→1u + ¼ u + 32 = 1¼ + 32

   (1¼u + 32) − (5/32u + 4) = 1 1/32 u + 28

   C→5/32 u + 4

5/32u + 4 + 149 = ¾ u + 96

5/32u + 153 = 24/32 u + 96

5/32u + 153 − 96 = 24/32 u

5/32u + 57 = 24/32 u

57 = 24/32u − 5/32u

57 = 19/32u ＼ ÷19

   3 = 1/32u

15 = 5/32u ⟍ x5

15 + 4 = 19

3 x 32 = 96 (1u)

96 + 128 = 224

NANYANG PRIMARY SCHOOL

FIRST SEMESTRAL EXAMINATION 2016

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	/ 20	**Paper 1 Total:**
Booklet B	/ 20	**/ 40**

Name: _____ (   )

Class: Primary 6 (   )

Date: _____

Any query on marks awarded should be raised by <u>18 May 2016</u>. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's Signature: _____

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.

YOU ARE **NOT** ALLOWED TO USE A CALCULATOR.

PAPER 1 (BOOKLET A)

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

1　Which one of the following is a common factor of 6 and 16?

(1)　1

(2)　6

(3)　16

(4)　48

2　Which one of the following is nearest to 1?

(1)　$\frac{1}{2}$

(2)　$\frac{5}{6}$

(3)　$1\frac{1}{5}$

(4)　$1\frac{1}{7}$

1
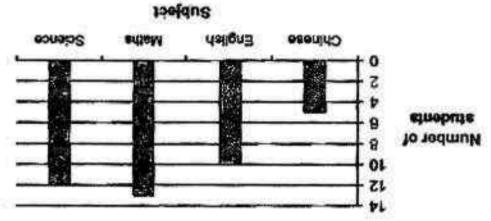
3   Find the value of 750 + 8.

   (1)   9.375

   (2)   9.875

   (3)   93.75

   (4)   98.75

4   The price of a car was increased by 20% to $120 000.   How much was
     the original price of the car?

   (1) $80 000

   (2) $100 000

   (3) $150 000

   (4) $600 000

5   Jun Xi has 80 marbles.   He has 2x marbles fewer than his sister.   How
     many marbles do both of them have altogether?

   (1)   80 + 2x

   (2)   80 – 2x

   (3)   160 – 2x

   (4)   160 + 2x

6   Julian had some beads. He gave away 210 beads and was left with
    30% of the beads. How many beads did he have at first?

    (1)   90

    (2)   300

    (3)   490

    (4)   700

7   EFGH is a parallelogram. FJ and KG are straight lines. Find ∠JFG.

    (1)   74°

    (2)   54°

    (3)   34°

    (4)   4°
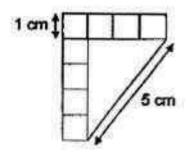
9   The figure below is made of eight identical squares and a right-angled triangle. Find the perimeter of the figure.

(1)   14 cm

(2)   16 cm

(3)   23 cm

(4)   30 cm

10   The sides of a triangle are in the ratio 6 : 4 : 9. The length of the shortest side is 36 cm. Find the length of the longest side.

(1)   16 cm

(2)   41 cm

(3)   54 cm

(4)   81 cm

11   Find the product of $\frac{4}{3}$ and $\frac{5}{6}$.
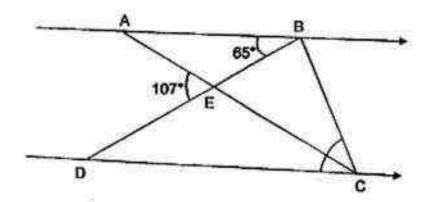
(1) $\frac{10}{9}$

(2) $\frac{8}{5}$

(3) $\frac{20}{3}$

(4) $\frac{3}{8}$

12   Arrange the following numbers in descending order.

9,   9.09,   9.009,   9.9
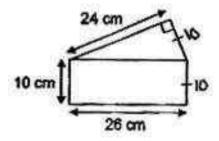
(1)   9.9,   9,   9.09,   9.009

(2)   9.9,   9.09,   9.009,   9

(3)   9,   9.9,   9.09,   9.009

(4)   9,   9.009,   9.09,   9.9

6

13   What is the perimeter of a semicircle with radius 14 cm?

(Take $x = \dfrac{22}{7}$)

(1)   36 cm

(2)   44 cm

(3)   58 cm

(4)   72 cm

14   In the figure below, AB is parallel to DC and AEC cuts ∠BCD equally.
AEC and BED are straight lines.   Given that ∠ABD is 65° and ∠AED
is 107°, find ∠BCD.

(1)   42°

(2)   56°

(3)   73°

(4)   84°

16 The figure below is made of a right-angled triangle and a rectangle. Find the area of the figure.
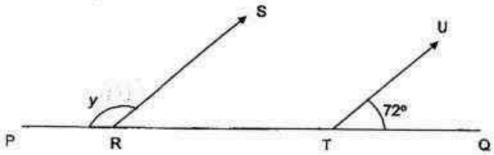
(1)   260 cm²

(2)   380 cm²

(3)   390 cm²

(4)   500 cm²

PAPER 1 (BOOKLET B)

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

---

16   Simplify $6n + 8 + 2n - 7$.

Ans: _____

---

17   Find the value of $8008 - 299$.

Ans: _____

---

18   Find the value of $(18 + 12) - 5 + 1 \times 4$.

Ans: _____

9

19   Express 17.05 as a mixed number in its simplest form.

Ans: _____

20   Round off 499.998 to the nearest hundredth.   Leave your answer in 2
decimal places.

Ans: _____

21   Ji Sub bought an oven for $1070 inclusive of 7% GST.   How much was
the usual price of the oven without GST?

Ans: $ _____

22 In the figure below, PQ is a straight line, RS and TU are parallel. Find the value of y.
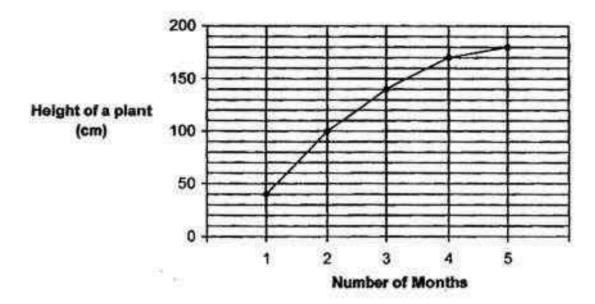
Ans: _____ °

---

23 What is 2016 cm in m?
Express your answer as a decimal.

Ans: _____ m

---

24   The graph below shows the height of a plant over a 5-month period. What is the difference in the height of the plant between the 2ⁿᵈ and the 4ᵗʰ month?

Height of a plant (cm)

Number of Months

Ans: _____ cm

---

25   A painter mixed 2 *l* of blue paint and 6 *l* of yellow paint with every litre of white paint for a painting job.   He used a total of 36 *l* of paint for the painting job.   How many litres of white paint did he use?

Ans: _____ *l*

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

26   The total cost of 400 identical bags is $482. What is the total cost of 100 such bags?

Ans: $ _____
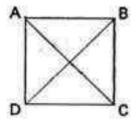
27   The length of a rectangle is 6 times its breadth. Express the ratio of the length of the rectangle to the perimeter of the rectangle in the simplest form.

Ans: _____

13

28   Boon went for a 3-day hiking trip. Each day he walked 2.4 km more
      than the day before. He walked a total of 54 km for the three days.
      How many kilometres did he walk on the third day?

Ans: _____ km

29   The figure below is made of up a circle and a square. Points A, B, C
      and D lie on the circumference of the circle. The area of Square ABCD
      is 50 cm². Find the area of the circle in terms of π.

Ans: _____ cm²

14

30 After a class test, Si Won and some of his friends calculated their average marks. They realised that if Si Won had scored 15 marks more, they would have an average of 85 marks. However, if Si Won had scored 7 marks more, they would have an average of 83 marks. How many of them, including Si Won, were calculating their average marks together?

Ans: _____

END OF PAPER

NANYANG PRIMARY SCHOOL

FIRST SEMESTRAL EXAMINATION 2016

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	/ 60
GRAND TOTAL	**/ 100**

Name: _____ (   )

Class: Primary 6 (   )

Date: _____

Any query on marks awarded should be raised by 18 May 2016. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's Signature: _____

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.

YOU ARE ALLOWED TO USE A CALCULATOR.

PAPER 2

Questions **1** to **5** carry 2 marks each.   Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

<div align="right">(10 marks)</div>

---

1   The table below shows the mass of a group of children.   Express the ratio of Kelsey's mass to Gopal's mass to Jiawen's mass. Give your answer in the simplest form.
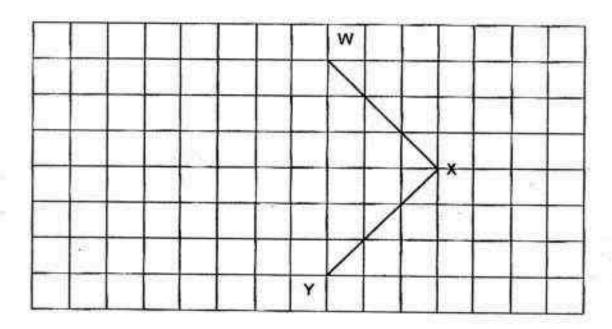
Name of child	Mass (kg)
Gopal	36
Isabel	24
Jiawen	28
Kelsey	32

Ans: _____

---

2   Gary is *y* years older than his sister.   His sister is 10 years old now, how old is Gary now?

Ans: _____

1
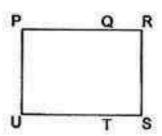
3   Mrs Lim sold 8.09 kg of beef in the morning and 9200 g in the afternoon.
How much beef did she sell altogether?   Give your answer in kg.

Ans: _____ kg

---

4   Two sides of a square WXYZ have been drawn in the square grid as
shown below.   Complete the drawing of the square WXYZ.

2

5 In the figure below, PQTU is a square and QRST is a rectangle. The area of Square PQTU is 196 cm² and the area of Rectangle QRST is 84 cm² Find the length of TS.

P _____ Q   R
| | |
| | |
U _____ T   S

Ans: _____ cm

For questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided.

The number of marks available is shown in brackets [   ] at the end of each question or part-question.

(50 marks)

6   Mr Heng bought 10 pizzas to give to a group of children. After each girl was given $\frac{1}{8}$ of a pizza and each boy was given $\frac{1}{4}$ of a pizza, there was no pizza left. There were thrice as many girls as boys. How many boys were there?

Ans: _____ [3]

7   The ratio of the number of stickers Ming had to the number of stickers Raihana had is 11 : 7. After Ming gave 42 stickers to Raihana, the ratio of the number of stickers Ming had to the number of stickers Raihana had became 4 : 5. How many stickers did they have altogether?

Ans: _____ [3]

4

8   Figure 1 below shows a rectangular piece of paper CDEF. It is folded along DF to form Figure 2. Find $\angle a$.

C   D

F   E

Figure 1

E

20°

C   D

a

F

Figure 2

Ans: _____ [3]
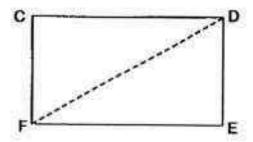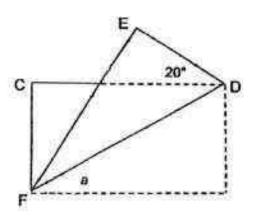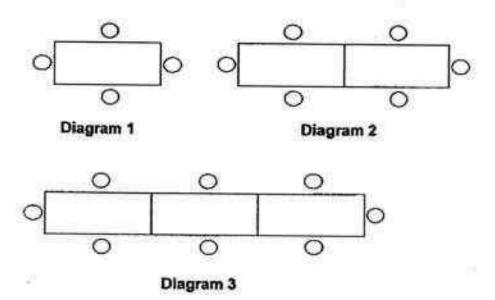
9   On Day 1 of a camp, the participants were divided to form groups such that there were exactly 12 participants in each group. On Day 2, 8 more participants joined the camp and all the participants were then rearranged to form new groups. Each group had 10 participants and there were 3 more groups than Day 1. On both days, no participants left the camp. How many participants were there at the camp on Day 2?

Ans: _____ [3]

10   A table in a hall can sit 4 pupils as shown in Diagram 1.   When the
      tables are joined together, they could sit the number of pupils as
      illustrated in Diagrams 2 and 3 below.

Diagram 1   Diagram 2

Diagram 3

(a) How many pupils could be seated when 4 tables are joined
    together?

(b) How many pupils could be seated when 50 tables are joined
    together?

Ans: (a) _____ [1]

      (b) _____ [2]

7

11 Naomi and Zec shared a sum of money. $\frac{1}{4}$ of Naomi's share was $120 more than 20% of Zec's share. They had a total of $5700. How much did Naomi have?

Ans: _____ [4]

12 At first, the ratio of the number of children to the number of adults at a party was 1 : 2.   After 96 more children and 118 more adults joined the party, the ratio of the number of children to the number of adults at the party became 3 : 5 in the end.   How many adults were there at the party at first?

Ans: _____ [4]
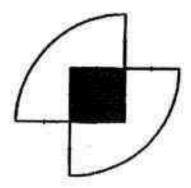
13   Mrs Lim bought some green ribbon and some purple ribbon.   The total
      length of the green ribbon and the purple ribbon she bought was
      $396\frac{1}{3}$ m. After using $\frac{4}{7}$ of the green ribbon and $\frac{3}{5}$ of the purple
      ribbon, she had an equal length of green ribbon and purple ribbon left.
      How many metres of purple ribbon did she buy?

                                        Ans: _____ [4]
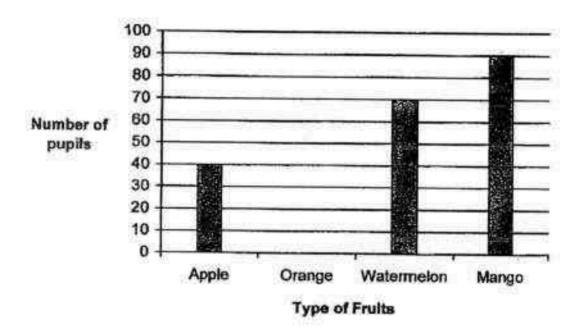
14 Azean had 0.6 as many books as Tricia. Azean gave away 20% of her books and Tricia bought another 108 books. As a result, Azean had 0.5 as many books as Tricia. How many books did Tricia have in the end?

Ans: _____ [4]

15 The figure below is made up of 2 overlapping quadrants. The area of the shaded part is 36 cm². Using π = 3.14, find the perimeter of the figure.

Ans: _____ [4]

16   250 pupils were asked to choose one of their favourite fruits.   The bar
      graph below shows the choice of the pupils.   The result for the number
      of pupils who chose orange was accidentally erased and some pupils
      did not choose a fruit at all.
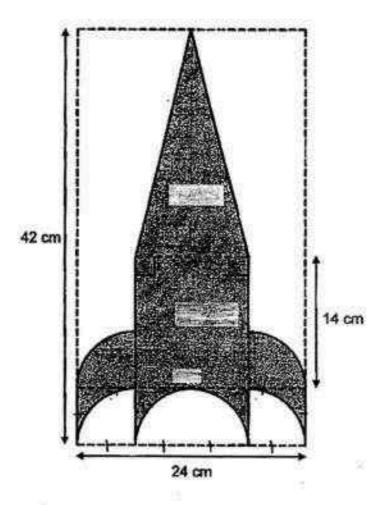
(a) What percentage of the pupils chose mango as their favourite fruit?

(b) The total number of pupils who chose watermelon and mango as
    their favourite fruits was twice the number of pupils who chose
    apple and orange.   How many pupils did not choose a fruit at all?

Ans: (a) _____ [1]

      (b) _____ [4]

13

17   A symmetric figure is drawn on a rectangular piece of paper measuring
      42 cm by 24 cm as shown below. Its outline consists of 4 identical
      quarter circles, 1 semi-circle and 8 straight lines. Using $\pi = 3.14$, find
      the area of the figure.

Ans: _____ [5]

18 Jolene spent $\frac{1}{4}$ of her salary on a bag. She bought a pair of shoes with $\frac{1}{6}$ of the remaining money and a scarf with $225. She then gave $\frac{2}{5}$ of the rest of her money to her mother and $180 to her son. In the end, she had $\frac{3}{10}$ of her salary left. How much was Jolene's salary?

Ans: _____ [5]

END OF PAPER

15

EXAM PAPER 2016

SCHOOL :NANYANG

SUBJECT :P6 MATHEMATICS

TERM : SA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	4	3	2	4	2	3	2	2	4
Q11	Q12	Q13	Q14	Q15					
1	2	4	4	2					

16)(8n+1)   17)7709   18)29   19)$17\frac{1}{20}$ 20)500.00

21)$1000

22) $\angle$UTR$\rightarrow$180° − 72° = 108°   23)2016 ÷ 100 = 20.16m

  $\angle$SRT$\rightarrow$180° − 108° = 72°   24)170 − 100 = 70 cm

  $\angle$y$\rightarrow$180° − 72° = 108°   25)2L + 6L + 1L = 9L

                                        36L ÷ 9L = 4

26)400 ÷ 100 = 4

  $482 ÷ 4 = $120.50

27) L : B
    6 : 1

(6+1) x 2 = 14

    L : P
    6 : 14
    = 3 : 7

28) 2.4 x 3 = 7.2

54 − 7.2 = 46.8

46.8 ÷ 3 = 15.6

15.6 + 2.4 x 2 = 20.4 km

29) 50 ÷ 2 = 25

½ x 10 x 5 = 25

10 ÷ 2.5

Π x 5 x 5 = 25 Π cm$_2$

30) 15 − 7 = 8

85 − 83 = 2

8 ÷ 2 = 4

Paper 2

1) K : G : J

32 : 36 : 28

= 8 : 9 : 7

2) S → 10

G → (10 + y) years old

3) 9200g = 9.2kg

8.09kg + 9.2kg = 17.29kg

4)

5) $\overline{196} = 14$

    $84 \div 14 = 6cm$

6) $1/8 \times 3 + \frac{1}{4} = 5/8$

    $10 \div 5/8 = 16$

7) M : R

    11 : 7

  -42   +42

    4 : 5

= 8 : 10

  $11 + 7 = 18$

  $4 + 5 = 9$

  $18 \div 9 = 2$

  $11 - 8 = 3$

  $42 \div 3 = 14$

  $14 \times 18 = 252$

8) $180° - 90° - 20° = 70°$

  $180° - 70° = 110°$

  $180° - 110° = 70°$

  $\angle CFE \rightarrow 180° - 90° - 70° = 20°$

  $90° - 20° = 70°$

  $\angle a \rightarrow 70° \div 2 = 35°$

9) 10 groups of $12 \rightarrow 12 \times 10 = 120$

  $120 + 8 = 128$

  11 groups of $12 \rightarrow 12 \times 11 = 132$

  $132 + 8 = 140$ (ans)

  $140 \div 10 = 14$

  $14 - 11 = 3$

10) a) $8 + 2 = 10$

  $50 \times 2 = 100$

  b) $100 + 2 = 102$

11) 20% = 1/5

$120 x 5 = $600

$5700 + $600 = $6300

4 + 5 = 9

$6300 ÷ 9 = $700

$700 x 4 = $2800

12)   C : A

       1 : 2

+ 96   + 118

       3 : 5

118 − 96 = 22

3u − 2u = 1u

1u→96 − 22 = 74

74 x 5 = 370

370 − 118 = 252

13) $1 - 4/7 = 3/7$

$1 - 3/5 = 2/5$

$3/7 = 6/14$

$2/5 = 4/10$

2/10 of purple = ¼ of green

10/10 of purple = 15/14 of green

$15 + 14 = 29$

$396_{1/3} \div 29 = 13_{2/3}$

$13_{2/3} \times 15 = 205m$

14) $0.6 = 60\%$

$60\% \times 20\% = 12\%$

$60\% - 12\% = 48\%$

$48\% \times 2 = 96\%$

$100\% - 96\% = 4\%$

$108/4 \times 96 = 2592$

15) $\overline{36} = 6$

$6 \times 4 = 24$

$\frac{1}{2} \times 3.14 \times 24 = 37.68$

$37.68 + 24 = 61.68$

16)a) $90/250 \times 100\% = 36\%$

   b) $90 + 70 = 160$

   $160 \div 2 = 80$

   $250 - 160 - 80 = 10$

17) $24 \div 4 = 6$

   $6 \times 2 = 12$

   $14 \times 12 = 168$

   $42 - 14 - 6 = 22$

   $\frac{1}{2} \times 22 \times 12 = 132$

   $6 \times 6 = 36$

   $36 \times 2 = 72$

   $12 \times 6 = 72$

   $\frac{1}{2} \times 3.14 \times 6 \times 6 = 56.52$

   $72 - 56.52 = 15.48$

   $15.48 + 72 = 87.48$

   $87.48 + 132 + 168 = 387.48 \text{cm}_2$

18) $1 - \frac{1}{4} = \frac{3}{4}$

$1/6 \times \frac{3}{4} = 1/8$

$\frac{1}{4} = 2/8$

$2/8 + 1/8 = 3/8$

$3/8 = 15/40$

$3/10 = 12/40$

$1 - 2/5 = 3/5$

$\$180 \div 3 = \$60$

1/5 of the rest of the money = 1/10 of salary + $60

5/5 of the rest of the money = 5/10 of salary + $300

$5/10 = 20/40$

$1 - 20/40 - 15/40 = 5/40$

$\$60 \times 5 = \$300$

$\$300 + \$225 = \$525$

$\$525 \div 5 = \$105$

$\$105 \times 40 = \$4200$

NAN HUA PRIMARY SCHOOL
SEMESTRAL EXAMINATION 1 – 2016
PRIMARY 6

MATHEMATICS

Paper 1

Section A: 15 Multiple Choice Questions (20 marks)

Section B: 15 Short Answer Questions   (20 marks)

Total Time for Paper 1:   50 minutes

INSTRUCTION TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided for Questions 1-15.
6. You are not allowed to use calculator for Paper 1.

Marks Obtained

Paper 1	Booklet A		/ 40
	Booklet B		
Paper 2			/ 60
Total			/ 100

Name : _____ (   )

Class : 6_____

Date : 10 May 2016   Parent's Signature :_____

Section A (20marks)
Questions 1 to 10 carry 1 mark each.
Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical
Answer Sheet.

1. Simplify $12x + 13 + 3x - 7$.

    (1) $15x - 20$

    (2) $15x + 20$

    (3) $15x - 6$

    (4) $15x + 6$

2. Round off 728 596 to the nearest thousand.

    (1) 727 000

    (2) 728 000

    (3) 729 000

    (4) 730 000

3. Given that 16 x 208 = 3 328, find 16 x 0.208

    (1) 3.328

    (2) 33.28

    (3) 332.8

    (4) 33 280

1

4. The clock below shows the time now.

How long will it take for the clock to show 2.05 p.m.?

(1) 25 min

(2) 27 min

(3) 30 min

(4) 33 min

5. Find the value of $\dfrac{5}{6} \div \dfrac{1}{12}$

(1) 8

(2) 2

(3) 10

(4) 12

2

3

6. In the number line below, what is the number indicated by the letter 'A'?

(1) $6\frac{1}{2}$

(2) $6\frac{3}{4}$

(3) $7\frac{1}{4}$

(4) $7\frac{1}{2}$

7. What is the missing number in the box?

$$\frac{20}{30} = \frac{30}{\boxed{}}$$

(1) 15

(2) 30

(3) 45

(4) 60
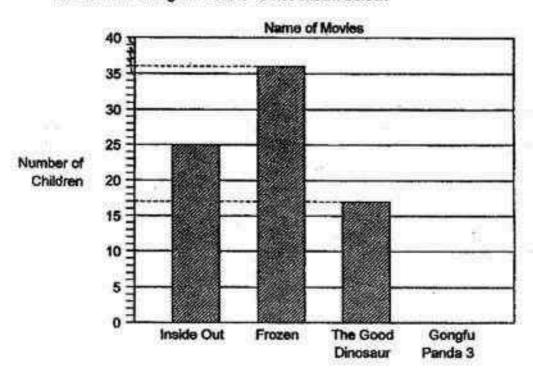
8. What fraction of the entire figure below is **unshaded**?

(1) $\frac{3}{14}$

(2) $\frac{3}{7}$

(3) $\frac{11}{14}$

(4) $\frac{4}{7}$

9. There were 48 rotten eggs in the carton. This was 75% of the eggs in the carton.
What was the total number of eggs in the carton?

(1) 12

(2) 36

(3) 60

(4) 64

4

10. The bar graph below shows the favourite movies of a group of children.

The data for 'Gongfu Panda 3' is not shown below.

Name of Movies

If $\frac{3}{4}$ of the total number of children like 'Inside Out', 'Frozen' and 'The Good Dinosaur', how many children like 'Gongfu Panda 3'?

(1) 26

(2) 78

(3) 104

(4) 182

11. 40% of Alvin's savings is equal to 25% of Theodore's savings. What is the ratio of Alvin's savings to Theodore's savings?

   (1)   8 : 5

   (2)   5 : 8

   (3)   2 : 1

   (4)   1 : 2

12. Study the following pattern. What is the 57th shape?

□ ✚ △ ✚ ○ □ ✚ △ ✚ ○ □ ✚ △
1st   13th

   (1)   □

   (2)   ✚

   (3)   △

   (4)   ○

13. Flour, raisins and eggs are mixed in the ratio of 6 : 3 : 1 to make cupcakes. Every 100g of the mixture can make 12 cupcakes. Mrs Loo used 480g of flour in her mixture, how many cupcakes did she make?

   (1)   40

   (2)   48

   (3)   80

   (4)   96

6

14. Both Hansel and Gretel are given the same amount of pocket money every month. Every month, Gretel saves $\frac{3}{4}$ of her pocket money while Hansel saves $\frac{1}{2}$ of what Gretel saves. What fraction of their total pocket money did they spend every month?

   (1) $\frac{1}{8}$

   (2) $\frac{5}{16}$

   (3) $\frac{7}{16}$

   (4) $\frac{9}{16}$

15. Machine A and Machine B could together produce 150 similar loaves of bread in 6 minutes. Every minute, Machine A produced 15 more loaves of bread than Machine B. How long would it take Machine A to produce 400 loaves of bread by itself?

   (1) 16

   (2) 20

   (3) 62

   (4) 80

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. [10 marks]

16. 14 identical cakes are to be shared equally by a group of children. Each child receives $\frac{2}{7}$ of a cake. How many children are there in the group?
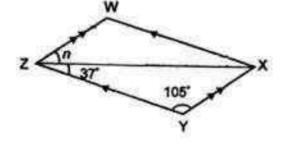
Do not write in this space

Ans : _____

17. Ali is w years old. He is five years older than June.
What is their total age in terms of w?

Ans : _____ years

18. Figure WXYZ is a parallelogram (not drawn to scale). Find $\angle n$.

Ans: _____ °

8

Subtotal	/ 3

19. A motorist can travel 42 km in 30 minutes. Find his speed.

Ans : _____ km/h

20. The solid below is formed by gluing together some identical unit cubes. What is the least possible number of unit cubes needed to make the solid into a bigger cube?

Ans : _____ cubes

21. Ken had $\frac{7}{8}\ell$ of orange juice. He drank $\frac{1}{9}$ of it. How much orange juice had he left?
(Leave your answer as a fraction in its simplest form)

Ans : _____ ℓ

Subtotal	/ 3

9

22. Miss Nelson bought a bag at $160. The usual price of the bag was $250. Find the percentage discount given to her.

Ans :_____ %

23. Tom and Dick shared some cards. If the number of Tom's cards is $\frac{5}{8}$ of

the total number of their cards, what is the ratio of the number of Dick's cards to the number of Tom's cards?

Ans _____ : _____

24. Mrs Twinkle drove from Town P to Town Q and back to Town P in $1\frac{1}{3}$ h.

She travelled at a speed of 90 km/h. What was the distance between Town P and Town Q?

Ans:_____ km

25. Fann queued just in front of Zoe to take part in the "Singapore Idol 2016" Contest. The sum of their queue numbers is 4691. What is Fann's queue number?
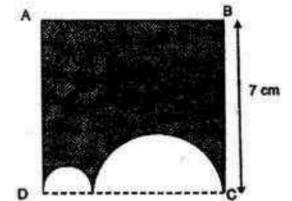
Ans :_____

Subtotal	/ 4

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For each questions which require units, give your answers in the units stated. [10 marks]

26. 5 shirts and 2 jackets cost $408.
2 shirts and 1 jacket cost $174.
What is the cost of 1 shirt?
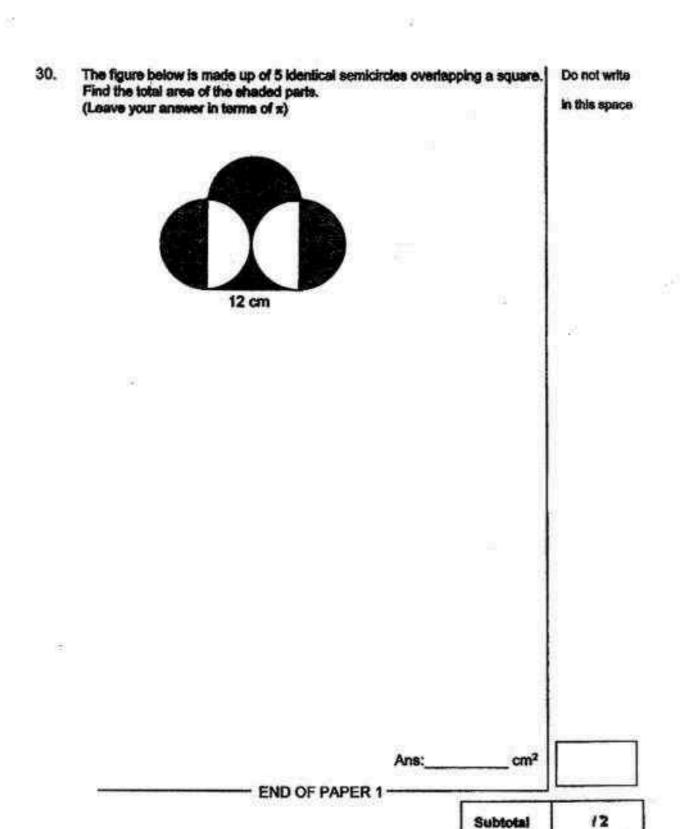
Ans :$ _____

27. In the figure below, two semi-circles were removed from a square of

sides 7 cm. Find the perimeter of the shaded part. (Take $\pi = \dfrac{22}{7}$)

7 cm

Ans : _____ cm

11

28. A fitness club has a membership of 84 people. The number of female to male members was 4 : 3. When 66 new members joined the fitness club, the ratio of female to male members became 2 : 3. How many of the new members were males?

Ans: _____

29. In the figure below, not drawn to scale, ABCE and CDEF are rhombuses. Find ∠AEF.

Ans: _____

12

Subtotal	/ 4

30. The figure below is made up of 5 identical semicircles overlapping a square. Find the total area of the shaded parts.
(Leave your answer in terms of π)

12 cm

Ans:_____ cm^2

Subtotal	/ 2

13

NAN HUA PRIMARY SCHOOL
SEMESTRAL EXAMINATION 1 – 2016
PRIMARY 6

MATHEMATICS

Paper 2

Total Time for Paper 2: 1 hour 40 minutes

5 Short Answer Questions   (10 marks)

13 Structured / Long Answer Questions (50 marks)

INSTRUCTION TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully
4. Answer all questions and show your workings clearly.
5. You are allowed to use a calculator.

Marks Obtained

Total		/ 60

Name : _____(   )

Class : 6_____

Date : 10 May 2016   Parent's Signature : _____

Questions 1 to 5 carry 2 marks each. Show your workings clearly in the space below it and write your answer in the space provided. Give your answers in the units stated.

1. The figure below is made up of 2 circles with centre O.
    Find the area of the shaded part. Use the calculator value of π and give your answer correct to 2 decimal places.

Ans:_____ cm²

2. The figures below are made of black and white squares.

Figure Number	Figure	No. of white squares	Total number of squares
1		2	3
2		4	5
3		6	7

(a) How many white squares are there in Figure n?
(b) What is the total number of squares in Figure n?

Ans: (a) _____ [1m]

(b) _____ [1m]

Subtotal	/ 4

1

3. The beaker below shows the amount of water John had at first. He poured all the water from the beaker into an empty container to fill the container to the brim.
What is the base area of the container given that its height is 10 cm?

2 ℓ

10 cm

Beaker   Container

Ans:_____ cm²

4. The figure below, not drawn to scale, shows a square ABCD.
Find the total area of the shaded parts.

6 cm

7 cm

9 cm

Ans:_____ cm²

| Subtotal | /4 |

2

5. The ratio of Min Lee's stickers to Jane's stickers was 7 : 4 at first. If

Min Lee gives $\frac{1}{3}$ of her stickers to Jane, what will be the ratio of

Min Lee's stickers to Jane's stickers in the end?

Ans:_____:_____
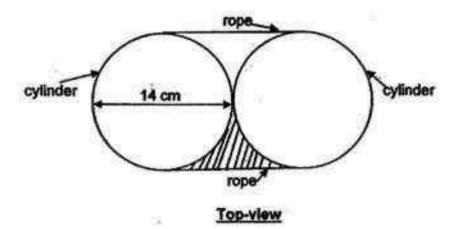
Subtotal	/2

For each question from 6 to 18, **show your workings clearly in the space below** it and **write your answer in the space provided.** The number of marks available is shown in brackets [ ] at the end of each question or part-question. **Remember to include the units** wherever possible.

6. Riley made $\frac{2}{5}$ as many paper aeroplanes as paper balls. After his brother gave him another 45 paper aeroplanes and 45 paper balls, the number of paper aeroplanes became 7:13 paper balls. What was the total number of paper aeroplanes and paper balls at first?

Ans: _____ [3]

7. Three boys, Alex, Ben and Charlie shared the cost of a toy. The ratio of Alex's share to the total of Ben's and Charlie's share was 1 : 3. The ratio of Ben's share to the total of Alex's and Charlie's share was 1 : 5. Charlie paid $50 more than Ben. Find the cost of the toy.

Ans: _____ [3]

Subtotal	/ 6

4

8. A rope was used to wind around 2 identical cylinders. The figure below shows the top view of the 2 cylinders held tightly by the rope. Each cylinder has a diameter of 14 cm.
Find the area of the shaded part. (Take $\pi = 3.14$)

Top-view

Ans: _____ [3]

9. In a basket, $\frac{5}{9}$ of the fruits are apples and the rest are oranges.

$\frac{1}{3}$ of the apples are red apples while the rest are green apples.

If there are 130 green apples, how many oranges are there in the basket?

Ans: _____ [3]

6
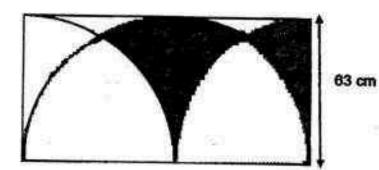
10. At 7 a.m., a car started travelling from Town A towards Town B at an average speed of 64 km/h. At 10 a.m., a van started travelling from Town A towards Town B at an average speed of 90 km/h. By then, the car had already covered $\frac{2}{5}$ of the entire journey. At what time did the van reach Town B? (Leave your answer in 12-hour clock.)

Ans:_____ [3]

7

11. The figure shows two identical quarter circles and a semicircle in a rectangle.

Find the total perimeter of the shaded parts. (Take $\pi = \dfrac{22}{7}$)

63 cm

Ans: _____ [3]

8

12. In Factory A, the ratio of the number of male workers to the number of female workers is 3 : 2. In Factory B, the ratio of the male workers is to the number of the female workers is 1 : 2. Factory B has three times as many workers as Factory A. If there are 1035 workers in Factory B, how many more female workers are there in Factory B than that in Factory A?

Ans: _____ [4]
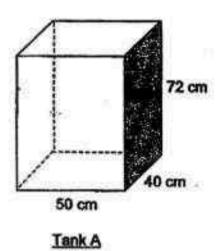
13. Belle had 450 coins in her collection. 20% were from China while the rest were from Malaysia.

    (a) How many coins from China must her father give her to increase the number of coins from China in her collection to 40%?

    (b) Find the percentage increase in the number of coins from China. (Give your answer correct to 2 decimal places.)

Ans : (a) _____ [2m]

(b) _____ [2m]

10
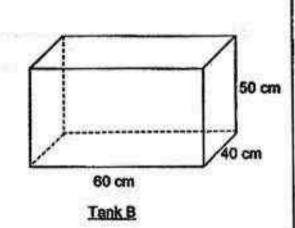
14. Tank A is filled with water to its brim while Tank B is empty. Water is then poured from Tank A to Tank B such that the volume of water in Tank A is twice as much as the volume of water in Tank B.

(a) What is the volume of water left in Tank A? Give your answer in litres.

(b) Find the height of the water in Tank B.

72 cm

50 cm

40 cm

40 cm

50 cm

60 cm

Tank A

Tank B

Ans :(a) _____ [2m]

(b) _____ [2m]

11

15. Car X and Car Y left Brighton Town at the same time, travelling in the opposite direction. Car X headed for Carefree Town while Car Y headed for Arise Town.

The speed of Car Y was 24 km/h faster than Car X. After 30 mins, Car X had completed $\frac{2}{3}$ of its journey while Car Y had completed $\frac{1}{2}$ of its journey. The two cars were then 92 km apart.

a) Calculate the speed of Car X.

b) How far was Car Y from Arise Town when Car X reached its destination?

Ans :(a) _____ [2m].

(b) _____ [3m]

12

16. A box contained red, blue and green pens in the ratio $3 : 2 : 1$ respectively. $\frac{3}{4}$ of the red pens were taken out and replaced by the same number of new green pens.

Then 180 blue pens were taken out and replaced by the same number of new green pens.

In the end, the ratio of the number of red pens to blue pens to green pens became $1 : 2 : 5$.

(a) How many red pens were there at first?

(b) What fraction of the total pens was green pens in the end?
(Leave your answer in the simplest form)

Ans :(a) _____ [3m]

(b) _____ [2m]

13
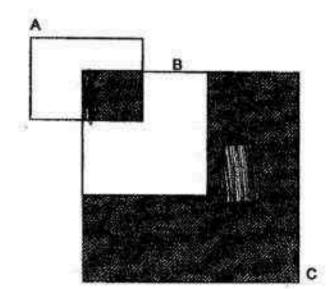
17. Tom was asked to guess a fraction. The sum of $\frac{1}{2}$ of the numerator and $\frac{1}{3}$ of its denominator is 30. If Tom subtracts 36 from its denominator, the fraction becomes $\frac{1}{3}$. What is the fraction that Tom was asked to guess? (Leave your answer in the simplest form)

Ans: _____ [5]

14

18. The figure below is made up of 3 overlapping rectangles A, B and C. The ratio of area A to that of B to that of C is 1 : 2 : 5.

$\frac{1}{6}$ of B is shaded and $\frac{2}{3}$ of C is shaded.

(a) What fraction of the figure is shaded?
(Leave your answer in the simplest form)

(b) If the total area of the unshaded parts is 266 cm², what is area of the figure?

Ans :(a) _____ [3m]

(b) _____ [2m]

End of Paper 2

Remember to check your work.

15

PAPER 1 BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	3	1	2	3	2	3	4	4	1

Q 11	Q12	Q13	Q14	Q15
2	2	4	3	2

PAPER 1 BOOKLET B

Q16) $14 \div \frac{2}{7} = 49$	**Ans**: 49
Q17) Ali → w June → w − 5 Total = 2w − 5	**Ans**: 2w − 5
Q18) $180° − 105° − 37° = 38°$	**Ans**: 38°
Q19) $42 \times 2 = 84$	**Ans** 84 km/h
Q20) $3 \times 3 \times 3 = 27$ $27 − 10 = 17$	**Ans**: 17 cubes
Q21) $1 − \frac{1}{9} = \frac{8}{9}$ $\frac{8}{9} \times \frac{7}{8} = \frac{7}{9}$	**Ans**: $\frac{7}{9}$ ℓ

Pg 1

Q22)	$250 − $160 = $90
	$\frac{90}{250} \times 100\% = 36\%$
	Ans: 36%

Q23)	Tom → 5 units
	Dick → 1 unit
	Hence, 1 : 5
	Ans: 1 : 5

Q24)	$P \rightarrow Q \rightarrow P = 1\frac{1}{3}h = \frac{4}{3}h$
	$\frac{4}{3} \div 2 = \frac{2}{3}h$
	Distance → $90 \times \frac{2}{3} = 60$ km
	Ans: 60 km

Q25)	4691 − 1 = 4690
	4690 ÷ 2 = 2345
	Ans: 2345

Q26)	4S + 2J → $174 × 2 = $348
	1S → $408 − $348 = $60
	Ans: $60

Q27)	$\frac{1}{2} \times \frac{22}{7} \times 7$ cm = 11 cm
	Perimeter → 11 cm + 7 cm + 7 cm + 7 cm = 32 cm
	Ans: 32 cm

Q28)	7 units → 84
	1 unit → 12
	3 units → 36 (then male members)
	84 + 66 = 150
	5 units → 150
	1 unit → 30
	3 units → 90 (now male members)
	New male members → 90 − 36 = 54
	Ans: 54

Q29)	AEC → 180° − 118° = 62°
	FEC → (180° − 102°) ÷ 2 = 39°
	AEF → 62° − 39° = 23°
	Ans: 23°

Q30)	Area of square → 12 cm x 12 cm = 144 cm²
	Area of semi-circle → $\frac{1}{2} \times \pi \times 6 \times 6 = 18\pi$
	Total area (144 + 18π) cm² (144 + 18π) cm²
	Ans: (144 + 18π) cm²

PAPER 2

Q1)	Area of big circle → π x 10 cm x 10 cm = 100π cm²

Area of small circle → π x 6 cm x 6 cm = 36π cm²
Difference → 100π cm² – 36π cm² = 64π cm²
Quarter of big circle → 100π cm² ÷ 4 = 25π cm²
Quarter of small circle → 36π cm² ÷ 4 = 9π cm²
Difference → 25π cm² – 9π cm² = 16π cm²
64π cm² – 16π cm² = 48π cm² ≈ 150.80 cm²

Ans: 150.80 cm²

Q2) (a) 2n
(b) 2n + 1

Ans: (a) 2n
(b) 2n + 1

Q3) Beaker → 1600 ml = 1600 cm³
Base area → 1600 ÷ 10 = 160 cm²
Ans: 160 cm²

Q4) 6 + 7 + 9 = 22
Area of half a square → (22 x 22) ÷ 2 = 242

Ans : 242 cm²

Q5)

Before
M : J
x3 $\begin{pmatrix} 7 : 4 \\ 21 : 12 \end{pmatrix}$

After
M : J
14 : 19

$\frac{1}{3}$ x 21 = 7 units given to Jane

Ans: 14 : 19

Q6)

Before
A : B
x2 $\begin{pmatrix} 2 : 5 \\ 4 : 10 \end{pmatrix}$

After
A : B
7 : 13

Difference (Before) → 5 units – 2 units = 3 units ⎤ x2
Difference (After) → 13 units – 7 units = 6 units ⎦
6 units → 45 + 45 = 90
1 unit → 15
Total (Before): 14 units → 210

Ans: 210

Q7)

A : (B + C) : Total
x3 $\begin{pmatrix} 1 : 3 : 4 \\ 3 : 9 : 12 \end{pmatrix}$

B : (A + C) : Total
x2 $\begin{pmatrix} 1 : 5 : 6 \\ 2 : 10 : 12 \end{pmatrix}$

A → 3 units
B → 2 units
C → 7 units
7 units – 2 units = 5 units
5 units → $50
1 unit → $10
12 units → $120

Ans: $120

Q8) Area of square → 14 cm x 14 cm = 196 cm²
Area of circle → 3.14 x 7 cm x 7 cm = 153.86 cm²
Difference → 196 cm² – 153.86 cm² = 42.14 cm²
Area of shaded part → 42.14 cm² ÷ 2 = 21.07 cm²

Ans: 21.07 cm²

Q9) A : O

$$\times 3 \begin{pmatrix} 5 : 4 \\ 15 : 12 \end{pmatrix}$$

Red Apples $\rightarrow \dfrac{1}{3} \times 15 = 5$

Green Apples $\rightarrow 15 - 5 = 10$

10 units $\rightarrow$ 130

1 unit $\rightarrow$ 13

12 units $\rightarrow$ 156 (Oranges)

Ans: 156 oranges

Q10) 7 a.m. to 10 a.m. $\rightarrow$ 3h

Distance Car covered $\rightarrow$ 64 km/h $\times$ 3h = 192 km

2 units $\rightarrow$ 192

1 unit $\rightarrow$ 96

5 units $\rightarrow$ 480 (Distance from Town A to Town B)

Time taken for Van $\rightarrow$ 480 km $\div$ 90 km/h = $5\dfrac{1}{3}$ h = 5h 20min

Reaching time for Van $\rightarrow$ 3.20 p.m.

Ans: 3.20 p.m.

Q11) Perimeter of a quarter circle $\rightarrow \dfrac{1}{4} \times \dfrac{22}{7} \times 63$ cm = 99 cm

99 cm $\times$ 3 = 297 cm

Total Perimeter = 297 + 63 = 360 cm

Ans: 360 cm

Q12) 3 units $\rightarrow$ 1035

1 unit $\rightarrow$ 345

2 units $\rightarrow$ 690 (Females in Factory B)

Factory A $\rightarrow$ 5 units

5 units $\rightarrow$ 345

1 unit $\rightarrow$ 69

2 units $\rightarrow$ 138 (Females in Factory A)

Difference $\rightarrow$ 690 – 138 = 552

Ans: 552 females

Q13) (a) $\dfrac{20}{100} \times 450 = 90$ (China coins)

450 – 90 = 360 (Malaysia Coins)

China Coins	Increase in number of China coins	Malaysia Coins	Total	Percentage (%)	Check Box
90	10	360	460	21.73	No
90	150	360	600	40	Yes

(b) $\dfrac{150}{90} \times 100 = 166.67\%$

Ans: (a) 150

(b) 166.67%

Q14) (a) Volume A → 50 cm x 40 cm x 72 cm = 144,000 cm³
        3 units → 144,000 cm³
        1 unit → 48,000 cm³
        2 units → 96,000 cm³ = 96 ℓ
     (b) Height → 48,000 ÷ (60 x 40) = 20 cm

Ans: (a) 96 ℓ
(b) 20 cm

Q15) (a) 24 km/h x $\frac{1}{2}$ h = 12 km

        92 km – 12 km = 80 km
        80 km ÷ 2 = 40 km

        40 km ÷ $\frac{1}{2}$ h = 80 km/h

     (b) Speed of Car Y → 80 km/h + 24 km/h = 104 km/h
        Total distance covered by Car Y → 104 km/h x 1 h = 104 km
        Distance covered by Car Y → 104 km/h x 45 min = 78 km
        Difference = 104 km – 78 km = 26 km

Ans: (a) 80 km/h
(b) 26 km

Q16) (a) Before
        R : B : G
     x4 $\left(\begin{matrix} 3 : 2 : 1 \\ 12 : 8 : 4 \end{matrix}\right)$

        $\frac{3}{4}$ x 12 units = 9 units (red pens taken out)

        After
        R : B : G
        3 : 8 : 13

        In the End
        R : B : G
     x3 $\left(\begin{matrix} 1 : 2 : 5 \\ 3 : 6 : 15 \end{matrix}\right)$

        Difference → 8 units – 6 units = 2 units (Blue pens)
        2 units → 180
        1 unit → 90
        12 units → 1080 (Red pens)

     (b) $\frac{15}{3+6+15} = \frac{5}{8}$

Ans: (a) 1080 red pens
(b) $\frac{5}{8}$

Q17) (a) $\frac{N}{2} + \frac{D}{3} = 30$

        $\frac{3N+2D}{6} = 30$

        3N + 2D = 180

$$\frac{N}{D-36} = \frac{1}{3}$$

$3N = D - 36$

$D - 36 + 2D = 180$

$3D - 36 = 180$

$3D = 216$

$D = 72$

(b) $\dfrac{N}{72-36} = \dfrac{1}{3}$

$\dfrac{N}{36} = \dfrac{1}{3}$

$3N = 36$

$N = 12$

Therefore, the fraction is $\dfrac{12}{72} = \dfrac{1}{6}$

Ans: (a) D = 72

(b) $\dfrac{1}{6}$

Q18) (a) A : B : C

×3 $\left(\begin{array}{c} 1 : 2 : 5 \\ 3 : 6 : 15 \end{array}\right)$

$\dfrac{1}{6} \times 6 = 1$ unit (Rectangle B)

$\dfrac{2}{3} \times 15 = 10$ units (Rectangle C)

Total parts → 2 units (Rectangle A) + 15 units (Rectangle C) = 17 units

Total shaded parts → 5 units (Rectangle B) + 5 units (Rectangle C)

→ 10 units

Hence, $\dfrac{10}{17}$

(b) 7 units → 266 cm²

1 unit → 38 cm²

17 units → 646 cm²

Ans: (a) $\dfrac{10}{17}$

(b) 646 cm²

Pg 6

ROSYTH

READY TO SERVE

Rosyth School
First Semestral Assessment 2016
Primary 6 Mathematics

Name: _____   Register No. _____

Class: Pr 6 - _____

Date: 10ᵗʰ May 2016   Parent's Signature: _____

Total Time for Booklets A and B : 50 minutes

PAPER 1
(Booklet A)

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.

2. Follow all instructions carefully.

3. Shade your answers in the Optical Answer Sheet (OAS) provided.

4. You are not allowed to use a calculator

5. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet A)	20	

* This booklet consists 8 printed pages (including this cover page)

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

All diagrams in this paper are not drawn to scale.

<div align="right">(20 marks)</div>
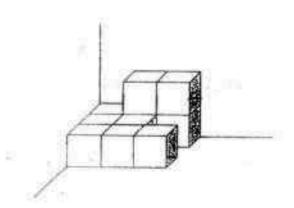
1. 2 million, 7 ten thousands and 3 tens has the same value as _____.

    (1)   207 030

    (2)   270 003

    (3)   2 070 003

    (4)   2 070 030

2. Which of the following fractions is less than $\frac{1}{2}$?

    (1) $\frac{4}{7}$

    (2) $\frac{5}{9}$

    (3) $\frac{5}{12}$

    (4) $\frac{6}{11}$

3. Express the sum of $\frac{3}{10}$ and $\frac{5}{1000}$ as a decimal.

    (1)   0.035

    (2)   0.305

    (3)   0.350

    (4)   3.005

<div align="center">2</div>

4. What is the maximum number of books Megan can purchase with $89?

Storybooks on Sale!

3 books for $20
OR
1 book for $8.50
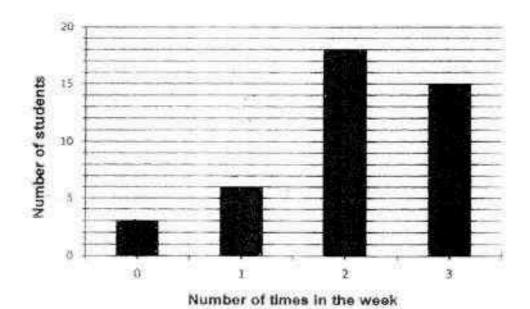
(1) 5
(2) 13
(3) 30
(4) 4

5. The figure below is made up of identical 1-cm cubes. What is the minimum number of cubes to be added to form a bigger cube?

(1) 17
(2) 18
(3) 27
(4) 54

3

(Go on to the next page)

6. A movie started at 22 00. It ended $2\frac{1}{4}$ hours later. What time did the movie end?

   (1) 12.15 a.m.
   (2) 12.15 p.m.
   (3) 12.25 a.m.
   (4) 12.25 p.m.

7. The bar graph below shows the number of students in Primary 6A who played at the school field last week.
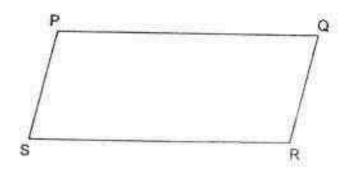
How many pupils played at the school field at least twice last week?

   (1) 18
   (2) 27
   (3) 33
   (4) 42

4
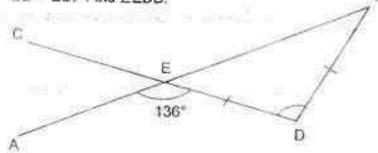
8. The figure is not drawn to scale. PQRS is a parallelogram.

Which of the following statements is true?
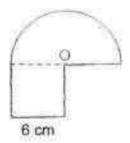
(1)   ∠ RSP + ∠ PQR = 180°
(2)   ∠ SPQ + ∠ RSP = 180°
(3)   ∠ RSP = ∠ SPQ
(4)   ∠ SPQ = ∠ PQR

9. The figure below is not drawn to scale. AEB and CED are straight lines. BD = ED. Find ∠EDB.

(1)   22°
(2)   44°
(3)   92°
(4)   136°

5
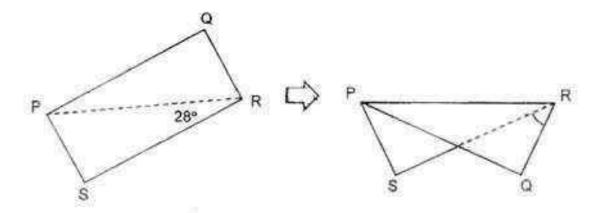
10. A rectangular field had a length of 6*t* metres and a breadth of 30 metres. Sandra ran round the field once. Express the total distance Sandra ran in terms of *t*.

    (1)   (6*t* + 30) m

    (2)   (6*t* + 60) m

    (3)   (12*t* + 30) m

    (4)   (12*t* + 60) m

11. Justin took several days to read a new novel. On the first day, he read 6 pages. Each day, he read 3 more pages than the day before. On the last day, he read 18 pages. How many days did he take to read the novel?

    (1)   5

    (2)   6

    (3)   3

    (4)   4

12. The figure below is not drawn to scale. It is made up of a semicircle with centre O and a square with side 6 cm. What is the perimeter of the whole figure? (Take π = 3.14)

6 cm

    (1)   27.42 cm

    (2)   33.42 cm

    (3)   36.84 cm

    (4)   42.84 cm

6
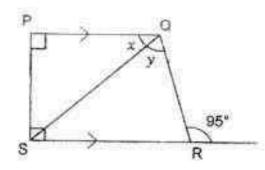
13. A rectangle PQRS is folded along its diagonal PR as shown.
Given that ∠PRS = 28°, find ∠QRS.

(1)   17°

(2)   31°

(3)   34°

(4)   62°

14. The figure below is not drawn to scale. PQRS is a trapezium.

∠x is $\frac{2}{3}$ of ∠y. Find ∠x.

(1)   38°
(2)   45°
(3)   57°
(4)   85°

7

15. Wei Ling baked some cookies. She kept $\frac{7}{10}$ of the cookies for herself and gave the rest to Ben and Ravi in the ratio 5 : 1. Ben received 20 more cookies than Ravi. How many cookies did Wei Ling keep for herself?

    (1)   28
    (2)   35
    (3)   56
    (4)   70

Rosyth School
First Semestral Assessment 2016
Primary 6 Mathematics

Name: _____   Register No. _____

Class: Pr 6 - _____

Date: 10ᵗʰ May 2016   Parent's Signature: _____

Total Time for Booklets A and B : 50 minutes

PAPER 1
(Booklet B)

Instructions to Pupils

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. You are **not** allowed to use a calculator.
4. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet B)	20	

* This booklet consists of 7 printed pages (including this cover page).

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

All diagrams in this paper are not drawn to scale unless stated otherwise.

16. Find the product of 72.03 and 6.

Ans: _____

17. What is the sum of all the factors of 18?

Ans: _____

18. How many millilitres are there in 30.08 litres?

Ans: _____ ml

2

19. 30% of a number is 420. What is the number?

Ans: _____

20. The clock shows the time on Kevin's watch at the end of his 2-hour swimming lesson. His watch is 15 min faster than the actual time. What time did his swimming lesson start?

Ans: _____ p.m

21. Tiffany scored an average of 64 marks in her first 2 tests. How many marks must she score in her third test to get an average of 70 marks for the 3 tests?

Ans: _____

3

(Go on to the next page)

22. The figure below is not drawn to scale. XYZ is an isosceles triangle. XY = WY. Find ∠WXZ

Ans: _____°

---

23. What is the perimeter of a semicircle with radius 14 cm? (Take π as $\frac{22}{7}$)

Ans: _____ cm

---
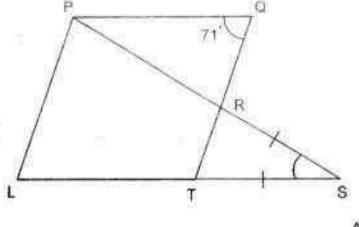
24. The figure below is not drawn to scale. PQTL is a rhombus and PRS and LTS are straight lines. Find ∠RST

Ans: _____°

4   (Go on to the next page)
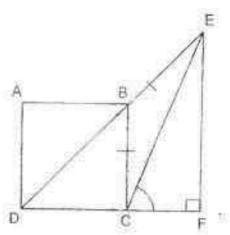
25. At a sale, the price of a printer decreased by 15% to $170. What is the original price of the printer?

Ans: $ _____

Questions 26 to 30 carry 2 marks each. Show your workings clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

All diagrams in this paper are not drawn to scale unless stated otherwise.

26. Iris has some sweets. When she packs them into bags of 3 or 8, there will be no remaining sweets. When the sweets are packed into bags of 5, she will be short of 2 sweets. What is the smallest possible number of sweets she has?

Ans: _____

(Go on to the next page)
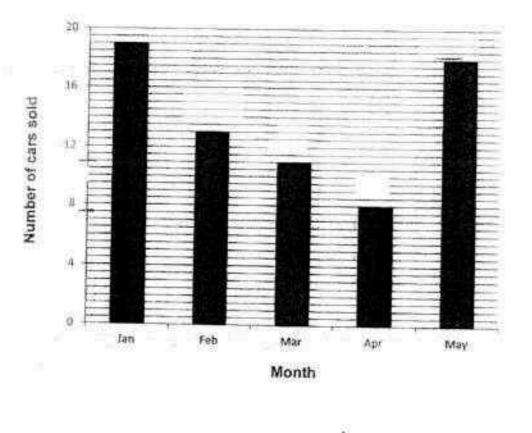
27. The figure below is not drawn to scale. ABCD is a square. CB = BE, CEF is a right-angled triangle and DBE is a straight line. Find ∠ECF.

Ans _____

28. The bar graph below shows the number of cars sold over 5 months. What is the ratio of number of cars sold in February to the total number of cars sold in the five months? Give your answer in simplest form.

Ans: _____

6

(Go on to the next page)

29. The figure below is made up of a square and 2 quarter-circles. What is the perimeter of the shaded part? Leave your answer in terms of π.

10 cm

Ans _____ cm

---

30. Zali is w years old 5 years ago. His sister is 2 years younger than him. What will be their combined age 10 years from now?

Ans _____

End of paper. Have you checked your work?

Rosyth School
First Semestral Assessment 2016
Primary 6 Mathematics

Name: _____   Register No. _____

Class: Pr 6 - _____

Date: 10th May 2016   Parent's Signature: _____

Time: 1 h 40 minutes

PAPER 2

Instructions to Pupils

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. Show your workings clearly as marks are awarded for correct working.
4. Write your answers in this booklet.
5. You are allowed to use a calculator.
6. Answer all questions

Questions	Maximum Mark	Marks Obtained
Q 1 to 5	10	
Q 6 to 18	50	

Section	Maximum Mark	Marks Obtained
Paper 1	40	
Paper 2	60	
Total	100	

* This booklet consists of 16 printed pages (including this cover page)

This paper is not to be reproduced in part or whole without the permission of the Principal.
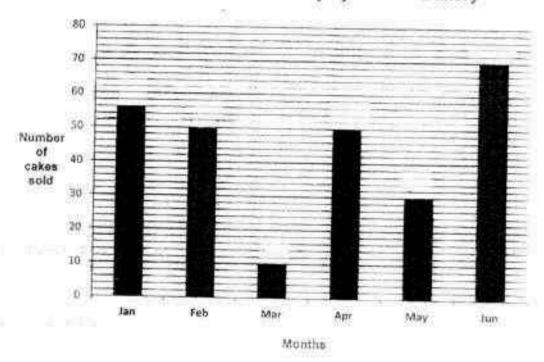
Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.
All diagrams are not drawn to scale unless stated otherwise.   (10 marks)

1.   The bar graph below shows the number of cakes sold monthly from January to June by Boston Bakery.

Number of cakes sold monthly by Boston Bakery

What was the average number of cakes sold from February to May?

Ans: _____ [2m]

(Go on to the next page)

2. Melvin had to answer 15 questions in an English test. He took half an hour for the first 10 questions. Melvin started the test at 10.45 a.m. and completed the test at 12.30 p.m. How long did he take to complete the last 5 questions?

Ans: _____ [2m]

3. Carolyn wanted to buy an iPad that costs $556.40 including 7% GST. During a sale, she did not need to pay GST and was given an additional discount of $88. How much did Carolyn have to pay in the end?

Ans: $_____ [2m]

2

(Go on to the next page)

4. The ratio of the perimeter of Rectangle X to the perimeter of Square Y is 6 : 1. The perimeter of Rectangle X is 168 cm. What is the area of Square Y?

Ans: _____ cm² [2m]

5. 4 years ago, Susan was thrice as old as Uman. If Uman is 19 years old now, how old is Susan now?
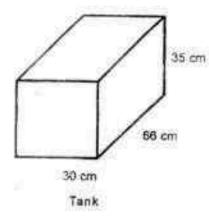
Ans: _____ [2m]

(Go on to the next page)

Questions **6** to **18**, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in brackets [   ] at the end of each question or part-question.

(50 marks)

6. Ahmad spent $\frac{1}{3}$ of his salary on food and gave $\frac{3}{8}$ of the remainder to his mother. He saved the remaining $3622. How much money did he spend on food?

Ans. _____ [3m]

7. Tom and Jenny had $357 altogether. Tom gave $\frac{2}{5}$ of his money to his father and Jenny spent 75% of her money. They found that they had an equal amount of money left. How much did Jenny spend?

Ans: _____ [3m]

4

(Go on to the next page)
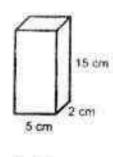
8. Jimmy filled $\frac{5}{9}$ of a rectangular tank measuring 30 cm by 66 cm by 35 cm with fruit juice. All of the fruit juice from the tank was poured into some rectangular containers measuring 5 cm by 2 cm by 15 cm to the brim. What is the height of the fruit juice in the last container?

35 cm

66 cm

30 cm

Tank

15 cm

2 cm

5 cm

Container

Ans _____ [3m]
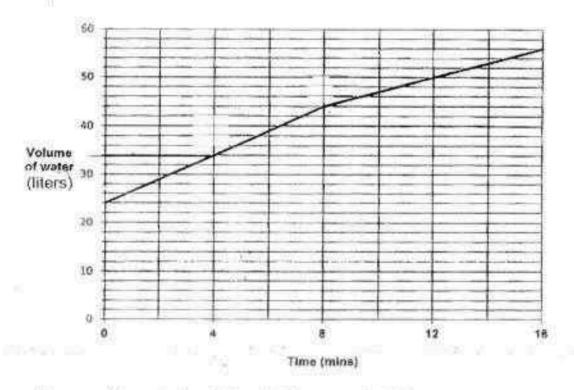
9. The tank contained some water at first. Tap A was turned on to fill the tank with water at a constant rate. After 8 minutes, Tap B tap was turned on to drain water out of the tank at a constant rate.

The graph below shows the volume of water in the tank during the 16 minute period.
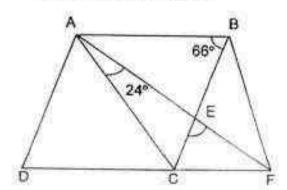
How many litres of water did Tap B drain every minute?

Ans: _____ [3m]

10. ABCD is a rhombus. AEF and DCF are straight lines. ∠ABC = 66° and ∠EAC = 24°. Find ∠CEF.
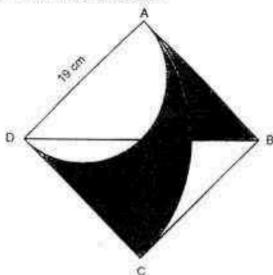
Ans: _____ [3m]

7

(Go on to the next page)

11. If Jacobs gave Min Hui 70 stamps, he would have the same number of stamps as Min Hui. If Min Hui gave Jacobs 28 stamps, the ratio of the number of stamps she had to the number of stamps that Jacobs had would be 1 : 8. How many stamps did Min Hui have?

Ans: _____ [3m]

8

12. ABCD is a square of side 19 cm. A quadrant and a semicircle are drawn inside the square. Find the area of the shaded part using calculator π. Give your answer to the nearest 2 decimal places.

Ans: _____ [4m]

(Go on to the next page)
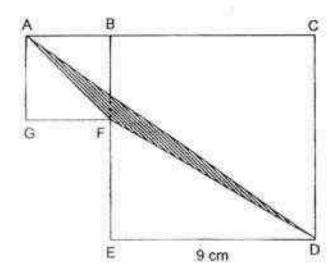
13. At an electronics sale, the usual price of a camera is 25% that of a notebook before including a GST of 7%. Michael bought a camera and a notebook for a total of $2675 after including GST.

a) What is the cost of the notebook with GST?
b) What is the total GST paid on the 2 items?

Ans: a) _____ [2m]

Ans: b) _____ [2m]

10

(Go on to the next page)

14. James and Susan had 289 stamps altogether. Susan had 33 fewer stamps than James. James sold twice as many stamps as Susan and had the same number of stamps that Susan had left.

a) How many stamps had Susan left?
b) How many stamps did James have at first?

Ans: a) _____ [3m]

Ans: b) _____ [2m]

(Go on to the next page)

15. The figure below is made up of two squares, ABFG, BCDE and a triangle ADF. The ratio of the length of AB to the length of BC is 1 : 3. DE = 9 cm. Find the shaded area.

Ans: _____ [5m]

(Go on to the next page)
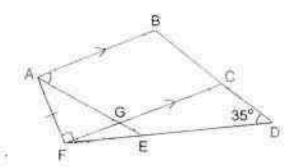
16. ABCG is a trapezium and EF = AF. AFG is a right-angled triangle
    BCD, DEF and CGF are straight lines. The ratio of ∠AFE to ∠BAG is 2 : 1
    and ∠ABC is thrice as much as ∠BAG.

    a) Find ∠BAG.
    b) Find ∠EFG.

Ans: a) _____ [2m]

Ans: b) _____ [2m]
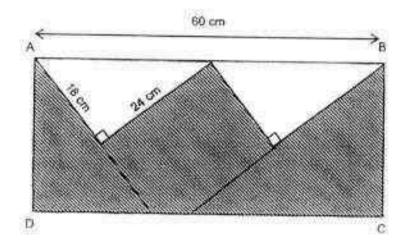
(Go on to the next page)

17. The ratio of the number of chocolates to the number of sweets that John bought was 2 : 7. The cost of a chocolate was $1.70 more than the cost of a sweet. He paid $299.60 for the chocolates and sweets. If the total cost of the sweets was $92.40 more than the total cost of chocolates, how many chocolates and sweets did John buy altogether?

Ans: _____ [5m]

(Go on to the next page)

18. In the figure below, ABCD is a rectangle. ABCD contains 2 identical right-angled triangles. The perimeter of the shaded part is 210 cm.

What is the ratio of the area of the 2 triangles to the area of the shaded part? Give your answer in the simplest form.

Ans: _____ [5m]

End of paper

15

EXAM PAPER 2016

SCHOOL :ROSYTH

SUBJECT :P6 MATHEMATICS

TERM : SA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	3	1	2	1	3	3	2	2	4
Q11	Q12	Q13	Q14	Q15					
1	4	3	1	4					

16)432.18   17)39   18)30080ml   19)1400

20)4.10p.m.   21)82   22)75"   23)72cm   24)38"

25)$200   26)48   27)67.5"   28)13.69

29)(15□+20)cm   30)(2w+28)

Paper 2

1)Total→50 + 10 + 50 + 30 = 140

   Average→140 ÷ 4 = 35

2)45 + 30 = 75

   75 mins→1hr 15 min

3)107% → 556.40

  1% → 556.40 ÷ 107 = 5.20

  5.20 x 100 = 520

  520 – 88 = $432

4)168 ÷ 6 = 28

  28 = 7 + 7 + 7 + 7

  7 x 7 = 49cm$_2$

5)19 – 4 = 15 (Uman 4 years ago)

  15 x 3 + 4 = 49

6)10u → 3622

  1 u → 3622 ÷ 10 = 362.20

  362.20 x 8 = 2897.60

7)Tom : 5X

  Jerry : 12X

  17X = $357

  9X = $357/7 x 9 = $189

8)256 x 150 = 38400

  38500 – 38400 = 100

  100 ÷ (2 x 6) = 10 cm

9)44L – 32L = 10L

  10L – 6L = 4L

  4L ÷ 4 = 1L

10) $\angle ECD = 180° - 66° = 114°$

$\angle ECA = (180° - 66°) \div 2 = 57°$

$\angle CEA = 180° - 57° - 24° = 99°$

$\angle CEF = 180° - 99° = 81°$

11) 7u → 28 + 70 + 70 + 28 = 196

1u → 196 ÷ 7 = 28

MH → 28 + 28 = 56 stamps

12) 19cm x 19cm = 361cm²

19cm ÷ 2 = 9.5cm

9.5cm x 9.5cm = 90.25cm²

90.25cm² ÷ 2 = 45.125cm²

361cm² ÷ 4 = 90.25cm²

Shaded Area → [(361cm² - 90.25∏cm²)] ÷ 2 +

(90.25∏ - 45.125∏)cm² = 180.50cm²

13) a) Camera + Notebook → 100/107 x $2675 = $2500

Notebook → ($2500 ÷ 5) x 4 = $2000

107/100 x $2000 = $2140

b) 7/100 x $2500 = $175

14) a) 33 x 2 = 66

(289 - 33) ÷ 2 = 128

128 - 33 = 96

b) (298 + 33) ÷ 2 = 161

15) Area of $\triangle$AGF $\rightarrow$ ½ x 3cm x 3cm = 4.5cm$_2$

Area of $\triangle$ADC $\rightarrow$ ½ x 12cm x 9cm = 54cm$_2$

Area of $\triangle$FED $\rightarrow$ ½ x 9cm 6cm = 27cm$_2$

(9cm x 9cm) + (3cm x 3cm) = 90cm$_2$

90cm$_2$ − 4.5cm$_2$ − 54cm$_2$ − 27cm$_2$ = 4.5cm$_2$

16) a) $\angle$ABC + $\angle$AFE = 360° − 35° − 90° = 235°

$\angle$BAG = 235° ÷ 5 = 47°

b) $\angle$AFE = 47° x 2 = 94°

$\angle$EFG = 94° − 90° = 4°

17) $299.60 − $92.40 = $207.20

$207.20 ÷ 2 = $103.60

$103.60 ÷ 2 = $51.80

$51.80 − $28 = $23.80

14 x 9 = 126

210 − 144 = 66

18) 210cm − [(18cm + 24cm) x 2] − 60cm = 66cm

		Triangles	:	Shaded
66cm ÷ 2 = 33cm				
66cm x 33cm = 1980cm$_2$		432	:	1548
18cm x 24cm = 432cm$_2$		12	:	43
1980cm$_2$ − 432cm$_2$ = 1548cm$_2$		ANS: 12 : 43		

Name : _____ (   )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2016 Semestral Assessment One

Paper 1

Booklet A

10 May 2016

15 questions
20 marks

Total Time for Booklets A and B : 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is NOT allowed.

This booklet consists of 8 printed pages including the cover page.

1

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3, or 4) on the Optical Answer Sheet.

(20 marks)

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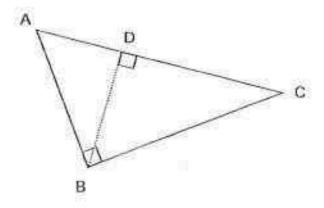
1. Last year, there were 320 989 visitors to a tourist attraction. Express this number to the nearest hundred.

   (1) 320 000

   (2) 320 900

   (3) 321 000

   (4) 321 900

2. What is the value of $86 + 40 \div 2 \times (12 - 8)$?

   (1) 91

   (2) 166

   (3) 252

   (4) 748

3. Find the value of $\frac{4}{5} \div 6$.

   (1) $\frac{5}{24}$

   (2) $\frac{2}{15}$

   (3) $4\frac{4}{5}$

   (4) $7\frac{1}{2}$

2

4. Guan Yong bought $8\frac{1}{2}$ kg of rice. He used $2\frac{2}{3}$ kg of the rice. How much rice was left?

(1) $11\frac{1}{6}$ kg

(2) $6\frac{5}{6}$ kg

(3) $6\frac{1}{6}$ kg

(4) $5\frac{5}{6}$ kg

5. What is the value of $60 \div 1200$?

(1) 0.2

(2) 0.5

(3) 0.02

(4) 0.05

6. Which of the following is the same as 3.09 ℓ?

(1) 3900 ml

(2) 3090 ml

(3) 3009 ml

(4) 3000 ml

3

7. There were 35 books on the shelf. Mrs Tan took away 28 books. What percentage of the books on the shelf did Mrs Tan take away?

(1) 7%

(2) 20%

(3) 60%

(4) 80%

8. Which of the following cannot be the height of the Triangle ABC shown below?

(1) AB

(2) BC

(3) BD

(4) CD

4
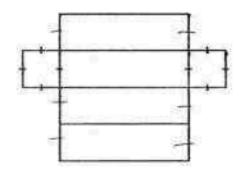
9. Find the value of $\dfrac{3x-9}{3} + 6$ when $x = 6$.
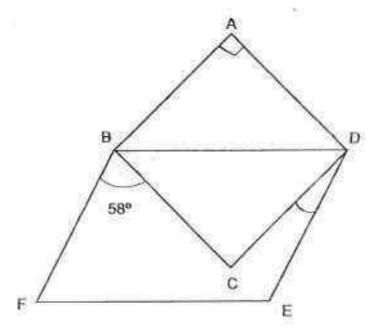
(1) 5

(2) 9

(3) 11

(4) 15

10. What is the name of the solid that can be formed by the following net?

(1) Cube

(2) Cuboid

(3) Cylinder

(4) Pyramid

5

11. The ratio of the number of Raja's marbles to the number of Peter's marbles is 3 : 4. They have a total of 84 marbles. Raja gave 24 marbles to Peter. What is the new ratio of the number of Raja's marbles to the number of Peter's marbles?

(1) 1 : 6

(2) 1 : 5

(3) 1 : 4

(4) 1 : 2

12. The figure below, not drawn to scale, shows a square ABCD and a parallelogram BDEF. Find ∠CDE.

(1) 16°

(2) 32°

(3) 45°

(4) 77°

13. Panny had a piece of ribbon 25 m long. After cutting the ribbon into smaller pieces of $\frac{4}{5}$ m each, she had some ribbon left. How much ribbon did Panny have left?

(1) 1m

(2) $\frac{1}{4}$ m

(3) $\frac{1}{5}$ m

(4) $\frac{5}{16}$ m

14. Vina has 180 stickers. She gave 30% of them to Jasmine and $\frac{2}{3}$ of the remainder to Alan. How many stickers did Alan get?

(1) 42

(2) 54

(3) 84

(4) 126

7

15. Last week, Mrs Devi bought some meat at $3.00 per kg at the market. This week, she bought 2 kg of the same type of meat but its price had decreased by 10%. How much did she pay for the meat this week?

(1) $2.70

(2) $3.30

(3) $5.40

(4) $6.60

** END OF BOOKLET A**

8

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2016 Semestral Assessment One

Paper 1

Booklet B

10 May 2016

15 questions
20 marks

TOTAL TIME FOR BOOKLET A & B : 50 MINUTES

INSTRUCTIONS TO CANDIDATES
DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.
THE USE OF CALCULATORS IS NOT ALLOWED.

This booklet consists of 7 printed pages including the cover page.

1

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space.

16. Find the value of 147×80.

Ans : _____
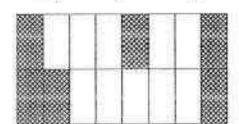
17. Express $3\frac{1}{9}$ as a decimal correct to 2 decimal places.

Ans : _____

18. Find the value of $22 - 0.55$.

Ans : _____

2
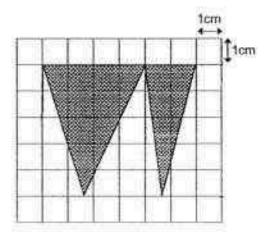
19. What percentage of the figure is shaded?

Ans : _____ %

20. What is the total area of the shaded triangles?

Ans : _____ cm²

21. ☐ : 15 = 51 : 45

What is the missing number in the box?

Ans : _____

3

22. Simplify $9y + 7 - 3y + 2 - 5y$.

Ans : _____

23. Patricia, Queenie and Ryan shared 35 sweets. Patricia received 2 times the number of sweets Queenie received. Ryan received half the number of sweets Queenie received. How many sweets did Patricia receive?

Ans : _____

24. A is 4 times of B. C is $\dfrac{5}{2}$ of B. How many times of C is A?

Ans : _____

25. The ratio of the length of a rectangle to its breadth 3 : 1. The perimeter of the rectangle is 48 cm. Find the length of the rectangle.

Ans : _____ cm

Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space.

26. A machine can pack 4300 sweets in 5 minutes. At this rate, how many sweets can it pack in 1 hour? Round off your answer to the nearest thousand.

Ans : _____

27. Alison baked a cake and gave half of it to her mother. She ate $\frac{1}{4}$ of the remaining cake. Then she cut the rest of the cake into 2 equal pieces to give to her two daughters. What fraction of the cake did each daughter receive?

Ans : _____

28. The average height of 3 boys is 150 cm. One of the boys is 160 cm tall. What is the average height of the other 2 boys?

Ans : _____ cm

29. Yati had a packet of sugar. She used an equal amount of sugar each day. At the end of the 10th day, $\frac{1}{4}$ of the sugar was left. At the end of the 12th day, the amount of sugar left was 120 g. How much sugar did Yati use each day?

Ans : _____ g

6

30. Siew Mei was given a fixed amount of pocket money each week. In the first week, she spent $30 and saved the rest. In the 2nd week, she spent 10% more and her savings decreased by 25%. How much did Siew Mei save in the 2nd week?

Ans : $_____

END OF PAPER 1

7

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

SIMPLE IN VIRTUE

STEADFAST IN DUTY

德 純 夭 堂

Primary 6 Mathematics

2016 Semestral Assessment One

Paper 2

10 May 2016

Paper 1		40
Paper 2		60
Total		100

Parent's /Guardian's Signature

TIME: 1 hour 40 minutes

INSTRUCTIONS TO CANDIDATES

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.
THE USE OF AN APPROVED CALCULATOR IS EXPECTED, WHERE APPROPRIATE

This booklet consists of 16 printed pages including the cover page.

1

1. Using each digit below only once, form

   (a) the smallest multiple of 6.

   (b) the number closest to 7000.

5	6	7	0

   Ans : (a) _____

   (b) _____

2. $\frac{1}{5}$ of the balls in a basket are yellow and the rest are red and blue. The number of red balls is $\frac{3}{5}$ the number of blue balls. What is the ratio of the number of yellow balls to the number of red balls to the number of blue balls?

   Ans : _____

2
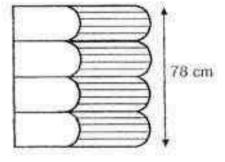
3. Maria was told to use only 2 different colours to colour the design of a class T-shirt. She was given 4 colours, red, blue, green and yellow to choose from. How many different two-colour combinations could she use in her design?

Ans : _____

4. Four identical dictionaries were stacked on top of another as shown below to form a height of 78 cm. What is the height of 234 such dictionaries stacked in the same way?

78 cm

Ans : _____ m

3

5. From January to March last year, the average number of customers dining at a restaurant was 3144 per month. The number of customers in January was 26 more than the number of customers in February. The total number of customers in January and February was the same as the number of customers in March. How many customers were there in February?

Ans : _____

4

For questions **6 to 18**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.   (50 marks)

6. The signs below show the parking charges at a public car park.

```
┌─────────────────────────────────────────────────────┐
│            Day and Night Parking                    │
│                                                     │
│   50¢      7.00 a.m. to 10.30 p.m.                  │
│   ½ hourly Everyday                                 │
│            (Including Sundays & Public Holidays)    │
└─────────────────────────────────────────────────────┘
```

```
┌─────────────────────────────────────────────────────┐
│              Overnight Parking                      │
│                                                     │
│   $4.00    10.30 p.m. to 7.00 a.m.                 │
│   per night Everyday                                │
│            (Including Sundays & Public Holidays)    │
└─────────────────────────────────────────────────────┘
```

Mr Nathan parked his car along this road from 3.00 p.m. on Saturday till 10.00 a.m. the following day. How much did he pay for the parking?

Ans : _____ [3]

5

7. Figure A below, not drawn to scale, is made up of two identical trapeziums overlapping each other as shown. Find the area of the Figure A.

19 cm

12 cm

28 cm

Figure A

Ans : _____ [3]

6

8. Gerald paid $123.05 for a kettle after the 7% GST. A week later, there was a 15% discount on the usual price of the same kettle. How much was the discount?

Ans : _____ [3]

9. Jia Hui had (13w + 2) stickers. Amanda had 4w fewer stickers than Jia Hui. Kathy had (10w + 3) more stickers than Amanda. Express the total number of stickers the three girls had in terms of w in the simplest form.

Ans : _____ [3]

7

10. Three family members shared the cost of buying a flat equally. Adam used $\frac{1}{2}$ of his savings, Bill used $\frac{6}{7}$ of his savings and Carl used $\frac{3}{4}$ of his savings. Bill and Carl had $44 820 left after paying for the flat. How much did the flat cost?

Ans : _____ [3]

8

11. Primary 6A and Primary 6B have a total of 87 children. There are an equal number of girls in both classes. The ratio of the number of girls to the number of boys in Primary 6A is 5 : 2. The ratio of the number of girls to the number of boys in Primary 6B is 2 : 1.

(a) How many girls are there in Primary 6A?

(b) How many more girls than boys are there in all?

Ans : (a) _____ [2]

(b) _____ [2]

9

12. Janet made some paper flowers to sell. $\frac{1}{4}$ of them were roses and the rest were lilies. After selling $\frac{2}{3}$ of the roses and 190 lilies, she had $\frac{1}{6}$ of the paper flowers left. How many paper flowers did Janet make?

Ans : _____ [4]

13. Mr Lim earned a monthly salary of $4200, which was 20% more than the monthly salary of Mr Tang. When Mr Lim's monthly salary was increased, he earned $910 more than Mr Tang. What was the percentage increase in Mr Lim's salary?

Ans : _____ [4]

14. Carol spent $\frac{1}{4}$ of her salary on accommodation and $\frac{1}{8}$ of it on a bag. Of the rest of the money, she gave $\frac{1}{4}$ of it to her parents and spent $450 on transport. Then she saved the remaining $1350.

(a) What fraction of Carol's salary did she give to her parents?

(b) What was her salary?

Ans : (a) _____ [1]

(b) _____ [3]

12

15. Hillary was cutting out some paper hearts to be sold for charity. Three paper hearts could be cut from every piece of coloured paper. For every 19 pieces of coloured paper used, 2 paper hearts were damaged. She sold all the pieces of undamaged paper hearts at 50¢ each. She collected a total of $385.
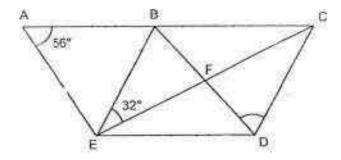
(a) How many paper hearts were sold?

(b) How many pieces of coloured paper did Hillary use?

Ans : (a) _____ [1]

(b) _____ [3]
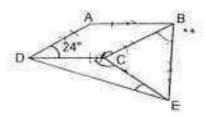
16. (a) In the figure below, not drawn to scale, ABDE is a rhombus and EBCD is a parallelogram. EFC is a straight line. $\angle EAB = 56°$ and $\angle BEC = 32°$. Find $\angle FDC$.

(b) In the figure below, not drawn to scale, ABCD is a rhombus and BCE is an equilateral triangle. Find $\angle CED$.

Ans : (a) _____ [2]

(b) _____ [3]

17. A container contained 40% more water than a pail at first. Jamie poured 20% of the water from the container to the pail. Then she used up 25% of the water from the pail. In the end, there was 900 ml more water in the container than the pail. How much water was there in the container at first?

Ans : _____ [5]

15

18. During a camp, Mrs Han ordered an equal number of cakes and buns for breakfast from a bakery. The cost of a cake was $1.20 and it was 3 times the cost of a bun. $\frac{3}{5}$ of the cakes and $\frac{2}{5}$ of the buns were eaten and that cost $264.

(a) How many cakes were eaten?

(b) How much did Mrs Han paid for all the cakes and buns?

Ans : (a) _____ [3]

(b) _____ [2]

End of Paper

YEAR   :   2016
LEVEL   :   PRIMARY 6
SCHOOL   :   CHIJ ST NICHOLAS GIRLS'
SUBJECT   :   MATHEMATICS
TERM   :   SA1

Paper 1

Q1	3	Q4	4	Q7	4	Q10	2	Q13	3
Q2	2	Q5	4	Q8	4	Q11	1	Q14	3
Q3	2	Q6	2	Q9	2	Q12	2	Q15	3

Q16   11760

Q17 $3\frac{1}{9} = \frac{28}{9} \approx 3.111 \approx \underline{3.11}$

Q18   21.45

Q19   Total units → 16
Shaded → 6
$\frac{6}{16} \times 100 \to \frac{75}{2} \Rightarrow \underline{37.5\ \%}$

Q20 $6 \times 5 \times \frac{1}{2} \Rightarrow \underline{15\ cm^2}$

Q21   17

Q22 $9y + 7 - 3y + 2 - 5y \to 9y - 3y - 5y + 7 + 2 \Rightarrow \underline{(y + 9)}$

Q23   P   :   Q   :   R
      4   :   2   :   1
      $4u + 2u + 1u \to 7u$
      $35 \times \frac{4}{7} \Rightarrow \underline{20\ sweets}$

Q24   A   :   B   :   C
      8   :   2   :   5
      $4 \times 2 \to 8$
      $\frac{8}{5} \Rightarrow 1\frac{3}{5}$

Q25   L   :   B
      3   :   1
      $3u + 1u \to 4u$
      $4u \times 2 \to 8u$
      $48 \times \frac{3}{8} \Rightarrow \underline{18\ cm}$

1

Q26 $1h = 60\text{min}$
$4300 \times \frac{60}{5} = 51600 \approx \underline{52000}$

Q27 $\frac{1}{2} \times \frac{3}{4} \times \frac{1}{2} \Rightarrow \frac{3}{16}$

Q28 $150 \times 3 = 450$
$450 - 160 = 290$
$290 \div 2 \rightarrow \frac{290}{2} \rightarrow \frac{145}{1} \Rightarrow \underline{145\ cm}$

Q29 $4\ \text{days} \rightarrow 120 \times 3 = 360$
$1\ \text{day} \rightarrow 360 \div 4 \Rightarrow \underline{90\ g}$

Q30 $30 \times \frac{110}{100} = 33$
$33 - 30 = 3$
$100 - 25 = 75$
$25\% \rightarrow 3$
$75\% \rightarrow 3 \times 3 \Rightarrow \underline{\$9}$

Paper 2

Q1a   5076

Q1b   7056

Q2   Y : R : B
2 : 3 : 5

Q3   6

Q4 $4u \rightarrow 78$
$1u \rightarrow 78 \div 4 = 19.5$
$234u \rightarrow 19.5 \times 234 = 4563$
$4563\ cm \Rightarrow \underline{45.63\ m}$

Q5 $3144 \times 3 = 9432$
$4u \rightarrow 9432 - 26 - 26 = 9380$
$1u \rightarrow 9380 \div 4 \Rightarrow \underline{2345\ customers}$

Q6 $1h \rightarrow 50¢ \times 2 = \$1$
$7h \rightarrow \$1 \times 7 = \$7$
$\$7 + \$0.50 = \$7.50$
$\$7.50 + \$4 = \$11.50$
$3h \rightarrow \$1 \times 3 = \$3$
$\$11.50 + \$3 \Rightarrow \underline{\$14.50}$

Q7 $28 \times 12 \Rightarrow \underline{336\ cm^2}$

Z

Q8 $100 + 7 = 107$

$123.05 \times \frac{100}{107} = 115$

$115 \times \frac{15}{100} \Rightarrow \underline{\$17.25}$

Q9 Jia Hui $\rightarrow 13w + 2$

Amanda $\rightarrow 13w + 2 - 4w = 13w - 4w + 2 \rightarrow 9w + 2$

Kathy $\rightarrow 9w + 2 + 10w + 3 = 9w + 10w + 2 + 3 \rightarrow 19w + 5$

Total $\rightarrow 13w + 2 + 9w + 2 + 19w + 5 = 13w + 9w + 19w + 2 + 2 + 5 \Rightarrow \underline{(41w + 9)}$

Q10 $3u \rightarrow 44820$

$6u \rightarrow 44820 \times 2 = 89640$

$89640 \times 3 \Rightarrow \underline{\$268920}$

Q11a

6A	6B
$5 : 2$	$2 : 1$
$10 : 4$	$10 : 5$

6AB : 1G : 6BB

4 : 10 : 5

$4u + 10u + 10a + 5u = 29$

$87 \times \frac{10}{29} \Rightarrow \underline{30 \text{ girls}}$

Q11b $10u + 10u = 20$

$4u + 5u = 9u$

$20u - 9u = 11u$

$87 \times \frac{11}{29} \Rightarrow \underline{33 \text{ more girls}}$

Q12 $\frac{1}{4} \times \frac{2}{3} = \frac{1}{6}$ (roses sold)

$1 - \frac{1}{6} - \frac{1}{6} \rightarrow \frac{4}{6} \rightarrow \frac{2}{3}$

$4u \rightarrow 190$

$1u \rightarrow 190 \div 4 = 47\frac{1}{2}$

$6u \rightarrow 47\frac{1}{2} \times 6 \Rightarrow \underline{285 \text{ paper flowers}}$

Q13 Mr Tang $\rightarrow 4200 \times \frac{100}{120} = 3500$

Mr Lim $\rightarrow 3500 + 910 = 4410$

$4410 - 4200 = 210$

$\frac{210}{4200} \times 100 \Rightarrow \underline{5\%}$

Q14a

Salary $\rightarrow \frac{2}{8}$ (accommodation)

$\rightarrow \frac{1}{8}$ (bag)

$\rightarrow \frac{5}{8}$ (rest) $\rightarrow \frac{1}{4}$ (parents)

$\rightarrow \frac{3}{4}$ (transport + saved)

$\frac{1}{4} \times \frac{5}{8} \Rightarrow \frac{5}{32}$

3

Q14b $1350 + 450 \to 1800$

$1800 \times \frac{4}{3} \to 2400$

$2400 \times \frac{8}{5} \Rightarrow \underline{\$3840}$

Q15a $385 \div 0.50 \Rightarrow \underline{770 \text{ paper hearts sold}}$

Q15b $19 \times 3 = 57$

$57 - 2 = 55$

$770 \div 55 = 14$

$14 \times 19 \Rightarrow \underline{266 \text{ pieces}}$

Q16a $\angle EAB = \angle BDE = 56°$

$\angle FBC = \angle EAB = 56°$

$\angle EBD = (180° - 56°) \div 2 \to 62°$

$\angle EDC = \angle EBC = 62° + 56° \to 118°$

$\angle FDC = 118° - 56° \Rightarrow \underline{62°}$

Q16b $\angle BCE = 180° \div 3 \to 60°$

$\angle BCD = 180° - 24° \to 156°$

$\angle DCE = 360° - (156° + 60°) \to 360° - 216° \to 144°$

$\angle CED = (180° - 144°) \div 2 \to 36° \div 2 \Rightarrow \underline{18°}$

Q17 $\frac{20}{100} \times \frac{140}{1} = 28$

$P \to 100\% + 28\% = 128\%$

Water left in P $\to \frac{3}{4} \times \frac{128}{1} = 96$

$112 - 96 = 16$

$16\% \to 900$

$1\% \to 900 \div 16 = 56.25$

$140\% \to 56.25 \times 140 \Rightarrow \underline{7875 \text{ ml}}$

Q18a Cost cake $\to 1.20$ & cost bun $\to 1.20 \div 3 = 0.40$

$1.20 \times 3 = 3.60$

$0.40 \times 2 = 0.80$

$3.60 + 0.80 = 4.40$

$264 \div 4.40 = 60$

$60 \times 3 \Rightarrow \underline{180 \text{ cakes}}$

Q18b $60 \times 5 = 300$

$300 \times 1.20 = 360$

$300 \times 0.40 = 120$

$120 + 360 \Rightarrow \underline{\$480}$

4

End

Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT 1 (2016)

PRIMARY 6

MATHEMATICS

PAPER 1

Booklet A

day   6 May 2016   50 min

Name: _____ (   )   Class: 6.(   )

INSTRUCTIONS TO PUPILS

1   Do not turn over the pages until you are told to do so.

2   Follow all instructions carefully.

3   Answer ALL questions.

4   Shade your answers in the Optical Answer Sheet (OAS) provided.

5   You are **not** allowed to use a calculator for this paper.
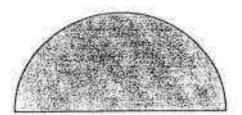
This question paper consists of 8 printed pages (inclusive of cover page).

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical
Answer sheet.   (20 marks)
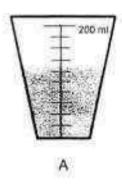
1. Round off 298 292 to the nearest thousand.

   (1) 298 000

   (2) 298 290

   (3) 298 300

   (4) 300 000

2. Express $\frac{36}{5}$ as a decimal.

   (1) 5.2

   (2) 5.5

   (3) 7.2

   (4) 7.5

3. When a number is divided by 7, the quotient is 8 and the remainder is 3.
   What is the number?

   (1) 18

   (2) 56

   (3) 59

   (4) 66

4. The figure below shows a semicircle with diameter 14 cm. Find the area of the semicircle.
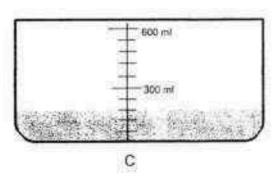
(Take $\pi = \dfrac{22}{7}$)

(1) 77 cm²

(2) 154 cm²

(3) 308 cm²

(4) 616 cm²

5. Below are three containers with some water. Arrange the volume of water in containers A, B and C from the largest to the smallest.
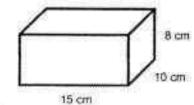
(1) A, B, C

(2) B, C, A

(3) C, B, A

(4) C, A, B

A3
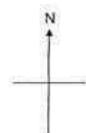
6. A tank with height 8 cm has a rectangular base of length 15 cm and breadth 10 cm. How much water is needed to fill $\frac{3}{4}$ of the tank?

   (1) 0.900 l

   (2) 9.000 l

   (3) 90.00 l

   (4) 900.0 l

8 cm
10 cm
15 cm
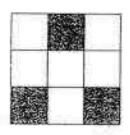
7. The average of a set of 4 numbers is 80. The average of another set of 2 numbers is 50. What is the average of the 6 numbers?

   (1) 45

   (2) 65

   (3) 70

   (4) 130

8. Taylor is facing east. She turned anti-clockwise to face north-west. How many degrees did she turn?

   (1) 90°

   (2) 135°

   (3) 180°

   (4) 225°

N

9. The figures below are made up of squares. Which of the following figures **does not** have a line of symmetry?
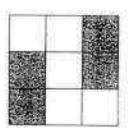
1)
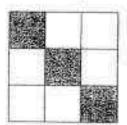
2)

3)
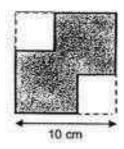
4)
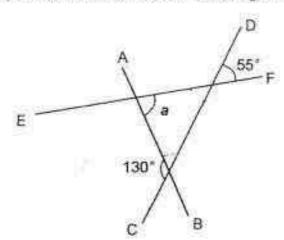
10. The ratio of the number of boys to the number of girls in a class is 3 : 4. Express the number of girls as a fraction of the total number of pupils.

(1) $\frac{3}{4}$

(2) $\frac{4}{3}$

(3) $\frac{3}{7}$

(4) $\frac{4}{7}$

11. The figure below shows a square cardboard with length 10 cm. Two identical small squares with length 4 cm were cut out from the cardboard. Find the area of the remaining shaded part.

10 cm
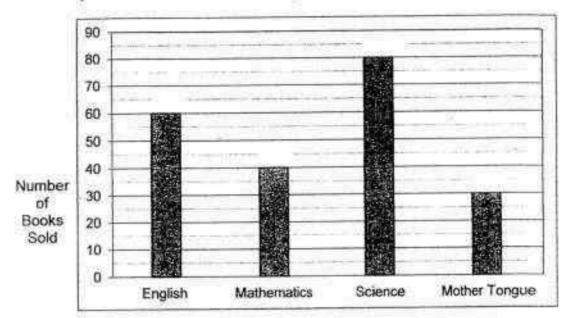
(1) 32 cm^2

(2) 40 cm^2

(3) 68 cm^2

(4) 84 cm^2

12. In the figure below, AB, CD and EF are straight lines. Find ∠a.

(1) 25°

(2) 50°

(3) 55°

(4) 75°

13. On Wednesday, 95 pupils had their lunch in the canteen. On Thursday, 76 pupils had their lunch in the canteen. Find the percentage decrease in the number of pupils who had lunch in the canteen.

   (1) 20%

   (2) 25%

   (3) 75%

   (4) 80%

14. Henderson had $15 at first. He bought 2 erasers at $p each. He then spent $3 on lunch. He used the remaining money to buy 3 identical pens. Find the cost of 1 pen in terms of p.

   (1) $ (9 - p)

   (2) $ (4 - 2p)

   (3) $ \dfrac{12 - p}{3}$

   (4) $ \dfrac{12 - 2p}{3}$

15. The bar graph shows the number of each type of assessment books sold by a shop.

The table shows the prices of the assessment books.

Type of Assessment books	Price per book
English	$3.00
Mathematics	$4.00
Science	$2.00
Mother Tongue	$5.00

From the sale of which assessment books did the shop collect the most amount of money?

(1) English

(2) Mathematics

(3) Science

(4) Mother Tongue

(Go on to Booklet B)

A8

Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT 1 (2016)
PRIMARY 6
MATHEMATICS
PAPER 1
Booklet B

Friday   **6 May 2016**   **50 min**
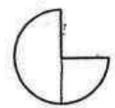
Name: _____ ( )   Class: 6.( )

INSTRUCTIONS TO PUPILS

1   Do not turn over the pages until you are told to do so.
2   Follow all instructions carefully.
3   Answer ALL questions.
4   You are **not** allowed to use a calculator for this paper.

This question paper consists of 8 printed pages (inclusive of cover page).

Questions **16** to **25** carry **1 mark each**. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)
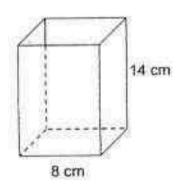
16. What is the value of $84 \div 2 - (7 \times 4) + 6\frac{1}{2}$?

Ans: _____

17. Find the product of 5 tenths and 50 tenths.

Ans _____

18. How many sevenths are there in $\frac{52}{14}$?

Ans: _____

B2

Sub-Total

19. The figure below shows a circle of diameter 7 cm, with a quadrant removed from it. What is the perimeter of the figure?

$$(\text{Take } \pi = \frac{22}{7})$$

Ans: _____ cm

20. Find the volume of the cuboid with a square base of length 8 cm.

14 cm

8 cm

Ans: _____ cm^3

B3

Sub-Total [ ]
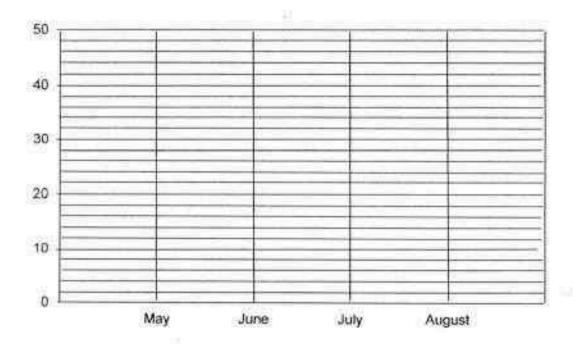
21. Jed was in school from 6.15 a.m. to 9.05 a.m. How much time was he in school? Express your answer in hour and minutes.

Ans: _____ hr _____ min

22. The line graph shows the number of computer games sold by a game shop from May to August.

What is the average number of computer games sold per month?

Ans _____

Sub-Total

23. $6:4:\boxed{} = 24:16:12$

What is the missing number in the box?

Ans: _____
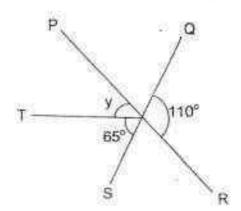
24. In the figure below, PR and QS are straight lines. Find $\angle y$.

Ans: _____ °

25. Express $\frac{2}{3}$ as a percentage. Give your answer correct to 2 decimal places.

Ans: _____ %

B5
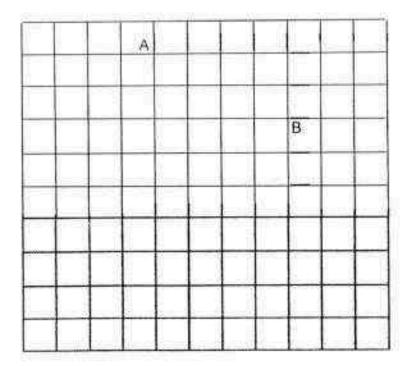
Sub-Total: [   ]

Questions **26** to **30** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

26. Maverick earns $6000 a month. He spends $\frac{2}{5}$ of his salary and gives $\frac{1}{4}$ of the remainder to his parents. He saves the rest. How much money does he save every month?

Ans: $ _____

27. In the square grid, complete the drawing of the triangle ABC whereby AB = AC and $\angle$CAB is a right angle. Measure the length of BC.

Ans: _____ cm

B6   Sub-Total

28. The pattern in the box shows part of a tessellation.

(i) Shade a unit shape of the tessellation.

(ii) Extend the tessellation by drawing one more unit shape in space provided.

29. Ali had dinner with his family. He paid a total of $143 including 10% service charge. How much did the meal cost before the service charge was added?

Ans: $_____

Sub-Total

30. Othello started reading books at the start of January. Each month, he reads k books more than the previous month. He reads 6k books in March. What was the total number of books he read from the start of January to the end of April? Leave your answer in terms of k.

~ End of Paper ~

Sub-Total: _____

Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT 1 (2016)
PRIMARY 6
MATHEMATICS
PAPER 2

Friday   6 May 2016   1 h 40 min

Name: _____ ( )   Class: 6.( )   Parent's Signature:_____

INSTRUCTIONS TO PUPILS

1   Do not turn over the pages until you are told to do so.

2   Follow all instructions carefully.

3   Answer ALL questions.

4   You can use a calculator for this paper.

Paper	Booklet	Possible Marks	Marks Obtained
1	A	20	
	B	20	
2		60	
Total		100	

This question paper consists of 15 printed pages (inclusive of cover page).

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)
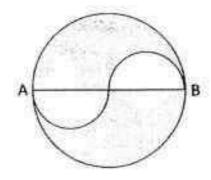
1. The table below shows the charges of renting a pair of Ice skating shoes at the Ice Skating Centre.

For the first hour	$7.80
Every additional 1 hour or part there of	$5.00

Michael rented 2 pairs of Ice skating shoes from 2 p.m. to 4.45 p.m. Calculate the total cost he had to pay for renting the 2 pairs of Ice Skating shoes.

Ans: $_____

2. Two identical semicircles of diameter 40 cm were cut out from a circular piece of paper, where AB is the diameter. Find the area of the remaining paper in terms of π.

Ans: _____ cm²

2

Sub-Total: ☐

3. In Johnson Primary School, the ratio of the number of Malay pupils to the number of Indian pupils is 3 : 2. The ratio of the number of Malay pupils to the number of Chinese pupils is 5 : 2. Find the ratio of the number of Malay pupils to the number of Indian pupils to the number of Chinese pupils.

Ans: _____

4. There were 115 passengers on a train. The number of women was $\frac{2}{3}$ of the number of men. After a number of men alighted at a station, there was an equal number of men and women. How many men alighted at the station?

Ans: _____

3

Sub-Total:
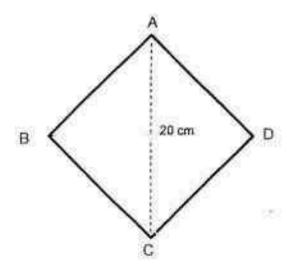
5. $\frac{3}{4}$ of Evan's mass is equal to $\frac{2}{3}$ of Fabian's mass. Given that Fabian weighs 8 kg more than Evan, find the total mass of Evan and Fabian.

Ans: _____ kg

4

Sub-Total

For questions **6** to **18**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (50 marks)

6. The average number of marbles Joel and Ali had was 900. The average number of marbles Joel and Wendy had was 480. The number of Ali's marbles is 5 times the number of Wendy's marbles, find the total number of marbles Wendy and Ali had altogether.

Ans: _____ [3]

7. Mr Kingsley is 45 years old. He is 3 times as old as his son this year. What was Mr Kingsley's age when he was 4 times as old as his son?

Ans: _____ [3]

5

Sub-Total:

8. The figure below is a square ABCD. AC is 20 cm. Find its area.

20 cm

Ans: _____ [3]
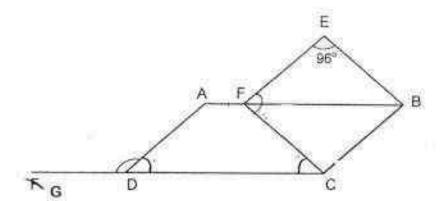
Sub-Total: [ ]

9. Kester saved a total of $4840. $\frac{1}{2}$ of his savings was made up of $10 notes and the rest was made up of $2 notes. How many notes did he have altogether?

Ans: _____ [3]

10. ABCD is a parallelogram and FEBC is a rhombus. ∠FEB is 96°
Find ∠~~ADF~~.
ADG

Ans: _____ [3]

7

Sub-Total

11. Lawrence spent $\frac{1}{3}$ of his money on a washing machine. He spent $\frac{1}{3}$ of his remaining money and an additional $250 on a computer. He then spent $200 on a DVD player and had $30 left. How much money did he have at first?

Ans: _____ [4]

8

Sub-Total:

12. Emmanuel had $300 in his piggy bank and Indra had $240 at first. Every week, Emmanuel saved $6 and Indra saved $8. They stopped saving once they had the same amount of money in their piggy banks.

(a) How many weeks did it take for them to have the same amount of money in their piggy banks?

(b) How much money did they have in their piggy banks altogether?

Ans: (a) _____ [2]

(b) _____ [2]

9   Sub-Total: [   ]
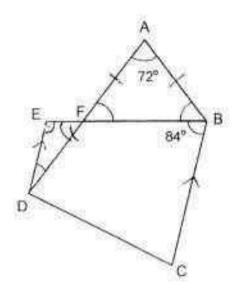
13. At 8.00 a.m., Car A travelled from Newton House towards Orchard Garden at a uniform speed of 60 km/h. 15 minutes later. Car B travelled from Orchard Garden towards Newton House at a uniform speed of 40 km/h.

a) How far had Car A travelled when Car B left Orchard Garden?

b) The distance between Newton House and Orchard Garden was 35 km. At what time would the Car A and Car B meet each other?

Ans: a) _____ [1]

b) _____ [3]

10   Sub-Total

14. In the figure below, AFD and EFB are straight lines. ED is parallel to BC.
∠ ~~EBF~~ EBC = 84° and AF = AB.

a) Find ∠ AFB.

b) Find ∠ EDF.

Ans: a)_____[1]

b) _____[3]

Sub-Total
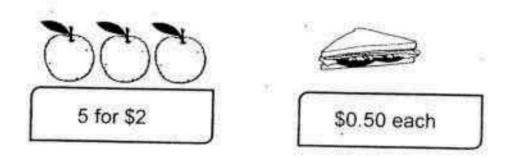
15. Bob used 70% of his money to buy 6 balls and 10 toy cars. The cost of each ball is 3 times the cost of each toy car. He bought more toy cars with his remaining money. How many toy cars did he buy altogether?

Ans. _____ [4]

12

Sub-Total [ ]
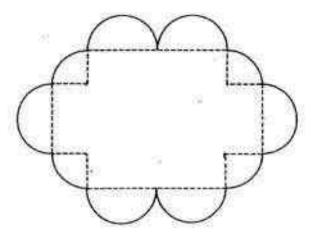
16. Danny bought some sandwiches and apples. The ratio of the number of sandwiches to the number of apples was 5 : 2. Danny's mother then gave him another 30 sandwiches and 5 apples and the ratio of the number of sandwiches to the number of apples became 3 : 1.

(a) How many sandwiches did Danny buy?

(b) Danny bought the apples at 5 for $2 each and the sandwiches at $0.50 each. What was the total amount of money that Danny spent on the food?

```
        5 for $2            $0.50 each
```

Ans : (a) _____ [3]

(b) _____ [2]

13

Sub-Total [   ]
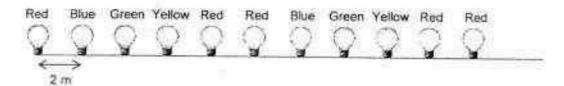
17. The figure below shows a placemat. The outside edge of the placemat is formed by 6 semicircles and 4 quarter circles, each of radius 4 cm.

a) Find the perimeter of the placemat.

b) Find the area of the ~~placement~~ placemat

Express your answers in terms of π.

Ans : (a) _____ [2]

(b) _____ [3]

14   Sub-Total [ ]

18. Winstedt Road is decorated with light bulbs of different colours. The light bulbs are placed at 2 m apart. The colour of the light bulbs follow a repeated colour pattern as shown below.

Red Blue Green Yellow Red Red Blue Green Yellow Red Red

2 m

Complete the table below.

Light Bulb Number	Colour
1	Red
2	Blue
3	Green
4	Yellow
5	Red
6	Red
7	Blue
8	Green
9	Yellow
⋮	⋮
34	
(a)	[1]

The total length of Winstedt Road is 2.5 km long.

b) How many light bulbs are there along Winstedt Road ?

c) How many light bulbs are red in colour?

Ans : (b) _____ [2]

(c) _____ [2]

– End of Paper –

Sub-Total

EXAM PAPER 2016
LEVEL   : PRIMARY 6
SCHOOL   : ANGLO CHINESE
SUBJECT : MATHEMATICS
TERM   : SA1
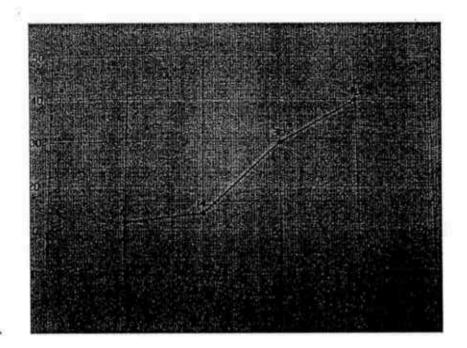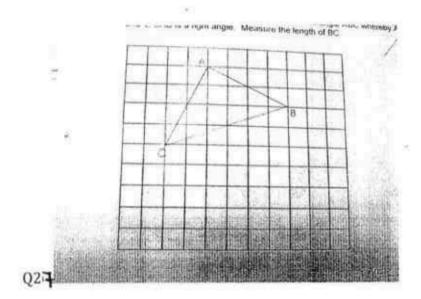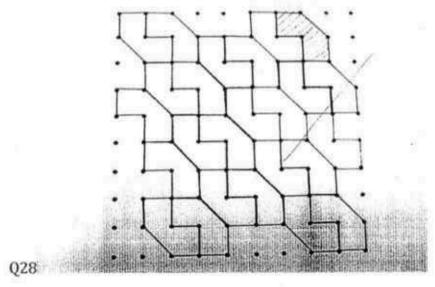
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1	3	3	1	4	1	3	2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
3	4	3	4	1	4	1	

Q16	$84 \div 2 - 28 + 6$ $= 42 - 28 + 6$ $= 14 + 6$ $= 20$	Q17	$0.5 \times 5 = 2.5$
Q18	$\dfrac{52}{14} \rightarrow \dfrac{26}{7}$ $26 \div 7 = 3R5$ $3 \times 7 + 5 = 26$	Q19	Semi$\rightarrow$ ½πd $\dfrac{1}{2} \times \dfrac{22}{7} \times 7$ $= 11$ quad$\rightarrow \dfrac{1}{4} \times \dfrac{22}{7} \times 7$ $= 5.5$ $11 + 5.5 + 7$ $= 23.5$cm
Q20	$8 \times 8 \times 14 = 896$	Q21	2 hr 50 min
Q22	$12 + 14 + 30 + 40 = 96$ $96 \div 4 + 24$	Q23	$12 \div 4 = 3$
Q24	$110° - 65° = 45°$	Q25	$0.666 \rightarrow \dfrac{666}{1000} \rightarrow \dfrac{66.6}{100}$ $66.6 = 66.6$
Q26	$6000 \div 20 = 300$ $9u \rightarrow 9 \times 300 = 2700$	Q27	5.8cm
Q28		Q29	$110\% \rightarrow 143$ $1\% \rightarrow 130$ $100\% \rightarrow 130 \times 100$ $= 130$
Q30	$6K - K = 5K$ $5K - K = 4K$ $6K - K = 7K$ $7K + 6K + 5K + 4K = 22K$ 22K books.		

Q22.

Q27.

... is a right angle. Measure the length of BC

Q28

2

Q1. $5+5+7.80=17.80$ $17.80\times2=35.60$	**Q2.** $200\pi\times2=400\pi$ Big $\rightarrow \pi\cdot^2$ $=\pi\ 40\times40=1600\pi$ $1600\pi-400\pi=1200\pi$
Q3. M : 1 M : C 3 : 2 5 : 2 15 : 10 : 6 Ans: 15 : 10 : 6	**Q4.** $5u\rightarrow115$ $1u\rightarrow115\div5=23$
Q5. $\frac{3}{4}\rightarrow\frac{6}{8}$ $\frac{2}{3}\rightarrow\frac{6}{9}$ $1u\rightarrow8$ $17u\rightarrow17\times8=136$	**Q6.** $4u\rightarrow1800-960=840$ $1u\rightarrow840\div4=210$ $6u\rightarrow6\times210=1260$
Q7. $1u\rightarrow45\div3=15$ $45-15=30$ $1p\rightarrow30\div3=10$ $1u\rightarrow10\times4=40$ years old	**Q8.** $20\div2=10$ $5\times10=50$ $50\times4=200cm^2$
Q9. $4840\div2=2420$ $2420\div10=242$ $2420\div2=1210$ $1210+242=1452$ Ans: 1452 notes	

Q10.	£ CFB→180°−96=84°	Q11.	2u→200+30+250=48
	84°÷2=42°		1u→480÷2=240
	£ AFC→180°−42°=42°=138°		3u→240×3=720
	£ FCD→180°−138°=42°		2p→720
	£ ADC→180°−42°−96°=42°		1p→720÷2=360
	£ ADG→180°−42°=138°		3p→360×3=1080
	Ans: 138°		**Ans: $1080**

Q12.	(a)300−240=60	Q13.	(a) 60÷4=15
	8−6=2		Car A had travelled 15km when
	60÷2=30		Car B left Orchard Garden.
	(b) 30×8=240		(b) 8.00+15min=8.15
	240×2=480		35−15=20
	480×2=960 (a) 30 weeks		60+40=100
	(b) $960		100÷5=20
			60÷5=12min
			8.15+12min=8.27a.m

Q14.	a) £ AFB→180°−72°=108°	Q15.	18+10=28
	108°−2°=54°		28u→70%
	b) £ DEB→180°−84°=96°		1u→70÷28=2.5
	£ DEB→180°−54°−96°=30°		?u→30÷2.5=12
	⩽ OF		12u→30%
			12+10=22

Q16.	a) 6u+15=5u+30	Q17.	a) Semi→½πd
	6u−5u=30−15		=½×π×8=4π
	1u→15		6s→4π×6=24π
	5u→5×15=75 sandwiches		quad→¼πd=¼×π×8=2π
	b) →75×0.5=37.50		4q→2π×4=8π
	A→(15×2)−5×2=12		Total→8π+24π=32π
	$37.50+$12= $49.50		
			b) Semi→½πr²
Q18.			=½×π×4×4=8π
	a) Yellow		6 Semi→6×8π=48π
	b) (1250+1=1251)		quad→¼πr²
	c) 250×2+1= 501		=¼×π×4×4=4π
			4q→4×4π=16π
			Rec→8×4=32
			2 Rec→2×32=64
			Square→16×16=256
			Total→256+64=320
			16π48π=64π cm²

4.

END .

PRIMARY 6 MID-YEAR EXAMINATION 2016

Name : _____ ( ) Date 13 May 2016

Class : Primary 6 ( ) Time 8.00a.m. – 8.50a.m.

Parent's Signature _____

MATHEMATICS

PAPER 1

(BOOKLET A)

20

INSTRUCTIONS TO CANDIDATE

1. Write your name, class and register number
2. Do not turn over this page until you are told to do so
3. Follow all instructions carefully
4. Answer all questions
5. Show your working clearly as marks are awarded for correct working
6. You are **NOT** allowed to use a calculator

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet.

[20 marks]
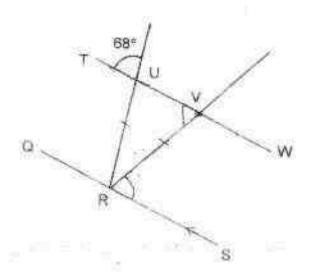
1) Round 5.355 to 2 decimal places.

 (1) 5.30

 (2) 5.35

 (3) 5.36

 (4) 5.40

2) Which of the following is the same as 7 050 g?

 (1) 7 kg 5 g

 (2) 7 kg 50 g

 (3) 70 kg 5 g

 (4) 70 kg 50 g

3) LMOP is a trapezium. MO is parallel to LP. Find ∠MPO.

 (1) 25°

 (2) 35°

 (3) 44°

 (4) 86°

-2-

4) Leo had $60. He spent $18 on food. What percentage of his money had he left?

    (1)   30%

    (2)   42%

    (3)   60%

    (4)   70%

5) In a class of 39 students, 12 are boys.
What is the ratio of the number of boys to the number of girls?

    (1)   4 : 9

    (2)   4 : 13

    (3)   9 : 4

    (4)   9 : 13

6) Alice, Betty, Cally and Diane played badminton this morning. Each girl played with each other only once. How many games were played altogether?

    (1)   6

    (2)   8

    (3)   9

    (4)   12

7) HAPPYHARRYHAPPY..........

What will be the 100th letter in the pattern above?

    (1)   A

    (2)   H

    (3)   P

    (4)   Y

8) The average mass of Aaron and Ben is 45 kg. Aaron's mass is 80% of Ben's mass. Find the mass of Ben.

   (1) 20 kg
   (2) 25 kg
   (3) 40 kg
   (4) 50 kg

9) QS is parallel to TW. RU = RV. Find ∠VRS.

   (1) 44°
   (2) 56°
   (3) 68°
   (4) 112°

10) 0.5% is the same as _____.

   (1) 0.005
   (2) 0.05
   (3) 5
   (4) 50

11) 10 lanterns were hung at equal distance apart in a row. The distance between the first and the fourth lantern is 24 m. What is the distance between the first and the tenth lantern?

(1) 54 m
(2) 60 m
(3) 72 m
(4) 80 m

12) Madam Ang bought 5 pears and 6 mangoes for $11.90.
A pear cost 40 cents more than a mango.
What was the cost of each mango?

(1) $0.90
(2) $1.30
(3) $2.30
(4) $5.75

13) Kylie, Linda and Melisa shared a sum of money.

Kylie received $\frac{1}{5}$ of the sum of money.

The ratio of Linda's share to Melisa's share was 3 : 5
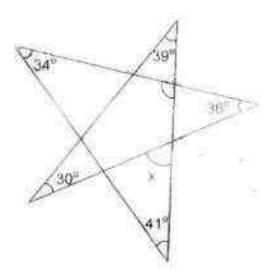
If Kylie received $80, how much money did Linda receive?

(1) $108
(2) $120
(3) $200
(4) $320

- 5 -

14) The area of the rectangle is 24 cm²
What is the possible **perimeter** of the rectangle?
(The length and breadth are whole numbers.)

(1) 6 cm

(2) 11 cm

(3) 12 cm

(4) 22 cm

15) Find $\angle x$

(1) 69°

(2) 69.5°

(3) 70°

(4) 80°

PRIMARY 6 MID-YEAR EXAMINATION 2016

Name : _____ ( )   Date: 13 May 2016

Class : Primary 6 ( )   Time: 8.00 a.m – 8.50 a.m

Parent's Signature: _____

MATHEMATICS

PAPER 1

(BOOKLET B)

20

INSTRUCTIONS TO CANDIDATE

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully
4. Answer all questions.
5. Show your working clearly as marks are awarded for correct working.
6. You are **NOT** allowed to use a calculator.

16) Express $\dfrac{55}{1000}$ as a decimal

Ans: _____

17) Find the value of $\dfrac{4}{5} \div 20$

Give your answer as a fraction in the simplest form.

Ans _____

18) What is the value of $3 + 3 + 3 - 3$?

Ans: _____

19) Sam's pocket money was increased from $15 to $18.
Find the percentage increase in his pocket money.
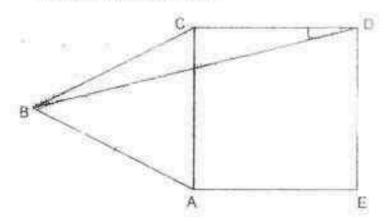
Ans: _____ %

20) The volume of a cube is 64 cm³. Find the length of one edge of the cube.

Ans: _____ cm

21) The figure, not drawn to scale, is made up of a square and an equilateral triangle. Calculate ∠CDB.

Ans: _____ °

- 9 -

22) The table below shows the number of television sets per flat in a housing estate.

Number of television sets per flat	0	1	2	3
Number of flats	11	45	54	30

How many flats have at least 2 television sets?

Ans: _____

23) 12 watches cost $a. What is the cost of 18 watches in terms of a?

Ans: $ _____

24) What is the missing number in the box?

$4 : 14 = \boxed{} : 63$

Ans: _____

25) How many ninths are there in $\frac{7}{3}$?

Ans: _____

- 10 -

Questions **26** to **30** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. [10 marks]

26) The car park rate is shown below.

| First 30 minutes | $0.65 |
| Every additional 10 minutes or part thereof | $0.25 |

Devi parked her car in the car park from 11 a.m. to 11.45 a.m. How much did she have to pay?

Ans. $ _____
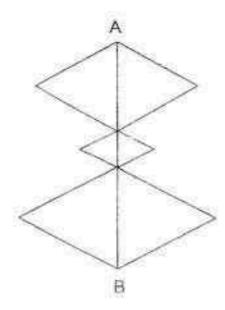
27 For every $1.50 George put into his piggy bank, his mother put in another 50 cents. When George had a total of $100 in his piggy bank, what was the amount of money put in by his mother?

Ans: $ _____

-11-

28) A, B, C, D and E represent five 2-digit numbers.

The average of these 5 numbers is 20.

What number does D represent?

A	18
B	20
C	22
D	▧7
E	2▧

Ans _____
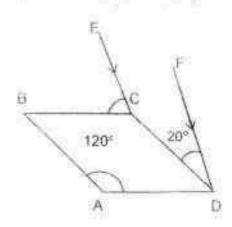
29) The figure is made up of 3 pairs of aquilateral triangles.
The length of AB is 21 cm. What is the perimeter of the figure ?

Ans: _____ (2m)

30) ABCD is a rhombus. EC is parallel to FD. ∠BAD = 120°. ∠CDF = 20°.
Find ∠ECB.

Ans: _____ °

- END OF PAPER 1 -

PRIMARY 6 MID-YEAR EXAMINATION 2016

Name : _____ ( )   Date: 13 May 2016
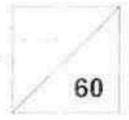
Class : Primary 6 ( )   Time: 10.00a.m – 11.40a.m

Parent's Signature : _____

MATHEMATICS

PAPER 2

60

INSTRUCTIONS TO CANDIDATE

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Show your working clearly as marks are awarded for correct working.
6. You are allowed to use a calculator.
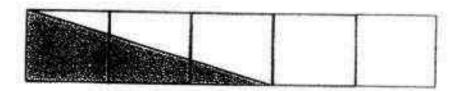
Questions **1** to **5** carry **2** marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

1) Sally is 9 years old. Her age is $\frac{1}{4}$ of her mother's age now.

How old will her mother be in 5 years' time?

Ans: _____ years

2) The figure below is made up of rectangles of the same size. What fraction of the figure is shaded?

Ans: _____

-2-

3) Cindy had $\frac{5}{9}$ l of water. She drank $\frac{1}{3}$ of it and kept the rest.
How much water was left?

Ans: _____ l

---

4) $\frac{2}{5}$ of Lily's savings is equal to $\frac{1}{4}$ of Meiyin's savings.

What fraction of Lily's savings is Meiyin's savings?

Ans: _____

---

5) Study the following table carefully.

W	X	Y	Z
1	2	3	4
8	7	6	5
9	10	11	12
16	15	14	13

Which column will the number 63 appear in?

Ans: _____

For questions **6** to **18**, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(50 marks)
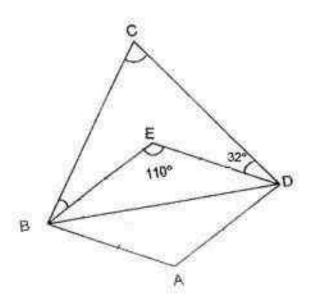
6) Grace has $\frac{1}{3}$ as many 50-cent stamps as 20-cent stamps.

There are 6p more 20-cent stamps than 50-cent stamps.

(a) Express the number of 20-cent stamps in terms of p

(b) How much did she spend on the 20-cent stamps when p = 8?

Give your answer in dollars.

Ans: (a) _____ [1m]

Ans: (b) _____ [2m]

-4-
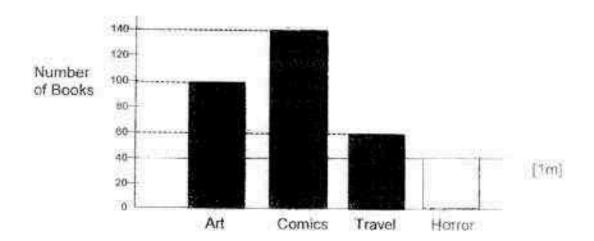
7) The figure, not drawn to scale, is made up of Triangle BCD and Rhombus ABED. ∠BCD is twice the size of ∠CBE. Find ∠CBE.

Ans: _____ [3m]

8) The bar graph below shows the number of books sold at a Book Sale.

[1m]

(a) There were $\frac{2}{3}$ as many Horror books as Travel books sold

Draw a bar to represent the number of Horror books sold

(b) On average, each customer bought 4 books and all the books were sold
How many customers were at the Book Sale?

Ans: (b) _____ [2m]

9) At a playground, 7 children took turns to sit on the three swings from 12 noon to 3.30 p.m. At any one time, all the three swings were occupied, one child to one swing, while the other 4 children waited. If each child had the same amount of playing time, how many minutes did each child play on the swing?

Ans: _____ [3m]

10) Joy and Tricia shared the total cost of a tablet.

Joy paid $100 less than $\frac{2}{7}$ of the cost of the tablet.

Tricia paid $536.
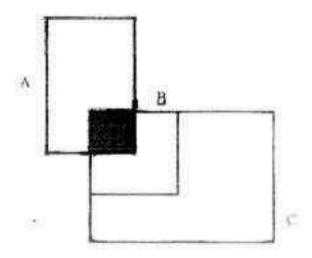
(a) How much did the tablet cost?

(b) How much did Joy pay?

Ans: (a)_____ [3m]

(b)_____ [1m]

11) The figure is made up of a square and two rectangles.

The ratio of the area of Rectangle A to the area of Square B to the area of

Rectangle C is 3 : 2 : 6 . $\frac{1}{4}$ of Square B is shaded.

(a) What fraction of the figure is not shaded?

(b) If the area of Rectangle C is 48 cm², find the area of the figure.
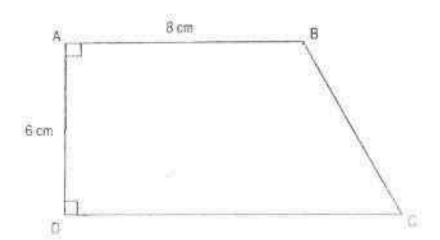
Ans: (a)_____ [2m]

(b)_____ [2m]

12) The average marks for a group of pupils was 13.
After Johana joined the group, their average marks became 15.
If Johana scored 35 marks, how many pupils were there at first?

Ans: _____ [3m]

13) The area of the trapezium is 60 cm². AB = 8 cm and AD = 6 cm.
Find the length of DC.

Ans _____ [3m]
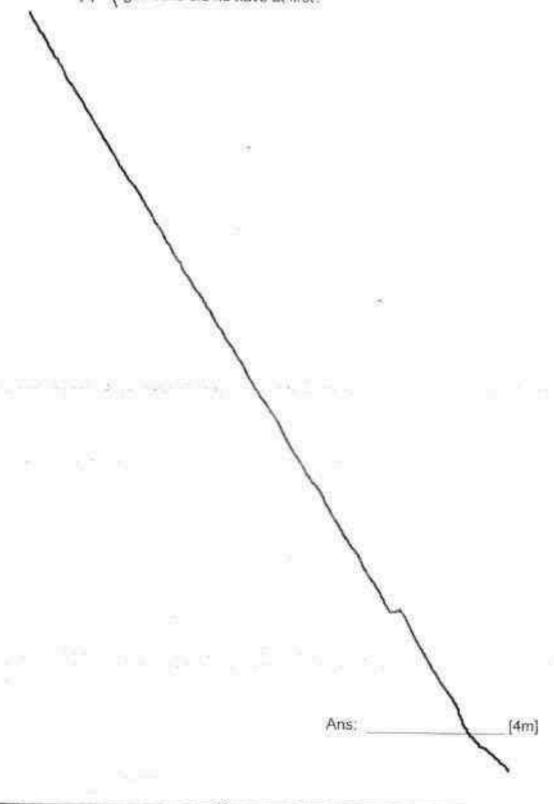
14) Alex had a total of 69 white and pink golf balls.
He gave away 27 pink golf balls and bought more white golf balls.
The number of white golf balls then increased by 60%.
Finally, he had a total of 72 golf balls.
How many pink golf balls did he have at first?
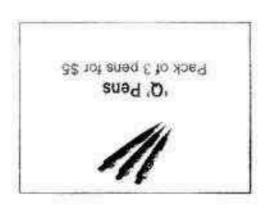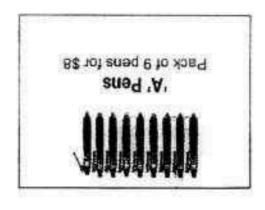
Ans: _____ [4m]

15) There were equal number of male and female goats at first.

7 male goats and 13 female goats were sold.

As a result, the ratio of the number of male to the female goats became 7:5.

(a) How many female goats were left?

(b) How many goats were there at first?

Ans: (a) _____ [3m]

(b) _____ [2m]

16) Joy and Eton shared some books. Joy's share was 30 less than Eton's share. After Eton gave $\frac{1}{3}$ of his share to Joy, Joy had 12 more than Eton. How many books did Joy have at first?

Ans: _____ [5m]

17) A bookshop sold two types of pens in packs at the prices shown below.

'A' Pens
Pack of 9 pens for $8

'Q' Pens
Pack of 3 pens for $5

(a) Adelyn spent a total of $26 on some 'A' pens and 'Q' pens.

How many more 'A' pens did she buy?

(b) The bookshop sold 360 pens last week.
The number of 'A' pens sold was 3 times the number of 'Q' pens sold.
How much money was collected from the sale of 'Q' pens last week?

Ans: (a) _____ [3 m]

(b) _____ [2 m]

18) The diagram below shows 4 figures formed by shaded and unshaded squares.

Figure 1   Figure 2   Figure 3   Figure 4

(a) Complete the table below. [2]

(b) Find the total number of squares in **Figure 13** [1]

(c) How many shaded squares are there in **Figure 31**? [2]

Figure	Total number of squares	Total number of shaded squares
1	1	1
2	4	3
3	9	6
4	16	10
5	[A1]	[A1]

Ans: (b) _____ [1m]

Ans: (c) _____ [2m]

- END OF PAPER 2 -

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	3	4	1	1	4	4	3	1

Q11	Q12	Q13	Q14	Q15
3	1	2	4	1

16)0.055   17)1/25   18)1   19)20%   20)4cm

21)15"   22)84   23)$(1.5a)   24)18   25)21

26)$1.15   27)$25   28)17   29)84cm   30)80"

Paper 2

1)9 x 4 = 36

36 +5 = 41

She will be 41 years old.

2) ½ x 3/5 = 3/10

3/10 of the figure is shaded.

3)3/3 – 1/3 = 2/3 (left)

2/3 x 5/9L = 10/27L

10/27L of water was left.

4)2/5 ₓ₁= 2/5

¼ ₓ₂ = 2/8

Meiling = 8/5
Lily

8/5 of Lily's savings is Meiling savings.

5)63 ÷ 8 = 7 R7

In column X.

6)a)(6p ÷ 2) x 3 = 9p

b)6p = 8 x 6 = 48

3p = 48 ÷ 2 = 24

9p = 24 x 3 = 72

72 x $0.20 = $14.40

a)There are 9p 20-cent stamps.

b)She spent $14.40 on the 20-cent stamps.

7) $\angle EDB = (180° - 100°) \div 2 = 35°$

$\angle CBE + \angle BCD = 180° - 35° - 35° - 32° = 78°$

$\angle CBE = 78° \div 3 = 26°$

$\angle CBE$ is $26°$

8) a) $2/3 \times 60/1 = 40$

b) Total no. of books → $100 + 140 + 60 + 40 = 340$

$340 \div 4 = 85$

There were 85 customers.

9) 210 mins $\div 7 = 30$ mins

30 mins $\times 3 = 90$ mins

10) a) $5 x = \$536 - \$100 = \$436$

$7 x = (\$436 \div 5) \times 7 = \$610.40$

b) $2 x = (\$610.40 \div 7) \times 2 = \$174.40$

$\$174.40 - \$100 = \$74.40$

a) The tablet cost $610.40

b) Joy paid $74.40

11) a) $16/17$

b) 12 units $= 48cm_2$

17 units $= (48cm_2 \div 12) \times 17 = 68cm_2$

12) Of there are 10 pupils at first

$10 \times 13 = 130$

$130 + 35 = 165$

$165 \div 11 = 15$

There were 10 pupils at first.

13) $8cm \times 6cm = 48cm_2$

$60cm_2 - 48cm_2 = 12cm_2$

$6cm \div 2 = 3\ cm$

$12cm_2 \div 3cm = 4cm$

$4cm + 8cm = 12cm$

The length of DC is 12cm.

14) free point

15) a) 7 units + 7 = 5 units + 13

$2\ units = 13 - 7 = 6$

$5\ units = (6 \div 2) \times 5 = 15$

b) $12\ units = (15 \div 5) \times 12 = 36$

$36 + 20 = 56$

a) 15 female goats were left.

b) There were 56 goats at first.

16) 4 units + 10 = 2 units + 32

2 units = 32 − 10 = 22

3 units = (22 ÷ 2) x 3 = 33

Joy had 33 books at first.

17) a) ($5x2) + ($8x2) = $26

(9x2) − (3x2) = 12

b) (360 ÷ 4) ÷ 3 = 30

30 x $5 = $150

a) She bought 12 more 'A' pens.

b) $150 was collected from the sale of 'Q' pens.

18) a) 25 , 15

b) 132 = 169

c) 31 ÷ 2 ≈ 16

16 x 31 = 496

b) There are 169 squares.

c) There are 496 shaded squares.

13

HENRY PARK PRIMARY SCHOOL
2016 SEMESTRAL EXAMINATION 1
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET A)

Name: _____

Class: Primary 6 _____

Marks:

Paper 1	Booklet A	20
	Booklet B	20
Paper 2		60
Total		100

Total Time for Booklets A and B: 50 min

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.
You are **not** allowed to use a calculator.

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice and shade your answer (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

---

1   Which digit in 85.96 is in the tenths place?

(1)   5

(2)   6

(3)   8

(4)   9   (   )

2   Arrange the following from the largest to the smallest:

| 1.205, | $\dfrac{5}{4}$, | 1.2 |

(1) $\dfrac{5}{4}$,   1.205,   1.2

(2) $\dfrac{5}{4}$,   1.2,   1.205

(3)   1.205,   1.2, $\dfrac{5}{4}$

(4)   1.2 $\dfrac{5}{4}$,   1.205   (   )

3   Which one of the following is the most likely length of the whiteboard on the wall in your classroom?

(1)   3000 cm

(2)   300 cm

(3)   30 cm

(4)   3 cm   (   )

(Go on to the next page)

1

4   In the figure below, PQRS is a rhombus. Which two lines are parallel to each other?

(1)   PQ and PR

(2)   PR and QS

(3)   QS and RS

(4)   RS and QP

(   )

5   Megan has some blue, red and yellow beads. $\frac{1}{5}$ of the beads are blue. The ratio of the number of blue beads to the number of red beads is 2 : 3. What fraction of Megan's beads is red?
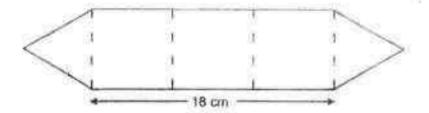
(1) $\frac{1}{2}$

(2) $\frac{1}{5}$

(3) $\frac{3}{5}$

(4) $\frac{3}{10}$

(   )

(Go on to the next page)

2
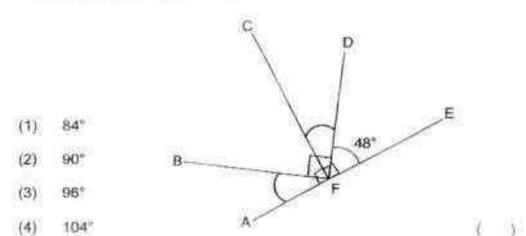
6   Alex is *t* years old. Bob is 2 times as old as Alex. Calvin is 3 years younger than Bob. How old will Calvin be in 8 years' time?

(1) $(2t - 5)$ years

(2) $(2t + 5)$ years

(3) $(2t - 11)$ years

(4) $(2t + 11)$ years   (   )

7   The ratio of the length of a rectangle to its breadth is 3 : 2. The perimeter of the rectangle is 40 cm. What is the length of the rectangle?

(1)   8 cm

(2)   12 cm

(3)   16 cm

(4)   24 cm   (   )

8   The figure below is made up of 2 identical equilateral triangles and 3 identical squares. Find the perimeter of the figure.

(1)   30 cm

(2)   54 cm

(3)   60 cm

(4)   84 cm   (   )

(Go on to the next page)

3

9. ∠BFD and ∠CFE are right angles and AFE is a straight line.
    Find the sum of ∠CFD and ∠AFB.

(1)   84°

(2)   90°

(3)   96°

(4)   104°   (   )
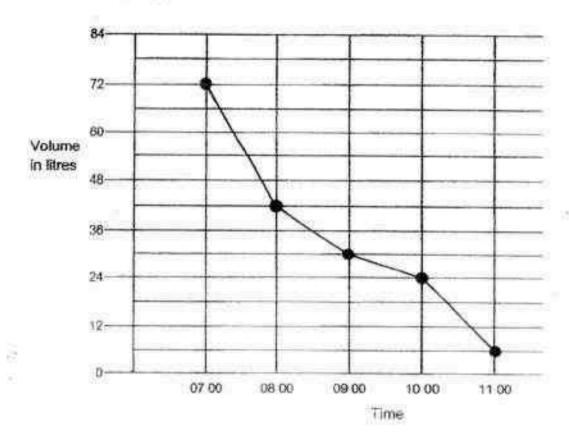
10. The sum of four numbers is 1020. One of the numbers is 150. What is the
    average of the other three numbers?

(1)   105

(2)   255

(3)   290

(4)   390   (   )

11. At first, Jamal had $192 and Ken had $84. Ken gave some of his money to
    Jamal. In the end, Jamal had three times as much money as Ken. How
    much money did Ken have in the end?

(1) $15

(2) $20

(3) $54

(4) $69   (   )

12   A tank was filled with some water at 07 00. Water flowed out of the tank from 07 00 to 11 00. The line graph shows the amount of water in the tank from 07 00 to 11 00.

What was the average decrease in the volume of water from 07 00 to 11 00?
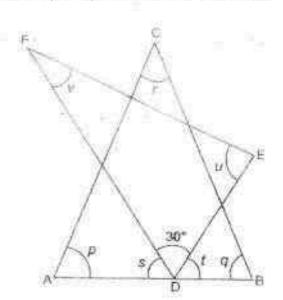
(1)   13.2 litres per hour

(2)   14.4 litres per hour

(3)   16.5 litres per hour

(4)   18 litres per hour   (   )

13 The table below shows the number of hours a group of students spent playing computer games in a particular week.

Number of hours	Number of students
0	3
1	13
2	16
3	9
4	1

What was the total number of hours these students spent playing computer games in that particular week?

(1) 10

(2) 42

(3) 76

(4) 79

( )

14 In the figure below, ABC and DEF are two overlapping triangles and ADB is a straight line. What is the value of $\angle p + \angle q + \angle r + \angle s + \angle t + \angle u + \angle v$?

(1) 330°

(2) 480°

(3) 510°

(4) 540°

( )

6

15   A printer takes 50 minutes to print a total of 1200 identical black-and-white posters and 500 identical coloured posters. The same printer takes one hour to print 2400 such black-and-white posters. How many such coloured posters can the same printer print in one hour?

(1)   2040

(2)   1500

(3)   1000

(4)   800   (   )

HENRY PARK PRIMARY SCHOOL
2016 SEMESTRAL EXAMINATION 1
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET B)

Name: _____

Class: Primary 6 _____

20

Total Time for Booklets A and B: 50 min

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

You are **not** allowed to use a calculator.

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

Do not write in this space

16   Express 8.02 as a mixed number in its simplest form.

Ans: _____

17   Use the digits 9, 5, 4 and 2 to form a 4-digit number that is closest to 5000. Each digit can only be used once.

Ans: _____

18   The figure below is made up of two identical rectangles. Each rectangle measures 10 cm by 4 cm. Find the perimeter of the figure.

Ans: _____ cm

1

19 The figure below is made up of 2 identical squares of side 7 cm.
    A semi-circle is drawn inside the figure. Find the area of the shaded part.

    (Take $\pi = \dfrac{22}{7}$)
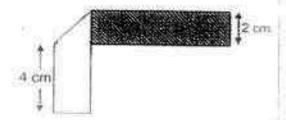
    Ans: _____ cm²

---
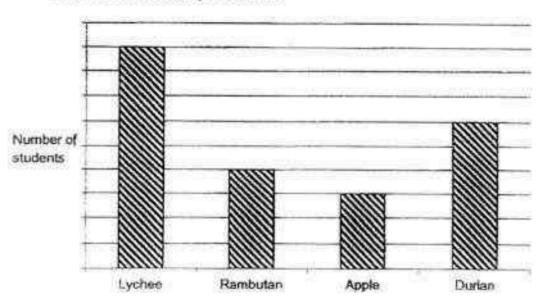
20 A rectangular piece of paper measuring 14 cm by 2 cm is folded into the
    shape as shown below. What is the area of the shaded part?

    4 cm

    2 cm

    Ans: _____ cm²

    (Go on to the next page)

    2

21   The following bar graph shows the favourite fruits voted by some students. Each student could only vote once.

Given that 6 students voted for "Apple" as their favourite fruit, find the total number of students.

Ans: _____

22   The table below shows the time taken by 5 different runners in a race.
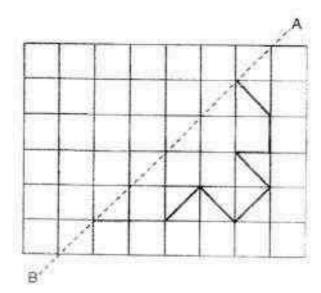
Runner	Time taken in seconds
Ali	14.4
Ben	14.9
Charles	13.8
Dinesh	13.7
Eric	14.6

What was the average time taken by the two slowest runners?

Ans: _____ seconds

(Go on to the next page)

3

23   Complete the figure below so that line AB is the line of symmetry.

24   A car travelled 60 km from 16 00 to 16 40. What is the average speed at which the car travelled?

Ans: _____ km/h
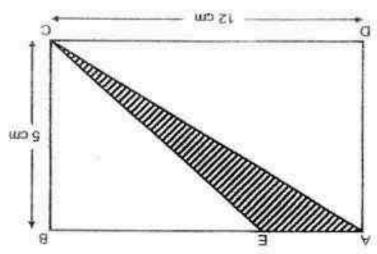
25   The ratio of the cost of one shirt to the total cost of one shirt and 2 similar blouses is 3 : 7. Given that each blouse costs $30, find the cost of one shirt.

Ans: $ _____

(Go on to the next page)

4

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Questions 26 to 30 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)
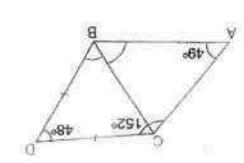
26   The figure below is not drawn to scale. ABCD is a rectangle. EB is $\frac{2}{3}$ the length of AB. Find the area of the shaded region.

Ans: _____ cm²
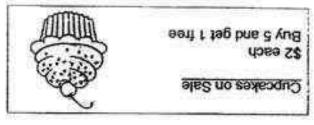
27   In the figure, CBD is an isosceles triangle and ∠ACD is 152°. Find ∠CBA.

Ans: _____ °

28 Cupcakes on Sale
$2 each
Buy 5 and get 1 free

What is the least amount of money needed to buy 30 such cupcakes?

Ans: $ _____

29 There were some children in a sports hall. $\frac{2}{5}$ of them are girls. After $\frac{1}{4}$ of the girls had left, there were 36 more boys than girls remaining in the sports hall. How many children were there in the sports hall at first?

Ans: _____

30 The usual price of a handbag is $250. Michelle bought the bag and was given a 20% discount. She had to pay a 7% GST on the discounted price. How much did she pay for the handbag in the end?

Ans: $ _____

End of Paper 1

HENRY PARK PRIMARY SCHOOL
2016 SEMESTRAL EXAMINATION 1
MATHEMATICS
PRIMARY 6

PAPER 2

Parent's Signature

Name: _____

Class: Primary 6 _____

60

Time for Paper 2: 1 h 40 min

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Show your working clearly as marks are awarded for correct working.

Write your answers in this booklet.

You are allowed to use a calculator.

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)
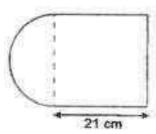
1   The figure below is formed by a square and a semicircle. Find the perimeter of the figure.

(Take $\pi = \dfrac{22}{7}$)

21 cm

Ans: _____ cm

2   Ann, Beth and Cindy shared some cookies in the ratio 2 : 3 : 7 respectively. Each of them received an average of 324 cookies. How many more cookies did Cindy receive than Ann?

Ans: _____

(Go on to the next page)

1
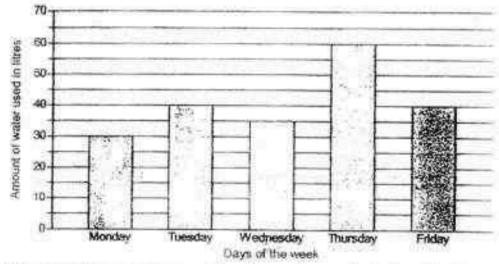
3 Jack has less than 50 sweets. If he packs the sweets in bags of five, he will have 4 sweets left. If he packs them in bags of seven, he will have 5 sweets left. How many sweets does Jack have?

Ans: _____

4 The table below shows the amount of water Jenny used during her shower from Monday to Friday last week.
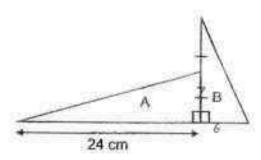
What was the average amount of water used on each day from Monday to Friday?

Ans: _____ litres

(Go on to the next page)

2

5   In the figure below, A and B are right-angled triangles.
The base of triangle A is 24 cm. The base of triangle A is 4 times the base of
triangle B. The height of triangle B is twice the height of triangle A.
Given that the area of triangle A is 84 cm², what is the area of triangle B?

Ans: _____ cm²

3

For questions **6 to 18**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [   ] at the end of each question or part-question.

Do not write in this space

(50 marks)

6   Salmah paid $21.10 for 2 bowls, 3 plates and 4 cups.
Each bowl cost 3 times as much as each cup. Each plate cost $1.20 less than each bowl. What was the cost of one plate?

Ans: _____ [3]

4

7   The table below shows the prices of pencils and notebooks sold at a bookshop.

Item	Price per item
Pencil	p cents
Notebook	$(3p - 5)$ cents
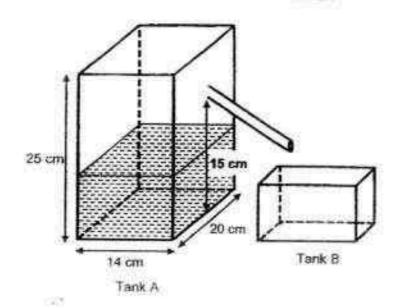
(a) Siti bought 4 pencils and 1 notebook. Express the amount of money that she spent at the bookshop in terms of p in its simplest form.

(b) Ming Wen paid $7.50 for 8 pencils and some notebooks. If $p = 30$, how many notebooks did he buy?

Ans: (a) _____ [1]

       (b) _____ [2]

(Go on to the next page)

5

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8   A rectangular piece of paper was folded at two of its corners, A and C, as shown below. Find ∠ABC.

Ans: _____ [3]

9   Tina had two rectangular tanks as shown below. Tank A was $\frac{2}{5}$ full. There was a pipe attached to Tank A, 15 cm from the base, where water can flow out of it and into Tank B. When Tina poured 1.7 litres of water into Tank A, how much water will flow out of Tank A into Tank B?

Tank A

Tank B

25 cm

15 cm

20 cm

14 cm

Ans: _____ [3]

7
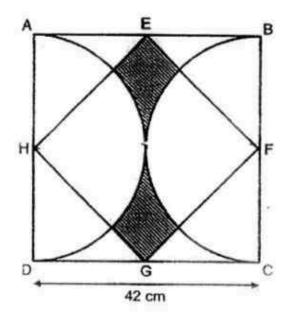
10 The figure below is made up of 2 squares, ABCD and EFGH, and 2 identical semicircles. E is the mid-point of AB and G is the mid-point of DC. Find the total area of the shaded parts.

(Take $\pi = \dfrac{22}{7}$)

Ans: _____ [3]

8

11 After selling 693 concert tickets at $75 each, there were $\frac{2}{9}$ of the tickets left. $\frac{2}{3}$ of the remaining tickets were sold at $60 each and the rest of the tickets were given away free. What was the total amount of money collected from the sale of tickets?

Ans: _____ [4]

(Go on to the next page)
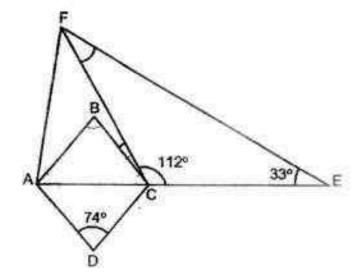
12   Mr Suraj saves 40% of his salary every month. He gives $\frac{4}{15}$ of the remainder to his wife and divides the remaining amount of his salary equally among his two parents and two daughters. Given that both of his daughters receive a total of $352 from him, find Mr Suraj's monthly salary.

Ans. _____ [4]

(Go on to the next page)

10

13 The figure below is not drawn to scale. ABCD is a rhombus and ACE is a straight line.

(a) Find ∠CFE.

(b) Find ∠BCF.

Ans: (a) _____ [1]

(b) _____ [3]

(Go on to the next page)

11

14 Bernice and Andrew drove from Town G to Town H. Bernice drove at an average speed of 90 km/h and took 40 min to reach Town H.
Andrew drove at an average speed of 80 km/h and reached Town H later than Bernice by 3 minutes.

(a) What was the distance between Town G and Town H?

(b) How many minutes earlier did Andrew start driving than Bernice?

Ans: (a) _____ [1]

(b) _____ [3]

(Go on to the next page)
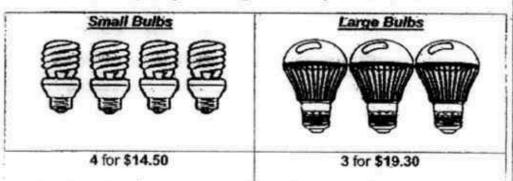
15   There were some chicken pies, beef pies and mutton pies for sale at a
      bakery. $\frac{3}{5}$ of the pies were chicken pies. The ratio of the number of beef
      pies to the number of mutton pies was 7 : 3. There were 56 fewer beef pies
      than chicken pies. After some beef pies were sold, 30% of the remaining
      pies in the bakery were beef pies and mutton pies. How many beef pies
      were sold?

Ans: _____ [4]

13

16   Mr Lim and Mr Wong bought some light bulbs at prices shown below.

Small Bulbs	Large Bulbs
4 for $14.50	3 for $19.30
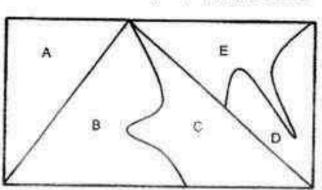
(a)   Mr Lim bought 40 small bulbs and 66 large bulbs to fix in his office. He fixed an equal number of small bulbs in each room in his office and had 1 small bulb left. He also fixed an equal number of large bulbs in each room in his office and had 1 large bulb left. How many rooms were there in Mr Lim's office?

(b) $\frac{2}{5}$ of the bulbs that Mr Wong bought were small bulbs. Given that he paid $159.30 in total, how many bulbs did Mr Wong buy altogether?

Ans: (a) _____ [2]

(b) _____ [3]

(Go on to the next page)

17   The rectangle below is divided into 5 parts, A, B, C, D and E.

The ratio of the area of A to the area of D to the area of E is 5 : 3 : 4.
The ratio of the area of A to the area of B is 3 : 4.

(a)   Find the ratio of the area of B to the area of C to the area of E in the simplest form.

(b)   Given that the area of A is 90 cm², find the area of the rectangle.

Ans: (a) _____ [3]

(b) _____ [2]

(Go on to the next page)

15

18   There were some green and red apples in a box. Ted took out $\frac{2}{11}$ of the green apples from the box. He replaced each of these green apples taken out with red apples. After that, he took out $\frac{2}{5}$ of the green apples and $\frac{1}{3}$ of the red apples. There were 108 green apples and 228 red apples left in the box in the end. What was the total number of green and red apples in the box at first?

Ans: _____ [5]

End of Paper

16

Henry Park Primary School 2016

Semestral Examination 1 Mathematics Primary 6

Paper 1 Booklet A

Q1	4	Q2	1	Q3	2	Q4	4	Q5	4
Q6	2	Q7	2	Q8	3	Q9	1	Q10	3
Q11	4	Q12	3	Q13	3	Q14	2	Q15	2

Paper 1 Booklet B

Q16. $8\frac{1}{5n}$

Q17. 4952

Q18. 48cm (10x4+4x2)

Q19. 49cm² (7x7)

Q20. 16cm² (8x2)

Q21. 44 (12+18+8+6)

Q22. 14.75 (14.6+14.9)/2

Q23.

Q24. 45km/h (60/40x60)

Q25. $45 (60/4x3)

Q26. 10cm²

Q27. 45 (360-49-152-48-66)

Q28. $50 (10x5)

Q29. 120 (36/3x10)

Q30. $214 (200*1.07)

Paper 2

Q1. 96cm (96+33)

Q2. 405 (972/12x5)

Q3. 19 (15+4 and 14+5)

Q4. 41 (205/4)

Q5. 42cm² (84/24x2, 1/2x6x14)

Q6. $2.70 (21.10+3.60=24.70, 24.70/19=1.3, 1.3x3-1.20=2.70)

Q7. (a) (7p-5) cents (b) 6 (8x0.3=2.40, 7.5-2.4=5.1, 5.1/0.85=6)

Q8. 82 ((90-69)x2, (90-62)x2, 180-42-56=82)

Q9. 0.3 (15X20X14=4200, 10x20x14=2800, 2.8+1.7=4.5, 4.5-4.2=0.3)

Q10. 189cm² (2x0.5x42x21=882, 22/7x21x21x0.5= 693, 882-693=189)

Q11. 59895 (693x75=3, 693/9x2=198, 198/3x2x60=7920, 7920+51975=59895)

Q12. 1600 (352X2=704, 704/11x15=960, 960/6x10=1600)

Q13. (a) 35 (180-112-33) (b) 15 ((360-74-74)/2=106, 106/2=53, 180-112-53=15

Q14. (a) 60km (4/6x90) (b) 2min (60/80=0.75 or 45 mins, 45-40-3=2)

Q15. 25 (C:B:M=15:7:3 → 105:21:49, total = 150, 45-21=24, 49-24=25)

Q16. (a) 13 (40-1=39, 66-1=65) (b) 30

Q17. (a) 20:16:12 → 5:4:3 (total = 72) (b) 450 (15u=90, 72u = 450)

Q18. 522

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION 1 2016

MATHEMATICS

PRIMARY 6

PAPER 1

(BOOKLET A)

Name : _____(   )

Class: Primary 6 _____ ____

Date: 11 May 2016

Total Time for Booklets A and B: 50 min

15 questions

20 marks

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Shade your answers in the Optical Answer Sheet (OAS) provided.

The use of calculators is **NOT** allowed.

Booklet A and B consist of 13 printed pages.
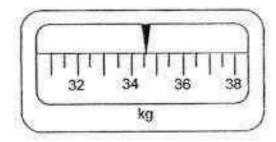
Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical
Answer Sheet. All diagrams are not drawn to scale.   (20 marks)

1.   Which one of the following digits in 9.215 is in the tenths place?

      (1)   1
      (2)   2
      (3)   5
      (4)   9

2.   47 405 pupils attended the National Day Parade.
      Express this number to the nearest thousand.

      (1)   47 000
      (2)   47 400
      (3)   47 410
      (4)   47 500

3.   Which one of the following is likely to be the mass of a can of soft drink?

      (1)   3 g
      (2)   30 g
      (3)   300 g
      (4)   3000 g

(Go on to the next page)

1
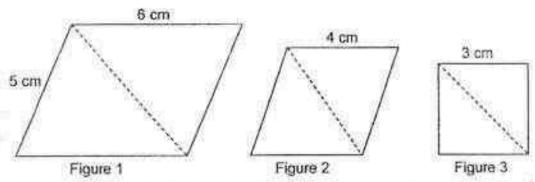
4. Which one of the following numbers is the largest?

(1) 0.8

(2) 0.72

(3) 0.098

(4) 0.605

5. Which one of the following is closest to the reading shown on the weighing scale below?

(1) 34.1 kg

(2) 34.6 kg

(3) 35.1 kg

(4) 35.6 kg

6. What is the value of 6 − 1 + 5 − 4 × (12 ÷ 4 − 3)?

(1) 5

(2) 6

(3) 10

(4) 17

(Go on to the next page)

2

7. Jay cuts three figures shown below along the dotted lines. Figure 1 is a parallelogram, Figure 2 is a rhombus and Figure 3 is a square.

Figure 1   Figure 2   Figure 3

Which of the figures above consist(s) of at least one isosceles triangle after cutting?
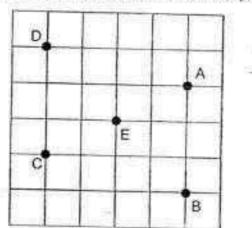
(1) Figure 1, 2 and 3

(2) Figure 1 and 2 only

(3) Figure 1 and 3 only

(4) Figure 2 and 3 only

---

8. The amount of time taken by 4 pupils to complete their homework is given in the table below.

Name	Time taken
Azel	1.5 h
Clayton	$1\frac{3}{5}$ h
Isaac	1 h 45 min
Matthias	95 min

Who took the longest time to complete his homework?

(1) Azel

(2) Clayton

(3) Isaac

(4) Matthias

(Go on to the next page)

3

9. In the square grid below, A, B, C, D and E are five points on the ground.

Which one of the following statements is correct?

(1) B is north-west of E

(2) C is south-west of E

(3) E is north-east of A

(4) E is south-east of D

10. A pail was half-filled with water. 4 cups of water were added to completely fill the pail. What was the ratio of the volume of a cup of water to the volume of the pail?

(1) 1 : 8

(2) 8 : 1

(3) 1 : 4

(4) 4 : 1

(Go on to the next page)

4

11. Both Mr Lim and Mr Tan stay in the same block of flats. Mr Lim's flat is on the 21ˢᵗ storey. Mr Tan's flat is on the middle storey of the building which is lower than Mr Lim's. There are 8 storeys between their flats. The 1ˢᵗ storey of the block is a void deck. What is the highest storey in the block?

    (1)   23ʳᵈ storey

    (2)   24ᵗʰ storey

    (3)   25ᵗʰ storey

    (4)   29ᵗʰ storey

---

12. 10 boys had to fold some paper hearts. 2 of them fell ill and the rest of the boys had to fold 4 more paper hearts each. How many paper hearts did they have to fold altogether?

    (1)   128

    (2)   160

    (3)   200

    (4)   320

---

13. Malcolm had some milk chocolates and dark chocolates. He ate an equal amount of milk and dark chocolates. He had $\frac{5}{7}$ of the milk chocolates and $\frac{2}{5}$ of the dark chocolates left. What fraction of the chocolates did Malcolm eat?

    (1) $\frac{5}{12}$

    (2) $\frac{12}{31}$

    (3) $\frac{31}{35}$

    (4) $\frac{31}{70}$

14. 8 lamp posts were put up along a road at an equal distance. The distance between the first and the fifth lamp post was 40 m. What was the distance between the first and the eighth lamp post?

    (1)   60 m

    (2)   64 m

    (3)   70 m

    (4)   80 m

15. Jared bought some sweets to give to his friends. His sister ate 11 of them. His mother gave him the same number of sweets that he had left. He packed the sweets into 8 gift bags. Each bag contained 13 sweets. How many sweets did Jared buy?

    (1)   52

    (2)   63

    (3)   104

    (4)   115

END OF BOOKLET A

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION 1 2016

MATHEMATICS

PRIMARY 6

PAPER 1

(BOOKLET B)

Name : _____ (   )

Class: Primary 6 _____

Date: 11 May 2016

Total Time for Booklets A and B: 50 min

15 questions

20 marks

Booklet A	
Booklet B	
Total	

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

The use of calculators is **NOT** allowed.

Booklet A and B consist of 13 printed pages.

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

---
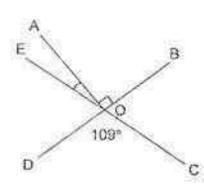
16.   Find the value of $96.4 + 40$.

Ans:_____

---

17.   What is the value of $\frac{4n}{3} - n$ when $n = 6$?

Ans:_____

---

18.   BD and EC are straight lines. Find $\angle AOE$.

Ans:_____°

(Go on to the next page)

7

19. Jon received 8 coins with a total value of $2. The coins were a mixture of $1, 20¢ and 10¢ coins. How many 20¢ coins did he receive?

Ans:_____

20. Mrs Lee deposits $2800 in a bank for 1 year. The bank offers an annual interest rate of 1%. What is the total amount of money she will have in the bank at the end of 1 year?

Ans: $_____

21. $\frac{2}{3}$ of a bag of marbles was given to some children.

Each child received $\frac{1}{9}$ of the marbles in the bag.

How many children were there?

Ans:_____

(Go on to the next page)

8

22. Michael has twice as much money as Lionel. Lionel has $\frac{3}{5}$ as much money as Fred. Find the ratio of Michael's money to the ratio of Fred's money.

Ans:_____

23. The display board at a car park showing the parking charges is shown below. However, the charges after 5 p.m. could not be read as the paint had peeled off.

Time	Parking charges
8 a.m. to 5 p.m.	$1.00 per hour or part thereof
After 5 p.m.	$■ per $\frac{1}{2}$ hour or part thereof

Susie parked her car from 3 p.m. to 5.45 p.m. on the same day. She paid a total sum of $4.80. How much was the parking charges per $\frac{1}{2}$ hour or part thereof after 5 p.m.?

Ans: $_____

(Go on to the next page)

9

Use the figure below to answer questions **24** and **25**.

24. Measure and write down the size of ∠RQP.

Ans: _____°

25. OP is parallel to RQ.
Measure the height of triangle PQR given its base is RQ.

Ans: _____ cm

Total marks for questions 16 to 25

(Go on to the next page)

10

Questions 26 to 30 carry 2 marks each. Show your working and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

26. Write three hundred and two thousand and forty-one in figures.

Ans: _____

27. The figure below shows 2 wheels with centres A and B. A and B are 454 cm apart from each other at first. Both wheels have a radius of 7 cm each. The wheel with centre B starts to turn along the straight line XY towards the wheel with centre A which does not move.

How many complete revolutions must the wheel with centre B make before it touches the other wheel with centre A? Take $\pi = \frac{22}{7}$.

Ans: _____

(Go on to the next page)

11

28. Samuel had a total of 30 nuggets and fish balls at first. He exchanged all his nuggets for fish balls. He had 48 fish balls after exchanging every 1 nugget for 2 fish balls. How many fish balls did he have at first?

Ans: _____

29. ABCD is a square. PCD and OCD are triangles. What fraction of the square ABCD is shaded?

Ans: _____

12

30. Joel used black and white square tiles to form figures that follow a pattern. The first 4 figures are shown below.

Figure 1   Figure 2   Figure 3   Figure 4

In figure 8, he used 33 black tiles. How many white tiles did he use to form figure 8?

Ans:_____

Total marks for questions 26 to 30

END OF BOOKLET B
END OF PAPER 1

(Go on to the next page)

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION 1 2016

MATHEMATICS

PRIMARY 6

PAPER 2

Name : _____ (   )

Class: Primary 6 _____

Date: 11 May 2016

Total Time: 1 h 40 min

Parent's Signature: _____

INSTRUCTIONS TO CANDIDATES

Paper 1 Booklet A	20
Paper 1 Booklet B	20
Paper 2	60
Total Marks	100

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

The use of an approved calculator is expected, where appropriate.

This booklet consists of 16 printed pages.

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale.   (10 marks)
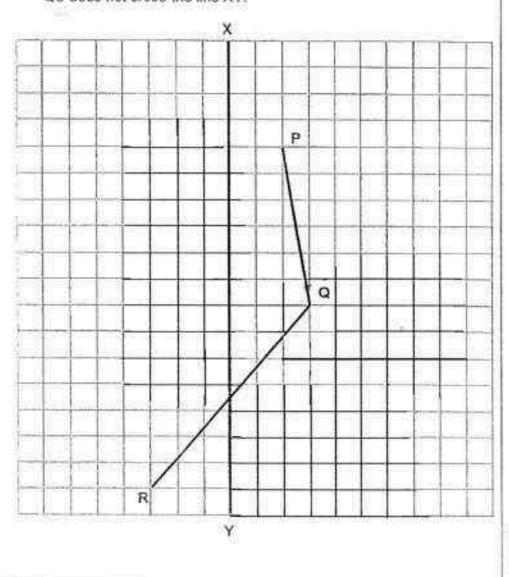
1. Helen spent $3 more than Mary during recess. They spent $k in total. How much did Helen spend? Give your answer in terms of k.

Ans: $_____

2. Mrs Lim made red bean soup using the recipe below.

For 6 bowls

250 g red beans
50 g sugar
1.2 ℓ water

She had 750 g of red beans, 210 g of sugar and 3 ℓ of water. How many bowls of red bean soup could she make at most?

Ans:_____

1

3. Alan arranged to meet a friend one afternoon. He arrived 15 minutes earlier than the meeting time. His watch showed 12.54 p.m.. His watch was 9 minutes faster than the actual time. What was the actual meeting time?

Ans: _____ p.m.

4. 1 pen and 2 correction tapes cost $9.10.
    2 pens and 1 correction tape cost $8.00.
    How much is the cost of 1 pen?

Ans: $_____

2

5. In the square grid below,
   (a) draw two straight lines to form a symmetric figure with XY as the line of symmetry
   (b) draw a line QS where QS is perpendicular to PQ, QS = QP and QS does not cross the line XY.

X

P

Q

R

Y

For questions **6 to 18**, show your working and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

All diagrams are not drawn to scale.   (50 marks)
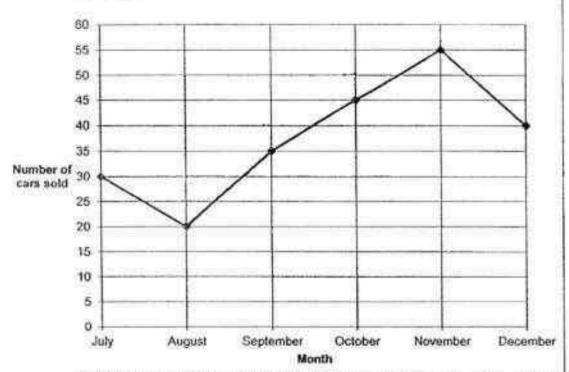
6. A group of pupils had an average mass of 40 kg. 2 pupils with an average mass of 45 kg joined the group. The average mass of the group of pupils became 42 kg. How many pupils were there in the group at first?

Ans: _____ [3]

4

7. The line graph below shows the number of cars sold from July to December.

(a) What percentage of the total number of cars sold from July to December was sold in the month of October?

(b) What was the percentage decrease in the number of cars sold from the month of November to December?
Give your answer correct to 1 decimal place.

Ans: (a) _____ [1]

(b) _____ [2]

5

8. Abel and Benjamin spent $802 altogether. $\frac{1}{4}$ of Abel's spending was $41 more than $\frac{1}{7}$ of Benjamin's spending. How much more did Benjamin spend than Abel?

Ans: _____ [3]

9.

Special Offer!
Cupcake at $1.70 each
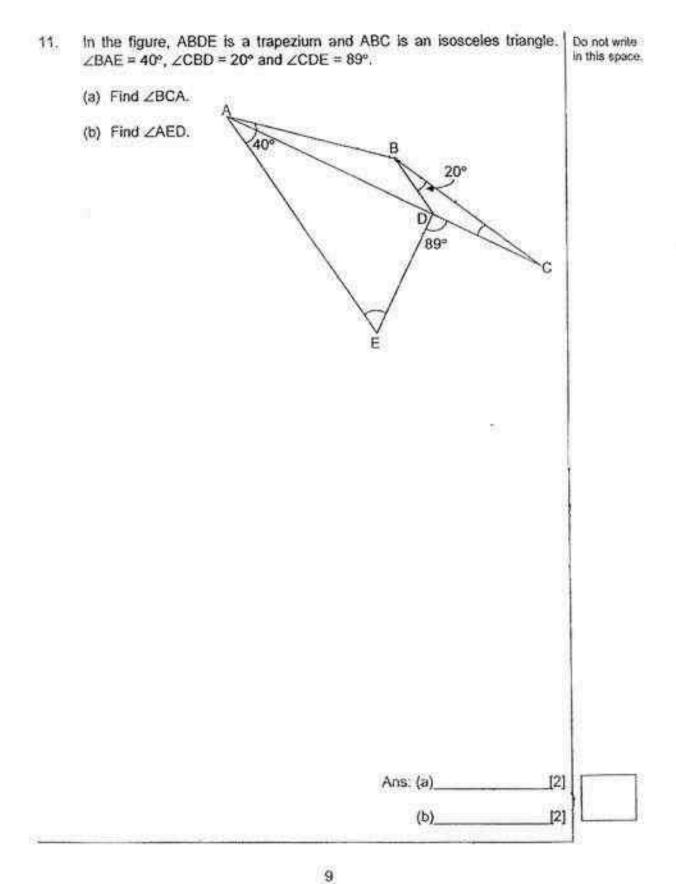
Buy 2 cupcakes and get the 3rd one at half price.

Xavier has $29. What is the greatest number of cupcakes he can buy?

Ans: _____ [3]

7

10. Caylen used some string to tie 24 small parcels. He used the same amount of string to tie 16 large parcels. Each large parcel used 70 cm more string than a small parcel. How many metres of string did Caylen use altogether?

Ans: _____ [3]

8

11. In the figure, ABDE is a trapezium and ABC is an isosceles triangle.
∠BAE = 40°, ∠CBD = 20° and ∠CDE = 89°.

(a) Find ∠BCA.

(b) Find ∠AED.

Ans: (a)_____[2]

(b)_____[2]

9

12. The ratio of Alvin's savings to Bernard's savings was 3 : 11 after Alvin gave $\frac{1}{10}$ of his savings to Bernard. Both later spent the same amount of money at a book fair. In the end, the ratio of Alvin's savings to Bernard's savings became 1 : 9 and Bernard had $264 more than Alvin.
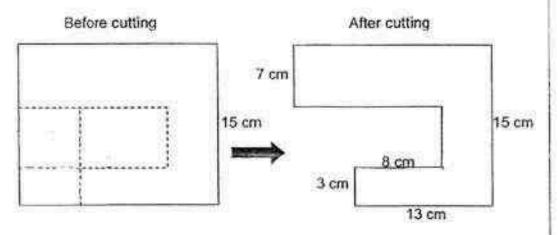
(a) What was the ratio of Alvin's savings to Bernard's savings at first?

(b) How much savings did Alvin had at first?

Ans: (a) _____ [1]

(b) _____ [3]

10

13. 2 small rectangles are cut out from a rectangular piece of paper along the dotted lines as shown below. The breadth of the paper is 15 cm. The perimeter of the paper after cutting is 82 cm.

Before cutting

After cutting

(a) What is the length of the rectangular paper before the cutting?

(b) What is the area of the remaining paper after the cutting?

Ans: (a) _____ [2]

(b) _____ [2]

11

14. Ray packs some egg tarts into 6 small boxes and 8 large boxes.
A large box can hold 5 more egg tarts than a small box.
$\frac{1}{4}$ of the tarts is packed into small boxes.

(a) How many more small boxes would Ray use if he decides to pack
the egg tarts in all the large boxes into small boxes?

(b) How many egg tarts are there in each large box?

Ans: (a) _____ [1]

(b) _____ [3]

12
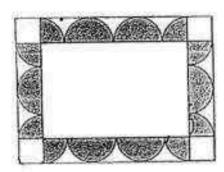
15.   Mr Fong and his 7 family members ate at a restaurant and paid $256.80. He had been given a 20% discount on the usual price. The payment included a 7% GST on the discounted price.

What was the usual price of the dinner per person, without GST?

Ans: _____ [4]

13

16. Ryan draws a border along the four sides of a drawing paper. He decorates it with 8 identical shaded quarter circles and 6 identical shaded semicircles as shown below. The perimeter of the drawing paper is 84 cm.

(a) What is the width of the border?

(b) Find the area of the shaded part of the border.

(c) Find the perimeter of the shaded part of the border?

Take $\pi = 3.14$

Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

14
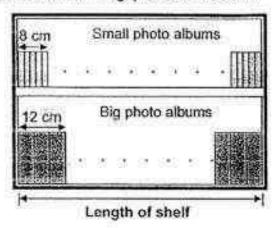
17. In a bookshop, small photo albums and big photo albums were wrapped in bundles of 5 albums and 3 albums respectively. Each bundle of small photo albums had a width of 8 cm and each bundle of big photo albums had a width of 12 cm. The photo albums were arranged from one end to the other end of a shelf with no gap as shown below.

Length of shelf
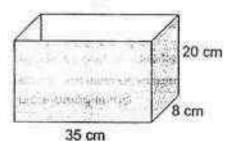
(a) What could be the shortest possible length of the shelf?

(b) What fraction of the total number of photo albums was small photo albums? Give your answer in the simplest form.

(c) There were 54 more small photo albums than big photo albums on the shelf. How many photo albums were there altogether?

Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [3]

15

18. Stephen has an open rectangular box as shown below.

20 cm

8 cm

35 cm

He has 980 1-cm cubes to pack into the box. He arranges the cubes to cover the base of the box completely before building another layer on top of it and continues until all the cubes are used up.

(a) How many **complete** layers of the base does he have in the end?

(b) What fraction of the box is packed with 1-cm cubes?

(c) Stephen decides to re-arrange the cubes to touch only the inside of the box. How many more cubes does he need to completely touch the inside of the box?

Ans:_____[1]

Ans:_____[1]

Ans:_____[3]

END OF PAPER.
PLEASE CHECK YOUR WORK CAREFULLY.

EXAM PAPER 2016

SCHOOL : CATHOLIC HIGH

SUBJECT : MATHEMATICS

TERM : PERLIM 1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	1	3	1	2	3	4	3	4	1

Q11	Q12	Q13	Q14	Q15
1	2	2	3	2

16) $96.4 \div 40 = 2.41$

17) $\frac{4n}{3} - \pi$

$= \frac{4(6)}{3} - 6$

$= \frac{24}{3} - 6$

$= 2$

18) $\angle AOE$

$= 109° - 90°$

$= 19°$

19) $\$2.00 - \$1.00 = \$1.00$ (1 x $1.00 coin)

$\$1.00 - \$0.20 - \$0.20 - \$0.20 = \$0.40$ (3 x $0.20 coins)

$\$0.40 \div \$0.10 = 4$ (4 x $0.10 coins)

20) $\frac{101}{100}$ x $2800 = $2828

21) $\frac{2}{3} \div \frac{1}{9}$

$= \frac{2}{3} \times \frac{9}{1}$

$= \frac{18}{3}$

$= 6$

22) Michael: 2 x Lionel

Lionel: $\frac{3}{5}$ x Fred

Fred: 1

Hence,
Michael: 1.2
Lionel: 0.6
Fred: 1

Ratio of Michael's money to Fred's = 6:5

23) 3p.m. to 5p.m. = 2hours   (2 x $1.00 = $2.00)
$4.80 - $2.00 = $2.80

5.45p.m. - 5p.m. = 45mins   (consist of 2 x $\frac{1}{2}$ hours)

Hence, the parking charges per $\frac{1}{2}$ hour or part thereof after 5p.m.

= $2.80 ÷ 2 = $1.40

24) ∠RQP = 125°

25) Height of triangle PQR = 3cm

26) 302,041

27) $\frac{22}{7} \times 2(7)$

$= \frac{22}{7} \times 14$

$= 44$

(454cm − 7cm − 7cm) ÷ 44 = 10
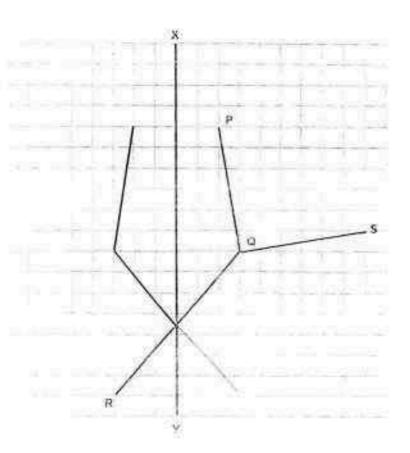
Hence, the wheel must complete 10 revolutions.

28) 48 − 30 = 18

30 − 18 = 12

He had 12 fish balls at first.

29) Triangle PDC is half of ABCD (P, at any point of AB marks the height of Triangle PDC)

Triangle ODC is $\frac{1}{4}$ of ABCD, hence $\frac{1}{2} - \frac{1}{4} = \frac{1}{4}$ is shaded.

30) Figure 1: 3 x 3 $((3-1) \times 2) + 1 = 5$
   Figure 2: 5 x 5 $((5-1) \times 2) + 1 = 9$
   Figure 3: 7 x 7 $((7-1) \times 2) + 1 = 13$
   Figure 4: 9 x 9 $((9-1) \times 2) + 1 = 17$

--

Figure 8: 17 x 17
= 289

$289 - 33 = 256$
He used 256 white tiles to from figure 8.

1) Helen spend = $\$\dfrac{A-3}{2} + 3$

2) $750g \div 250g = 3$
   3×6 bowls = 18 bowls

3) 12.54p.m. – 9mins + 15mins = 01:00p.m.

4) 1 pen 2 correction tapes = $9.10
   2 pens 1 correction tape = $8.00
   2 pens 4 correction tapes = $9.10 x 2 = $18.20

   3 correction tapes = $18.20 - $8.00
   = $10.20
   1 correction tape = $10.20 ÷ 3
   = $3.40
   1 pen = $9.10 - $3.40 - $3.40
   = $9.10 - $6.80
   = $2.30

5)

6) 2 students mass = 45kg x 2
= 90kg

Take the number of students initially to be n,
40n + 90 = 42(n + 2)
42n + 84 − 40n = 90
2n + 84 = 90
2n = 90 − 84
2n = 6
n = 3

7)
a. 30 + 20 + 35 + 45 + 55 + 40 = 225
$\frac{45}{225} \times 100\% = 20\%$

b. 55 − 40 = 15
$\frac{15}{55} \times 100\% = 27.3\%$

8) $41 x 7 = $287
   $802 + $287 = $1089

   Abel: ($1089 ÷ (4 + 7)) x 4 = $396
   Benjamin: $802 - $396 = $406
   Difference: $406 - $396 = $10

9) 1 cupcake = $1.70
   2 cupcakes = $3.40
   3 cupcakes = $4.25

   $29 ÷ $4.25 = 6 r$3.50
   6 x 3 = 18
   18 + 2 = 20

10) 1 large parcel = x
    1 small parcel = y
    x – y = 70cm
    x = y + 70cm
    16x = 24y
    16(y + 70cm) = 24y
    16y + 1120cm = 24y
    24y – 16y = 1120cm
    8y = 1120cm
    y = 140cm
    24y = 3360cm
    3360cm x 2 = 6720cm
    = 67.2m

11)
a. ∠ABD = 180° - 40°
   = 140°
   ∠ABC = 140° + 20°
   = 160°
   ∠BCA = (180° - 160°) ÷ 2
   = 10°

b. ∠AED = 180° - (360° - 89° - (180° - 20° - 10°))
   = 59°

12)

a. Ratio $3 : 11 \times 3 = 9 : 33$

$9 + 1 = 10$

$33 - 1 = 32$

Ratio of Alvin's savings to Bernard is $10 : 32$

b. $9 : 33$ (difference $= 24$)

$264 \div 24 = 11$

$11 \times 10 = 110$

13)

a. $82 - (15 \times 2) - 13 - 8 + (13 - 8) = 82 - 30 - 13 - 8 + 5$

$= 36$

$36 \div 2 = 18$

Length of the rectangular paper is 18cm

b. Area of rectangular paper $= 18 \times 15$

$= 270 \text{cm}^2$

Area of remaining paper $= 270 - (13 \times 5) - (5 \times 3)$

$= 270 - 65 - 15$

$= 190 \text{cm}^2$

14)

a. $3 \times 6 = 18$

b. $8 \times 5 = 40$

18 small $= 8$ small $+ 40$

10 small $= 40$

1 small $= 4$

1 large box $= 4 + 5$

$= 9$

15) $\frac{100}{107} \times \$256.80 = \$240$

$\frac{100}{80} \times \$240 = \$300$

$\$300 \div 8 = \$37.50$

16) Total 5 circles

a. $(8 + 6) \times 2 = 28$

28units $= 84$cm

1unit $= 3$cm

6units $= 18$cm

b. $5 \times \pi r^2 = 5 \times 3.14 \times 3 \times 3$

$= 141.3 \text{cm}^2$

c. $(5 \times 2 \times 3.14 \times 3) + 3(24 + 8) = 190.2$cm

17)

a.   24cm

b.   Assume there is only two shelves in the bookstore, one only holds big album, another only holds small album.

Hence, $\frac{15}{21} = \frac{5}{7}$

c. $54 \times \frac{14}{6} = 126$

18)

a. $980 \div 35 \div 8 = 3.5$
Hence, 3 complete layers

b. $980 \div (35 \times 8 \times 20) = 0.175$
$= \frac{7}{40}$

c. $(35 \times 8) + 2(34 + 7)(19) - 980$
$= 280 + 1558 - 980$
$= 858$cubes

RED SWASTIKA SCHOOL

2016 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 1

Name : _____ ( )

Class : Primary 6 / _____

Date : 9 May 2016

BOOKLET A
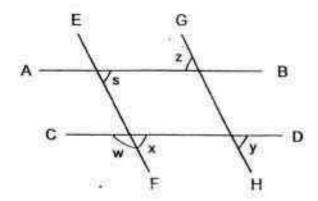
15 Questions
20 Marks
Duration of Paper 1 (Booklets A & B): 50 minutes

<u>Note:</u>

1. Do not open this Booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the Booklet.
3. Do not waste time. If a question is difficult for you, go on to the next one.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this booklet, you should have the following:
   (a) Page <u>1</u> to Page <u>5</u>
   (b) Questions <u>1</u> to <u>15</u>
6. You are <u>not</u> allowed to use a calculator.

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.   (20 marks)

---

1   Simplify $6y + 16 - 2y + 4$.

    (1) $4y + 12$
    (2) $4y - 20$
    (3) $4y + 20$
    (4) $8y + 20$

2   In the figure below, AB is parallel to CD and EF is parallel to GH. Which angle is not equal to $\angle s$?

    (1) $\angle w$
    (2) $\angle x$
    (3) $\angle y$
    (4) $\angle z$

3   How many eighths are there in $2\frac{3}{4}$?

    (1)   9
    (2)   11
    (3)   16
    (4)   22

1
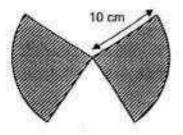
4   Express 30 cm as a percentage of 120 cm.

(1)   25%
(2)   36%
(3)   40%
(4)   400%

5   At 7 a.m, a van started travelling from Town A to Town B at a speed of
    60 km/h. It reached Town B at 10 a.m. Find the distance between Town
    A and Town B.

(1)   20 km
(2)   60 km
(3)   180 km
(4)   240 km

6   The figure below is made up of 2 identical quadrants. What is the
    perimeter of the figure? Leave your answer in terms of π.
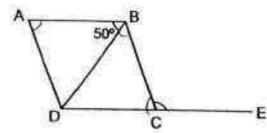
(1) $(5\pi + 40)$ cm
(2) $(10\pi + 20)$ cm
(3) $(10\pi + 40)$ cm
(4) $(20\pi + 40)$ cm
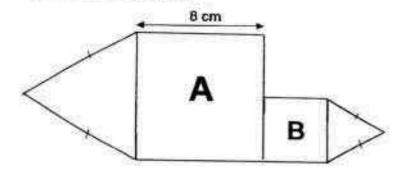
7   If $A : C = 5 : 3$ and $B : C = 3 : 4$, what is the ratio of $A : B$?

(1)   5 : 3
(2)   9 : 12
(3)   9 : 20
(4)   20 : 9

2

8   In the figure below, ABCD is a rhombus and DCE is a straight line. Find ∠BCE.
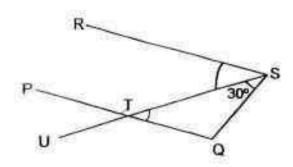
   (1)   50°
   (2)   80°
   (3)   100°
   (4)   120°

9   Ali jogged $\frac{3}{5}$ of the journey from his house to the stadium at a speed of 15 km/h for 2 hours. Ali took 5 hours to complete the whole journey. What was his average speed for the whole journey?

   (1)   30 km/h
   (2)   10 km/h
   (3)   6 km/h
   (4)   4 km/h

10   The figure below is made up of two squares and two equilateral triangles. The length of Square A is twice the length of Square B. Find the perimeter of the figure.

   (1)   48 cm
   (2)   52 cm
   (3)   56 cm
   (4)   84 cm

3

11. In the figure below, PTQ and UTS are straight lines. PQ is parallel to RS and QT = QS. Find ∠RST.

(1) 30°
(2) 60°
(3) 120°
(4) 150°
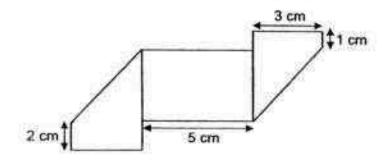
12. The ratio of the number of pens to the number of rulers was 7 : 4. After half of the rulers were sold, there were 108 pens and rulers left. How many rulers were there at first?

(1) 12
(2) 24
(3) 48
(4) 84

13. Daisy and Kenny met each other in the library on 2nd May. Daisy goes to the library every 2 days while Kenny goes there every 3 days. When will they next meet in the library again?

(1) 6th May
(2) 8th May
(3) 10th May
(4) 14th May

4

14   Mrs Lee spent $15 on a bag and had $60 left. What percentage of her money did she spend on the bag?

      (1)   20%
      (2)   25%
      (3)   60%
      (4)   80%

15   A rectangular piece of paper was folded at both ends to form the shape below. Find the perimeter of the rectangular piece of paper.

      (1)   16 cm
      (2)   28 cm
      (3)   32 cm
      (4)   34 cm

RED SWASTIKA SCHOOL

2016 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 1

Name : _____ (   )

Class : Primary 6 / _____

Date   : 9 May 2016

BOOKLET B

15 Questions
20 Marks

In this booklet, you should have the following:
(a) Page 6 to Page 12
(b) Questions 16 to 30

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		20
BOOKLET B		20
TOTAL		40

Parent's Signature : _____

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

16 Find the value of $\dfrac{6b+6}{3} - b$ when $b = 5$.

Ans: _____

17 If $\dfrac{3}{8}$ of a number is 24, what is $\dfrac{1}{2}$ of the number?

Ans: _____

18 Find the value of $90 + 54 \div 9 - 10 \times 2$.

Ans: _____
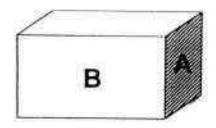
19   Write $5\frac{7}{9}$ as a decimal correct to 2 decimal place.

Ans: _____

---
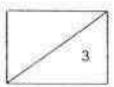
20   Miss Sim had as many red markers as blue markers. She lost $\frac{1}{4}$ of her red markers and $\frac{2}{3}$ of her blue markers. What fraction of her markers had she left?

Ans: _____

---
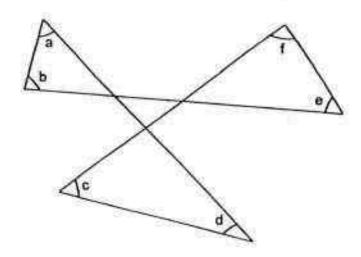
21   The cuboid below has a volume of 360 cm³. The shaded area A is a square of 36 cm². What is the area of B?

Ans: _____ cm²

7

22   Find the sum of ∠a, ∠b, ∠c, ∠d, ∠e and ∠f.

Ans: _____ °

---

23   There were some girls, boys and women in a park. $\frac{2}{3}$ of the people were girls. The ratio of the number of boys to the number of women was 2 : 1. If there were 12 more girls than boys, how many women were there in the park?

Ans: _____

8

24. The table below shows the postage charges for sending parcels.
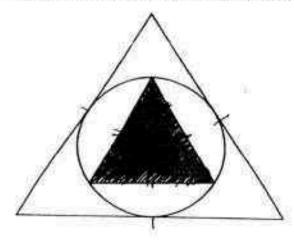
For the first 100 g	$4.00
For every additional 20 g or part thereof	$1.20

Peter sent a parcel weighing 250 g. How much postage charges did he pay?

Ans: $ _____

---

25. In the figure below, the circle touches each of the two equilateral triangles. What fraction of the figure is shaded?
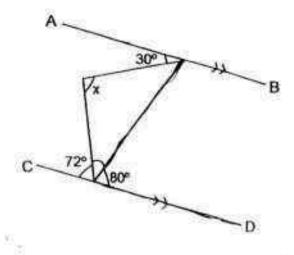
Ans: _____

2

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

26   In the figure below, AB and CD are parallel lines. Find ∠x.

Ans: _____ °
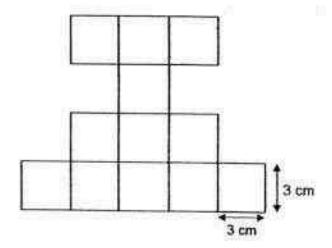
27   The usual price of a vacuum cleaner was $1 000. Mrs Wong bought it during the Electronics Fair and was given a 40% discount. She had to pay an additional 7% GST on the discounted price. How much did Mrs Wong pay for the vacuum cleaner?

Ans: $ _____

28 The figure below is made up of 12 identical squares of side 3 cm. Rearrange all the squares to form a rectangle which has the largest possible perimeter. What is the perimeter of the rectangle?

3 cm

3 cm

Ans: _____ cm

---
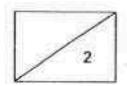
29 Randy and Samy drove from City X to City Y. The distance between the two cities was 360 km. Randy left City X 10 minutes after Samy, but arrived at City Y 20 minutes before him. Samy's average speed was 80 km/h. Find Randy's average speed for the whole journey.

Ans: _____ km/h

4

30 On Day 1, John read $\frac{2}{5}$ of a book. The next day, he read $\frac{7}{9}$ of the remaining pages. On Day 3, he finished reading the last 70 pages. How many pages were there in the book?

Ans: _____

END OF PAPER 1

2

12

RED SWASTIKA SCHOOL

2016 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 2

Name : _____ ( )

Class : Primary 6 / _____

Date : 9 May 2016

18 Questions
60 Marks
Duration of Paper 2: 1 hour 40 minutes

<u>Note:</u>
1. Do not open this Booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the Booklet.
3. Do not waste time. If a question is difficult for you, go on to the next one.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this paper, you should have the following:
   (a) Page <u>1</u> to Page <u>14</u>
   (b) Questions <u>1</u> to <u>18</u>
6. You are allowed to use a calculator.

MARKS

	OBTAINED	POSSIBLE
PAPER 1		40
PAPER 2		60
TOTAL		100

Parent's Signature : _____
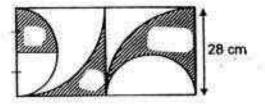
Questions 1 to 5 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

1   Amy, Bernice and Clarice shared the cost of a meal equally. Amy did not bring her wallet so Bernice and Clarice paid for the meal first in the ratio of 4 : 5. If Amy returned $30 to Clarice the next day, how much must she return to Bernice?

Ans: $ _____

2   The figure below is made up of 2 identical quadrants and 2 identical semi-circles. Find the area of the shaded parts. (Take $\pi = \dfrac{22}{7}$)

28 cm

Ans: _____ cm²

1
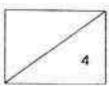
The length of a rectangle is twice its breadth. If the length is increased by 20% and the breadth is decreased by 20%, express the area of the new rectangle as a percentage of the area of the original rectangle.

Ans: _____ %

---

4   Mr Tan is p years older than his daughter. Four years later, his daughter is half of Mr Tan's age. How old is Mr Tan now in terms of p?

Ans: _____

2

4
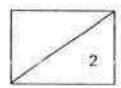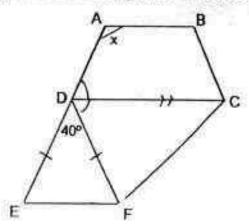
5   A box contained two-dollar notes and five-dollar notes. There were 250 more two-dollar notes than five-dollar notes and the total amount of money in the box was $3 160. How many five-dollar notes were there in the box?

Ans: _____

For Questions 6 to 18, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(50 marks)

6   In the figure below, ABCD is a trapezium and DEF is an isosceles triangle. ADE is a straight line and CD is parallel to EF. Find ∠x.

Ans: _____ [3]
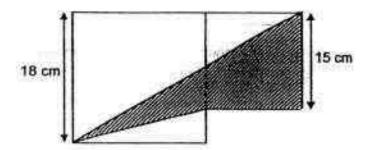
7   A fruit seller had some red and green apples. Next, he bought another 15 red apples and the ratio of the number of red apples to the number of green apples became 2 : 3. Then, he bought another 42 green apples and the ratio of the number of red apples to the number of green apples became 1 : 3. How many apples did the fruit seller have at first?

Ans: _____ [3]

4
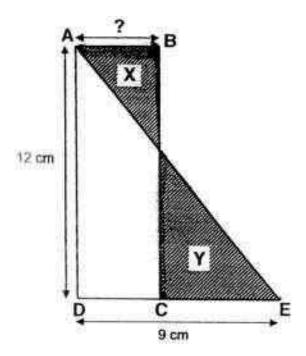
8   The figure below is made up of two squares. Find the area of the shaded part.

Ans: _____ [3]

The figure below is made up of Rectangle ABCD and Triangle AED. Shaded part X is 12 cm² smaller than shaded part Y. What is the length of AB?
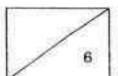
Ans: _____ [3]

10 At first, James had $320 more than Tom. James then gave 60% of his money to Tom. After that, Tom had $544 more than James. How much money did Tom have at first?

Ans: _____ [3]

11 Bob and Dewei had to paint a house. Bob could paint twice as fast as Dewei. They would take a total of 12 hours to paint the entire house together. How long would Bob take if he was to paint the house by himself?

Ans: _____ [3]

12 Sally had some stickers. She lost $\frac{2}{3}$ of them and gave $\frac{1}{4}$ of the remainder to Paul. After that, her brother gave her another 120 stickers. The ratio of the number of stickers she had at first to the number of stickers she had in the end was 4 : 3. How many stickers did Sally have in the end?

Ans: _____ [4]

8
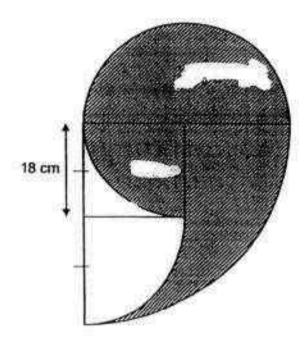
13   Miss Lim had 3 824 red, yellow and blue sweets. The number of red sweets and yellow sweets that Miss Lim had was the same. After giving away some yellow sweets and blue sweets to her students, she had $\frac{5}{7}$ of the yellow sweets and $\frac{3}{5}$ of the blue sweets left. There was a total of 3 024 sweets left. How many blue sweets did Miss Lim have at first?

Ans: _____ [4]

9

4

14   Michael participated in a Mathematics Competition. There was a total of 35 questions. For each correct answer, 3 marks were awarded. For each wrong answer, 2 marks were deducted. For each question left blank, 1 mark was deducted. Michael did not answer 5 questions and scored a total of 70 marks. How many questions did he answer correctly?

Ans: _____ [4]

4

15   The figure below is made up of a semi-circle, a square and 3 quadrants. The side of the square is 18 cm.

(a)   Find the area of the shaded parts. (Take $\pi = 3.14$)

(b)   Find the perimeter of the shaded parts. (Take $\pi = 3.14$)

Ans. (a) _____ [3]

(b) _____ [2]

16   Aaron was given a monthly allowance of $250 in 2015. He spent 30% of his allowance on food, 20% of it on transport and saved the rest. In 2016, there was an increase in his monthly allowance. He spent the same amount of money on transport but increased his spending on food by $43. The remaining 40% of his allowance was saved. What was the percentage increase in his allowance?
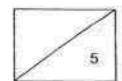
Ans: _____ [5]

12

5

17 Jeremy and Benjamin started cycling along the same path from Point Z
    but in opposite direction. After cycling for $\frac{3}{4}$ h, they were 72 km apart.
    Jeremy's speed was 16 km/h slower than Benjamin.

    (a) What was Jeremy's average speed?

    (b) If Benjamin continued to cycle for another $\frac{1}{2}$ h, find the total
         distance covered by him.

                                        Ans: (a) _____ [3]

                                             (b) _____ [2]

13

5

18 Miss Lee had a certain number of muffins and cupcakes in her shop. If Miss Lee sold 60 muffins and 30 cupcakes each day, she would have 300 muffins left by the time she finished selling all her cupcakes. If Miss Lee sold 30 muffins and 60 cupcakes each day, Miss Lee would have 930 muffins left by the time she finished selling all her cupcakes. Find the total number of muffins and cupcakes Miss Lee had in her shop.

Ans: _____ [5]

END OF PAPER 2

14

5

YEAR   :   2016
LEVEL   :   PRIMARY 6
SCHOOL   :   RED SWASTIKA
SUBJECT   :   MATHEMATICS
TERM   :   SA1

Paper 1

Q1	3	Q4	1	Q7	4	Q10	2	Q13	2
Q2	1	Q5	3	Q8	3	Q11	1	Q14	1
Q3	4	Q6	3	Q9	2	Q12	3	Q15	4

Q16 $12 - 5 = 7$

Q17 $24 : 3 = 8$
$8 \times 4 = 32$

Q18 76

Q19 $5 \times 9 = 45$
$45 + 7 = 52$
$52 + 9 = \underline{5.78}$

Q20 $\frac{17}{24}$

Q21 $\sqrt{36} = 6 \text{ cm}$
$360 \div 6 \div 6 = 10$
$10 \times 6 = \underline{60 \text{ cm}^2}$

Q22 $180^\circ \times 3 = 540^\circ$
$540^\circ - 180^\circ = \underline{360^\circ}$

Q23 $6 - 2 = 4$
$4u \rightarrow 12$
$1u \Rightarrow \underline{3 \text{ women}}$

Q24 $250 \text{ g} - 100 \text{ g} = 150 \text{ g}$
$150 \text{ g} \div 20 \text{ g} = 7R10$
$7 + 1 = 8$
$\$1.20 \times 8 = \$9.60$
$\$4 + \$9.60 = \underline{\$13.60}$

Q25 $\frac{1}{4}$

Q26 $180° - 80° - 72° = 28°$

$80° - 30° = 50°$

$180° - 50° - 28° = \underline{102°}$

Q27 $\frac{60}{100} \times \$1000 = \$600$

$\frac{107}{100} \times \$600 = \underline{\$642}$

Q28 $26 \times 3 \text{ cm} = \underline{78 \text{ cm}}$

Q29 $360 \text{ km} \div 80 \text{ km/h} = 4\frac{1}{2} \text{ h}$

$4\frac{1}{2} \text{ h} - \frac{1}{2} \text{ h} = 4 \text{ h}$

$360 \text{ km} \div 4 \text{ h} = \underline{90 \text{ km/h}}$

Q30 $2u \rightarrow 70$

$1u \rightarrow 35$

$15u \Rightarrow \underline{525 \text{ pages}}$

Paper 2

Q1

A		B		C		T
0		4		5		09

$9 \div 3 = 3$

$5 - 3 = 2$

$2u \rightarrow \$30$

$1u \Rightarrow \underline{\$15}$

Q2 $(\frac{22}{7} \times 28 \times 28) \div 4 = 616$

$(\frac{22}{7} \times 14 \times 14) \div 2 = 308$

$616 - 308 = 308$

$28 \times 28 = 784$

$784 - 616 = 168$

$(\frac{22}{7} \times 14 \times 14) \div 4 = 154$

$154 + 168 + 308 = \underline{630 \text{ cm}^2}$

Q3 Length $\rightarrow 20u$

New length $= \frac{120}{100} \times 20u \rightarrow 24u$

Breadth $\rightarrow 10u$

New breadth $= \frac{80}{100} \times 10u \rightarrow 8u$

Old area $= 20u \times 10u \rightarrow 200u^2$

New area $= 24 \times 8 \rightarrow 192u^2$

$\frac{192}{200} u^2 \times 100\% \Rightarrow \underline{96\%}$

Q4 $2 \times p \rightarrow 2p$

$2p - 4 \Rightarrow \underline{2p - 4}$

2

Q5 $250 \times \$2 = \$100$

  $\$3160 - \$500 = \$2660$

  $\$2 + \$5 = \$7$

  $\$2660 \div \$7 = \underline{\underline{380 \text{ five-dollar notes}}}$

Q6 $(180° - 40°) \div 2 = \mathbf{70°}$

  $180° - 40° - 70° = \mathbf{70°}$

  $180° - 70° = \underline{\underline{110°}}$

Q7 35 apples

Q8 $18 + 15 = 33$

  $\frac{1}{2} \times 33 \times 18 = 297$

  $18 \text{ cm} - 15 \text{ cm} = 3 \text{ cm}$

  $\frac{1}{2} \times 18 \times 3 = 27$

  $(18 \times 15) + (15 \times 15) = 549$

  $549 - 297 - 27 = \underline{\underline{225 \text{ cm}^2}}$

Q9 $\times 12 \times 9 = 54$

  $54 \div 12 = 4.2$

  $\div 12 = \underline{\underline{4.5 \text{ cm}}}$

Q10 $140\% \rightarrow (\$128 + \$544) - \$192 = \$480$

  $10\% \rightarrow 4$

  $100\% \Rightarrow \underline{\underline{\$400}}$

Q11 $12 \times 3 = 36$

  $36 \div 2 = \underline{\underline{18 \text{ hours}}}$

Q12 $(4 - 1) \times 3$

  $12 - 9$

  $9 \div 3 = 6$

  $6u \rightarrow 120$

  $1u \rightarrow 20$

  $9u \Rightarrow \underline{\underline{180 \text{ stickers}}}$

Q13 Sweets given away $\rightarrow 600$

  $2u \text{ Y} + 2u \text{ B} \rightarrow 600$

  $1u \text{ Y} + 1u \text{ B} \rightarrow 300$

  $9u \rightarrow 3624 - 1500 = 2124$

  $1u \rightarrow 236$

  $14u \rightarrow 236 \times 14 = 3304 \text{ (Y + R)}$

  $3624 - 3304 \Rightarrow \underline{\underline{320 \text{ blue sweets}}}$

3

Q14
$$35 - 5 = 30$$
$$70 + 5 = 75$$
$$3 \times 30 = 90$$
$$90 - 75 = 15$$
$$3 + 2 = 5$$
$$15 \div 5 = 3 \text{ (wrong)} \Rightarrow 30 - 3 = \underline{27 \text{ questions}}$$

Q15a Area of $\frac{3}{4}$ circle $= \frac{3}{4} \times (3.14 \times 18 \times 18) \rightarrow 763.02$

Area of small quadrant $= \frac{1}{4} \times (3.14 \times 18 \times 18) \rightarrow 254.34$

Area of big quadrant $= \frac{1}{4} \times (3.14 \times 36 \times 36) \rightarrow 1017.36$

Area of square $= 18 \times 18 \rightarrow 324$

Shaded parts $= 763.02 + (1017.36 - 324 - 254.34) \Rightarrow \underline{1202.04 \text{ cm}^2}$

Q15b $\frac{3}{4} \times (3.14 \times 36) \rightarrow 84.78$

$\frac{1}{4} \times (3.14 \times 36) \rightarrow 28.26$

$\frac{1}{4} \times (3.14 \times 72) \rightarrow 56.52$

$84.78 + 28.26 + 56.52 \Rightarrow \underline{169.56 \text{ cm}}$

Q16 $\frac{30}{100} \times \$250 \rightarrow \$75$

$\frac{20}{100} \times \$250 \rightarrow \$50$

$\$50 + \$43 = \$93$

$60\% \rightarrow \$93 + \$75 = \$168$

$1\% \rightarrow \$2.80 , 100\% \rightarrow \$280$

$\$280 - \$250 = \$30$

$\frac{30}{250} \times 100\% \Rightarrow \underline{12\%}$

Q17a $16 \text{ km/h} \times \frac{3}{4} \text{ h} = 12 \text{ km}$

$72 \text{ km} + 12 \text{ km} = 84 \text{ km}$

$84 \text{ km} \div 2 = 42 \text{ km}$

$42 \text{ km} - 12 \text{ km} = 30 \text{ km}$

$30 \text{ km} \div \frac{3}{4} \text{ h} = \underline{40 \text{ km/h}}$

Q17b $\frac{3}{4} \text{ h} + \frac{1}{2} \text{ h} = 1\frac{1}{4} \text{ h}$

$40 + 16 = 56$

$1\frac{1}{4} \text{ h} \times 56 \text{ km/h} = \underline{70 \text{ km}}$

Q18 $30u = 60p , 1u = 2p$

$60u + 300 = 30p + 930$

$120p + 300 = 30p + 930$

$120p - 30p = 930 - 300$

$90p = 630 \rightarrow 1p = 7$

$90p + 930$

$(90 \times 7) + 930 = \underline{1560 \text{ altogether}}$

End

4

16

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2016

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET A

Name : _____ ( )

Class : Primary 6 SY/C/G/SE/P

		Marks attained	Max Mark	Parent's Signature
Paper 1	Booklet A		20	
	Booklet B		20	
Paper 2			60	
Total Marks			100	

15 Questions
20 Marks

Total Time for Booklets A and B: 50 min

<u>INSTRUCTIONS TO CANDIDATES</u>
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You are **not allowed** to use a calculator

Booklet A

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

1   How many thousands are there in 3 500 000?

   (1)   35 000

   (2)   3 500

   (3)   350

   (4)   35

2   The table below shows the time taken by four swimmers during a competition. Who came in first?

Swimmer	Time in seconds
Alex	31.6
Benjamin	30.9
Carl	33.8
Darren	35.7

   (1)   Alex

   (2)   Benjamin

   (3)   Carl

   (4)   Darren

3   $5 + \dfrac{7}{10} + \dfrac{3}{1000} = $ _____

   (1)   5.73

   (2)   5.073

   (3)   5.703

   (4)   5.0073

4   Which one of the following is not an equivalent fraction of one another?

(1) $\frac{2}{3}$

(2) $\frac{4}{12}$

(3) $\frac{6}{9}$

(4) $\frac{10}{15}$

5   Arrange the following fractions from the largest to the smallest.

$$\frac{5}{11} \qquad \frac{1}{5} \qquad \frac{5}{10}$$

(1) $\frac{1}{5} \qquad \frac{5}{10} \qquad \frac{5}{11}$

(2) $\frac{5}{10} \qquad \frac{5}{11} \qquad \frac{1}{5}$

(3) $\frac{5}{10} \qquad \frac{1}{5} \qquad \frac{5}{11}$

(4) $\frac{5}{11} \qquad \frac{5}{10} \qquad \frac{1}{5}$

6   Which of the following is **TRUE**?

(1) $\frac{8}{10}$ is 8%

(2)   0.58 is 5.8%

(3)   25% of $200 is $100

(4)   45% is the same as $\frac{9}{20}$

2

7   What is the value of (2 x 2 + 2 + 2 x 2 − 2 x 2) ÷ 2 ?
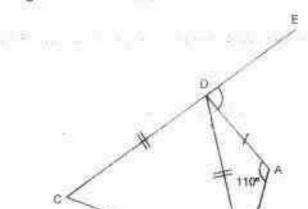
  (1)   0

  (2)   8

  (3)   3

  (4)   14

8   Simplify 9 + 6a − 4 + 2a.

  (1)   8a + 13

  (2)   8a + 5

  (3)   4a + 13

  (4)   4a + 5

9   In the figure shown below not drawn to scale, AD = AB and BCD is an equilateral triangle. CDE is a straight line. Find ∠ADE.

  (1)   35°
  (2)   60°
  (3)   85°
  (4)   95°

10   In 82.34, what does the digit 3 represent?

(1)   3 ones

(2)   3 tens

(3)   3 tenths

(4)   3 hundredths

11   Tim is $1\frac{3}{4}$ m tall. Joey is 1.25 m tall. What is the ratio of Tim's height to Joey's height?

(1)   3 : 1

(2)   3 : 25

(3)   7 : 5

(4)   13 : 11

12   In a pet house, $\frac{5}{6}$ of the pets are rabbits and the rest are hamsters. $\frac{7}{10}$ of the rabbits are grey. There are 28 grey rabbits. How many pets are there in the pet house?

(1)   12

(2)   24

(3)   40

(4)   64

4

13   Sarah, Rekah and Megan shared $900. Rekah received 20% more than Sarah while Megan received 20% less than Sarah. How much did Sarah receive?

    (1) $100

    (2) $240

    (3) $300

    (4) $360

14   What is the 854th number in the following series?

1, 2, 4, 6, 8, 1, 2, 4, 6, 8, 1, 2, 4, 6, 8, 1, 2, ...

    (1)   8

    (2)   2

    (3)   6

    (4)   4

15   Find the difference between ($\frac{1}{2}$ x 6) and ($\frac{2}{3} \div 4$)

    (1) $\frac{1}{6}$

    (2) $\frac{1}{3}$

    (3) $2\frac{2}{3}$

    (4) $2\frac{5}{6}$

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2016

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET B

Name : _____ ( )

Class : Primary 6 SY/C/G/SE/P

Paper 1	Mark attained	Max Mark
Booklet B		20

15 Questions
20 Marks

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You are **not allowed** to use a calculator

Booklet B

Name: _____ (   )   Class: P6 SY / C / G / SE / P
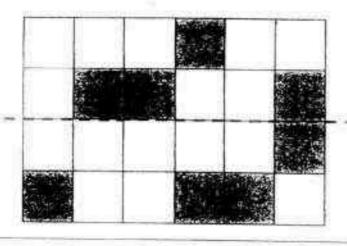
Questions **16 to 25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. **(10 marks)**

---

16   Round off 6.521 to 2 decimal places.

Ans: _____

---

17   Find the value of $8 \div \dfrac{2}{3}$

Ans _____

---

18   What is the product of the first two common multiples of 2 and 6?

Ans: _____

3

6

19. The figure below is made of squares. It has a line of symmetry as shown. Shade 4 more squares to complete the symmetric figure.

20. Express 3.6 as percentage.

Ans. _____ %
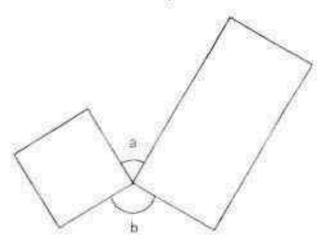
21. Find the value of $\dfrac{9q + 4}{4}$ when $q = 8$

Ans. _____

7

22   The figure below is not drawn to scale. It is made up of a square and a rectangle. Given that ∠ b is twice of ∠ a, find ∠ a.
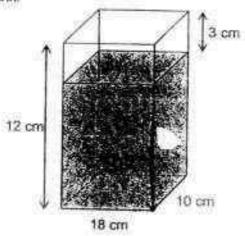
Ans: _____

23.   Timothy fills a 2.4 ℓ bottle with water from a tap. In one minute, 120 mℓ of water flows from the tap. How long does he take to fill the bottle?

Ans: _____ min

8

24   Find the volume of the water in the tank.

3 cm

12 cm

10 cm

18 cm

Ans _____

25   The ratio of the sides of two squares is 3 : 4. Find the ratio of area of big square to area of small square.

Ans _____

2
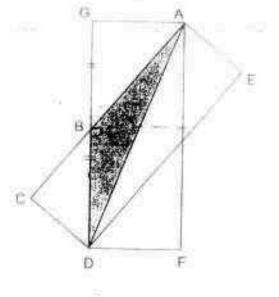
9

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space for each question and write your answers in the space provided.
For questions which require units, give your answers in the units stated.

(10 marks)

26   Kym spent $\frac{1}{6}$ of her money on a birthday present and $\frac{2}{5}$ of the remainder on

books. If she spent $320 on books, how much money does she have at first?

Ans $ _____

27   A carton can hold either 8 big boxes or 24 small boxes. If a shop assistant has already put 6 small boxes and 3 big boxes into the carton, how many more big boxes can he put into the carton?

Ans _____

28   100 lamp posts were placed at an equal distance of y m apart. Find the distance between the first and the last lamp posts.
(Leave your answer in terms of y)

Ans: _____ m

6

10

29 After giving away 45 marbles to his brother, Allan had $\frac{2}{3}$ of his marbles left.

He then packed the remaining marbles into bags of 6. How many bags of marbles did Allan have?

Ans: _____

30 In the figure below, ACDE and AGDF are identical rectangles measuring 16 cm by 5 cm. Given that GB = BD. Find the area of triangle ABD.

Ans: _____ cm²

4

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2016

PRIMARY 6

MATHEMATICS

PAPER 2

Name : _____ (   )

Class : Primary 6 SY/C/G/SE/P

Paper 2	Mark	Max Mark	Parent's Signature
		60	

18 Questions
60 Marks

Total Time for Paper 2: 1 h 40 min

INSTRUCTIONS TO CANDIDATES
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You **are allowed** to use the calculator

Questions **1** to **5** carry 2 marks each. Show your working clearly in the space below each question and write your answers in the space provided. For questions which require units, give your answers in the units stated.

(10 marks)

1   Darren bought 3 tables and 6 chairs for $367.20.
    Each table cost twice as much as a chair. Find the cost of a table.

Ans: $ _____

2   Mr Wee spent 25% of his salary on a suitcase and half of the rest of his salary on his house loan. He had $825 left. What is Mr Wee's salary?

Ans: $ _____

4

3   An ice cream stall sells ice-cream with peanut and blueberries toppings. Tiffany may choose from no topping to 2 toppings per ice-cream. The toppings cannot be repeated. How many different combinations of ice-cream can she order?

Ans: _____

4   Study the pattern of the figures below. How many coloured squares will there be when there are 30 white squares?

Pattern 1   Pattern 2   Pattern 3

Ans: _____

4

2

5. In a competition, 37 pupils received bronze and silver. 58 pupils received silver and gold. Find the difference between the number of pupils who received bronze and gold.

Ans: _____

2

3

Questions 6 to 18, show your working clearly in the space below each question and write your answers in the space provided. The number of marks awarded is shown in the brackets [   ] at the end of the question or part-question.

(50 marks)

6   Madeline packed some cookies into two bottles A and B. She packed $\frac{3}{4}$ as many cookies into Bottle A as Bottle B at first. After transferring 24 cookies from Bottle A to Bottle B, there are now $\frac{1}{4}$ as many cookies into Bottle A as Bottle B. How many more cookies were there in Bottle B than Bottle A at first?
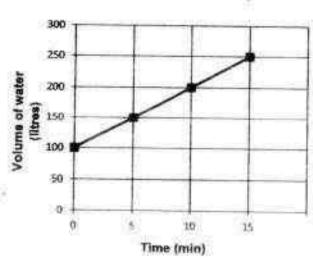
Ans _____ [3]

7   300 people helped out in a carnival. When $\frac{3}{4}$ of the men and $\frac{3}{5}$ of the women left the carnival, the total number of people left at the carnival became 90. How many women helped out at the carnival at first?

Ans : _____ [3]

6

4

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8   A tank was $\frac{1}{8}$ filled with water. The line graph below shows volume of water in the tank over 15 minutes. How long more does it take to fill the tank fully?

Time (min)

Ans _____ [3]

9   Andy and Cal weigh 75 kg. Bain and Cal weigh 63 kg. Andy and Bain weigh 80 kg. What is the weight of the lightest boy?

Ans: _____ [3]

6

5

10 A factory produced red and blue toy cars. On the first day, 70 more blue toy cars were produced than red toy cars. On the second day, the number of blue toy cars produced was decreased by 10% and the number of red toy cars produced was increased by 30%. Given that 1273 blue and red toys cars were produced on the second day, how many blue toy cars was produced on the second day?

Ans : _____ [3]

3

6

11. In a fishing competition, Janice caught 20 fish. There were only red and blue fish in the pond. 8 points were awarded for every red fish caught and 3 points were awarded for every blue fish caught. Janice was awarded 150 points. How many red fish did she catch?

Ans _____ [4]

4
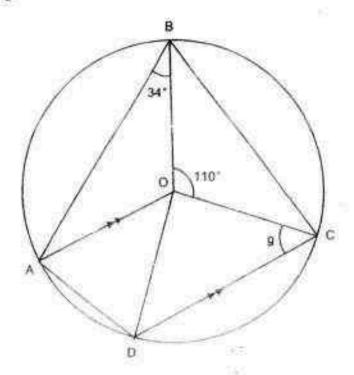
12 Mrs Wong bought a vacuum cleaner for $336 after a 30% discount.
    a) What is the cost of the vacuum cleaner before discount?
    b) She paid $95 for an iron.
       The total discount for both the vacuum cleaner and the iron was $174.
       What percentage discount was given to the iron?

Ans: (a) _____ [1]

      (b) _____ [3]

4

13   In the figure below, O is the centre of the circle and AO is parallel to DC.
Find ∠ g.

Ans: _____ [4]

14 A farm produced 3150 more ~~chicken~~ *duck* eggs than ~~duck~~ *chicken* eggs. After selling $\frac{7}{12}$ of the chicken eggs and $\frac{7}{9}$ of the duck eggs, there was an equal number of chicken eggs and duck eggs left. How many eggs did the farm produce altogether?

Ans : _____ [4]

4

15. Square P and Rectangle Q overlap each other as shown in the figure below. The ratio of the area of Square P to its shaded area is 7 : 4. The area of Square P is $\frac{2}{3}$ of the area of Rectangle Q. Given that the total unshaded area of the figure is 57cm², find the area of the whole figure.

Ans : _____ [4]

16 Tiffany had 60% as many sweets as Sue Ann. Tiffany gave away 20% of her sweets and Sue Ann bought another 46 sweets. Tiffany now has 25% as many sweets as Sue Ann. Find the number of sweets Tiffany had at first.

Ans : _____ [5]

5
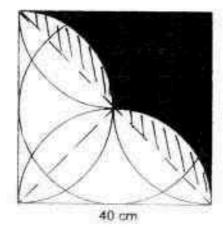
17 Mrs Tan bought some guavas at $1.20 each and some mangoes at $2 each.
    She spent $2.40 less on the mangoes than on guavas. However, she
    bought 8 more guavas than mangoes.
    a) How many mangoes did she buy?
    b) How much did she spend on guavas?

Ans: (a) _____ [3]

      (b) _____ [2]

5

18 The figure is made up of a square of side 40 cm, a circle and identical semicircles. Find
    a) The area of the shaded figure.
    b) The perimeter of the shaded figure.
    (Take π = 3.14)

40 cm

Ans: (a) _____ [3]

Ans: (b) _____ [2]

5

14

END

YEAR : 2016
LEVEL : PRIMARY 6
SCHOOL : : SCGS
SUBJECT : : MATHEMATICS
TERM : SA1

Paper 1
Booklet A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	2	3	2	2	4	3	2	3	3
Q11	Q12	Q13	Q14	Q15
3	4	3	1	4

Booklet B

Q16 6.52

Q17 12

Q18 72

Q19

Q20 360%

Q21 $\frac{(9 \times 8) + 4}{4} = \frac{72 + 4}{4} = \frac{76}{4} = \underline{19}$

Q22 $3U \rightarrow 360° - 90° \times 2 = 180° \Rightarrow \angle a \rightarrow \frac{180°}{3} = \underline{60°}$

Q23 $2.4 l = 2400$ ml. Time $\Rightarrow \frac{2400ml}{120ml} = \underline{20 \text{ min}}$

Q24 18 cm x 10 cm x 9 cm = $\underline{1620 \text{ cm}^3}$

Q25 16 : 9

Q26 $160 x 6 = $\underline{\$960}$

1

Q27 3 big boxes

Q28 99 ym

Q29 1u → 45 , 2u → 45 x 2 = 90 ⇒ $\frac{90}{6}$ = <u>15 bags</u>

Q30 $\frac{1}{2}$ x $\frac{8}{1}$ x $\frac{5}{1}$ = 20 cm²

Paper 2

Q1 3T + 6C = \$367.20 , 1T → 2u , 1C → 1u , 3T + 6C → 2u x 3 + 1u x 6 = 12u , 1u → $\frac{\$367.20}{12}$ = \$30.60 ⇒ Table (2u) \$30.60 x 2 = <u>\$61.20</u>

Q2 25u → suitcase , 100u – 25u = 75u , house loan → ½ x 75u = 37.5u (left) 37.5u → \$825 , 1u → $\frac{\$825}{37.5}$ = \$22 ⇒ salary → \$22 x 100 = <u>\$2200</u>

Q3 4

Q4 96 – 30 = 66 coloured squares

Q5 58 – 37 = <u>21</u>

Q6 1u → $\frac{24}{8}$ = 3 , 20u – 15u = 5u ⇒ 3 x 5 = <u>15</u>

Q7 $\frac{1}{4}$ of M + $\frac{2}{5}$ of W → 90
$\frac{3}{4}$ of M + $\frac{3}{5}$ of W → 300 – 90 = 210
$\frac{1}{4}$ of M + $\frac{1}{5}$ of W → 210 ÷ 3 = 70
$\frac{1}{5}$ of W → 90 – 70 = 20
20 x 5 = <u>100</u>

Q8 100ℓ = $\frac{1}{8}$ of tank
Tank → 100ℓ x 8 = 800ℓ
150ℓ – 100ℓ = 50ℓ
5 min → 50ℓ
1 min → 50ℓ ÷ 5 = 10ℓ
Water more 800ℓ - 250ℓ = 550ℓ ⇒ Time 550ℓ ÷ 10ℓ = <u>55 min</u>

Q9   80 kg + 63 kg + 75 kg = 218 kg

218 kg ÷ 2 = 109 kg

Andy → 80 − 34 = 46 kg, Bain → 63 − 29 = 34 kg, Cal → 109 − 80 = <u>29kg</u>

Q10   130u + 90u = 220u

220u → 1273 − 63 = 1210

1u → 1210 ÷ 220 = 5.5

5.5 × 90 + 63 = <u>558 blue toy cars</u>

Q11   Total → 20 × 3 = 60

Diff → 150 − 60 = 90

Individual diff → 8 − 3 = 5

Red fish $\Rightarrow \frac{90}{5} = \underline{18}$

Q12a Original price $\Rightarrow \frac{\$336}{70} \times 100 = \underline{\$480}$

Q12b Discount price, vacuum → $480 − $336 = $144

Discounted price, iron → $174 − $144 = $30

% discount, iron $\frac{\$30}{\$95 + \$30} \times 100\% = \underline{24\%}$

Q13 $\angle$OCB → (180° − 110°) ÷ 2 = 35°

$\angle$BOA → 180° − 34° × 2 = 112°

$\angle$AOC → 360° − 110° − 112° = 138°

$\angle$x 180° − 138° = <u>42°</u>

Q14   Duck egg left → $1 - \frac{7}{9} = \frac{2}{9}$

Chicken egg left → $1 - \frac{7}{12} = \frac{5}{12}$

$\frac{2}{9}$ of D = $\frac{5}{12}$ of C → $\frac{10}{45}$ of D = $\frac{10}{24}$ of C

45u − 24u = 21u → 3150

$1u \rightarrow \frac{3150}{21} = 150$

Total 150 × (24 + 45) = <u>10350 eggs</u>

Q15   Unshaded P → 14u − 8u = 6u

Unshaded Q → 21u − 8u = 13u

13u + 6u = 19u → 57 cm²

1u → 57 cm² ÷ 19 = 3 cm²

Total area $\Rightarrow$ 3 cm² × (21 + 6) = 81 cm²

3

Q16 Tiffany 48u or 25p
Sue Ann 100u + 46 or 100p
100p ÷ 25p = 4
48u x 4 = 100u + 46
192u = 100u + 46
92u → 46
1u → $\frac{46}{92}$ = 0.5 ⇒ 0.5 x 60 = <u>30 sweets</u>

Q17a

	No.	X	Value
Guavas	1u + 8	$1.20	1.2u + $9.60
Mangoes	1u	$2	2u

2u + $2.40 = 1.2u + $9.60
2u = 1.2u + [$9.60 - $2.40=($7.20)]
0.8u → $7.20 ⇒ 1u → $\frac{\$7.20}{0.8}$ = <u>9 mangoes</u>

Q17b (9 + 8) x $1.20 = <u>$20.40</u>

Q18a Semicircle → $\frac{1}{2}$ x 20 cm x 20 cm x 3.14 = 628cm²
Small triangle → $\frac{40cm \times 40cm}{2}$ ÷ 2 = 400 cm²
Two half leafs → 628 cm² - 400 cm² = 228 cm²
½ of square → ½ x 40 cm x 40 cm = 800 cm²
Shaded area → 800 cm² - 228 cm² = <u>572 cm²</u>

Q18b Semicircle arc → ½ x 40 cm x 3.14 = 62.8 cm
Perimeter → 40 cm x 2 + 62.8 cm = <u>142.8 cm</u>

4
END

PEI HWA PRESBYTERIAN PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1

PRIMARY 6
MATHEMATICS PAPER 1
(BOOKLET A)

11 MAY 2016

Name : _____

Form Class / Register No.   : 6R_____ / _____

Banded Class / Register No. : 6M_____ / _____

Total time for Booklets A and B: 50min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.

2. DO NOT turn over this page until you are told to do so.

3. Follow all instructions carefully.

4. Answer all questions.

5. Shade your answers on the Optical Answer Sheet (OAS) provided.

6. The use of calculator is **NOT ALLOWED**.

This booklet consists of **6** printed pages, excluding the cover page.

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet. You are **not** allowed to use a calculator.

(20 marks)

1 What is six million, four hundred and five thousand and eleven?

    (1)   6 004 511

    (2)   6 005 411

    (3)   6 405 011

    (4)   6 450 011

2 Find the value of the expression $\dfrac{4a}{4} + 3$ when $a = 8$.

    (1)   8

    (2)   11

    (3)   12

    (4)   15

3 The figure below is not drawn to scale. Find $\angle y$.

    (1)   35°

    (2)   125°

    (3)   145°

    (4)   215°

4   ABCD is a parallelogram. Find ∠BCD.

   (1)   28°

   (2)   62°

   (3)   118°

   (4)   124°

5   Evaluate $\dfrac{4}{5} \times \dfrac{1}{3}$
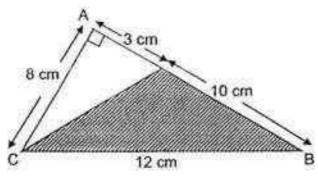
   (1) $\dfrac{5}{12}$

   (2) $2\dfrac{2}{5}$

   (3) $3\dfrac{3}{4}$

   (4) $\dfrac{4}{15}$

6   Robin is $2\dfrac{1}{3}$ times as old as Jonathan. Find the ratio of Robin's age to the total age of the two boys.

   (1)   7 : 10

   (2)   7 : 3

   (3)   3 : 10

   (4)   3 : 7

7   Dylan is $\frac{5}{6}$ as tall as Gilbert. Colin is $\frac{7}{10}$ as tall as Dylan. What is the ratio of Dylan's height to Gilbert's height to Colin's height?

(1) $5:6:7$

(2) $7:10:12$

(3) $10:12:7$

4) $20:12:7$

8   Express 0.7 as a percentage.

(1)   0.007%

(2)   0.7%

(3)   7%

(4)   70%

9   The radius of a circle is 14 cm. What is its circumference?
(Take $\pi = \frac{22}{7}$)

(1)   22 cm

(2)   44 cm

(3)   88 cm

(4)   616 cm

10   The figure shows a right-angled triangle ABC. Find the area of the shaded part.
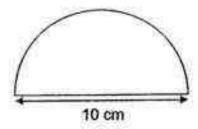
(1)   12 cm²

(2)   40 cm²

(3)   52 cm²

(4)   60 cm²

11   Chip ate $\frac{1}{9}$ of a chicken pie and gave away $\frac{3}{4}$ of the remainder to Dale.
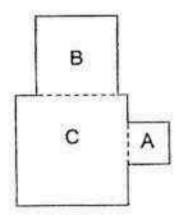
What fraction of the chicken pie did Chip have left?

(1) $\frac{1}{12}$

(2) $\frac{5}{36}$

(3) $\frac{2}{9}$

(4) $\frac{2}{3}$

12 Find the perimeter of the semicircle in terms of π.

10 cm

(1) 5π cm

(2) 10π cm

(3) (5π + 10) cm

(4) (10π + 10) cm

13 The figure below is made up of three squares, A, B and C.
A has side 3 cm, B has side 5 cm and C has side 6 cm.
What is the perimeter of the figure?

(1) 36 cm

(2) 40 cm

(3) 56 cm

(4) 70 cm

14   Apples are sold only in packs of 5 for $4. What is the maximum number of
      apples that can be bought with $22.40?

      (1)   28

      (2)   25

      (3)   5

      (4)   4

15   Ben, Clive and Dave shared $900. Clive received 20% more than Ben.
      Dave received 20% less than Ben. How much more did Clive receive than
      Dave?

      (1) $360

      (2) $240

      (3) $120

      (4) $60

-- End of Booklet A --

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.   (10 marks)

Do not write in this space.

16   Find the value of $9 \times 3 + (16 - 4) \div 3$.

Ans: _____

17   Simplify $7k + 7 - 3k + 5 - 2 + 4k$.

Ans: _____

18   PQR is an isosceles triangle. Find $\angle x$.

Ans: _____

19 Eight litres of water are poured equally into $\frac{1}{4}$ litre bottles. How many of such bottles are filled with water?

Ans: _____

20 The number of curry pies, sardine pies and chicken pies on a shelf are in the ratio of 4 : 3 : 5. What fraction of the pies are chicken pies?

Ans: _____

21 Jessie has 4 blue markers and 5 green markers. What percentage of the green markers is the blue markers?

Ans: _____ %

22 The radius of a circle is 18.2 cm. Find its diameter.

Ans: _____ cm

23 Find the area of a quadrant of diameter 20 cm.
(Take $\pi = 3.14$)

Ans: _____ cm^2

24 The figure below, PQRS is a rectangle. QS is a straight line. What is the ratio of Area M to Area N?

Ans: _____ : _____

25 The area of the shaded triangle is 117 cm² What is the area of the rectangle?

Ans:_____ cm²

Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space.

26   Mrs Lin is 8x years old. She is four times as old as her daughter. What will be their total age in 5 years' time? Express your answer in terms of x.

Ans: _____ years old

27   In the figure below, ABE is an equilateral triangle and BCDE is a square. Find ∠BFA.

Ans: _____ °

28 The diameter of a circle in the figure below is 12 cm. Find the area of the square.

Ans: _____ cm²

29 Mrs Pavia bought a book and a pen. The price of a pen is 60% that of a book. The book costs $10 more than the pen. Find the amount Mrs Pavia paid for the two items.

Ans: $ _____

30 Rectangle ABCD is divided into 9 identical small rectangles as shown. Given that the perimeter of rectangle ABCD is 46 cm, find the perimeter of one small rectangle.

Ans: _____ cm

END OF PAPER 1

PEI HWA PRESBYTERIAN PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1

PRIMARY 6
MATHEMATICS
PAPER 2

11 MAY 2016

Name : _____

Form Class / Register No.   : 6R_____ / _____

Banded Class / Register No. : 6M_____ / _____

Parent's signature

Total time: 1h 40min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.

2. DO NOT turn over this page until you are told to do so.

3. Follow all instructions carefully.

4. Answer all questions.

5. Write all your answers in this booklet.

6. The use of an approved calculator is expected, where appropriate.

Paper 1 :		40
Paper 2 :		60
Total Marks :		100

This booklet consists of <u>13</u> printed pages, excluding the cover page.

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answer in the units stated. **(10 marks)**
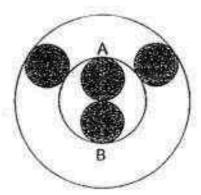
1   June has some orange juice. She can fill the orange juice equally into either 4 glasses or 7 cups such that the amount of orange juice in each glass or cup is a whole number. Given that each glass or cup must have more than 5 *ml* of orange juice, what is the least amount of orange juice she must have?

Ans: _____ *ml*

2   Rosita mixed cups of milk, syrup and water in the ratio of 2 : 3 : 7 to make a drink for a party. If she used 36 cups of milk, how many cups of drink did she make?

Ans: _____

3   Timberlake saved 40% of his salary every month. When Timberlake's salary was reduced by 10%, his savings became $1800. What was his salary at first?

Ans: $ _____

1

(Go on to the next page)
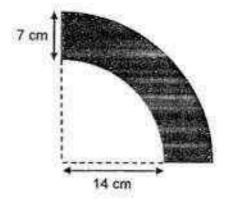
4   The figure below shows 4 shaded identical circles within 2 unshaded circles. The diameter of the small unshaded circle, AB, is 4 cm. What fraction of the biggest circle is shaded?

Ans:_____

5   The figure below shows 2 quadrants. Find the perimeter of the shaded portion. Give your answer correct to 2 decimal places.

7 cm

14 cm

Ans:_____ cm

Questions 6 to 18 show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [   ] at the end of each question or part question.   (50 marks)

6   Dean, Edric and Jonas had a total of 275 marbles. Edric had twice as many marbles as Dean. Jonas had 40 marbles fewer than Edric. How many marbles did Edric have?

Ans:_____ [3]

7    $\frac{2}{7}$ of the number of lego blocks Tevin has is equal to $\frac{3}{5}$ of the number of lego blocks Ryker has. The two boys have 930 lego blocks altogether. How many lego blocks does Tevin have?

Ans:_____ [3]

3

(Go on to the next page)
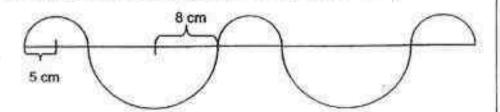
8 There were 550 plates, cups and bowls in a shop. When $\frac{3}{7}$ of the plates and 22 cups were sold, the ratio of the number of plates to the number of cups to the number of bowls became 8 : 3 : 5. How many bowls were there in the shop at first?

Ans:_____ [3]

9 The usual price of a dress was $30. It was given a 20% discount during a sale. A GST of 7% was charged on the discounted price. Ai Swee paid the dress with a $50 note. How much change did she receive?

Ans:_____ [3]

10   Ah Huat bends a piece of wire to form a figure made up of five semi-circles as shown below. The 2 big identical semi-circles have a radius of 8 cm each and the other 3 small identical semi-circles have a radius of 5 cm each. Find the length of the wire. (Take $\pi = 3.14$)
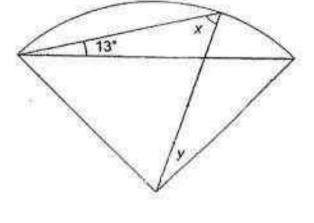
Ans:_____ [3]

11 The figure below shows a quadrant. Find
    (a) $\angle x$
    (b) $\angle y$

Ans: (a) _____ [2]

   (b) _____ [2]

(Go on to the next page)

12 Three identical basins, A, B and C, were each filled with some water
Basin A had a mass of 3.8 kg when it was $\frac{1}{2}$ full. Basin B had a mass
of 2 kg when it was $\frac{1}{5}$ full. What fraction of Basin C was filled with water
when the mass was 5.6 kg? Express your answer in its simplest form.

Ans:_____ [4]
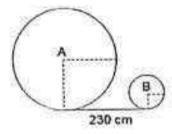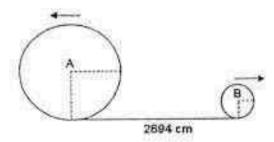
13 30% of the buffaloes in a herd were males. When 60 more female buffaloes joined the herd, the percentage of male buffaloes in the herd dropped to 20%. How many male buffaloes were there in the herd?

Ans:_____ [4]

14   Two wheels shown below with centres A and B are 230 cm apart. The diameter of the big wheel is 70 cm. The ratio of the radius of the small wheel to the radius of the big wheel is 2 : 5.

230 cm

Both wheels are rolled out in opposite direction shown until they are 2694 cm apart. The two wheels need to make the same number of revolutions. How many revolutions does each wheel make assuming that each wheel must make a complete revolution? (Take $\pi = \dfrac{22}{7}$)

2694 cm

Ans:_____ [4]

15 The ratio of the area of Rectangle A to that of Rectangle B is 9 : 4. When 34 identical 2-cm squares are added to Rectangle B, it becomes a square. Find the perimeter of the square if Rectangle A has an area of 423 cm².

Ans:_____ [4]

16 Abigail and Bonnie had $2880 altogether. Abigail had $400 less than Bonnie. During a shopping trip, Abigail spent 4 times as much money as Bonnie. Bonnie then had twice as much money left as Abigail. How much more money did Bonnie have left than Abigail?

Ans:_____ [5]

17   There were some pencils and pens in a box. If 5 pencils were removed from the box, the number of pencils left would be $\frac{1}{6}$ of the total number of remaining pencils and pens. If 9 pens were removed from the box, the number of pencils would be $\frac{1}{3}$ of the number of pens left. How many pencils and pens were there in the box?

Ans:_____ [5]

18   There were two crates of fruits at a fruit stall. Each crate contained some mangoes and papayas. The ratio of the number of mangoes to the number of papayas in Crate A was 11 : 8. In Crate B, the ratio of the number of papayas to the number of mangoes was 6 : 5. Half of the papayas from Crate A were transferred to Crate B. In the end, the total number of fruits in Crate A was 195 and the ratio of the number of mangoes to the number of papayas in Crate B was 9 : 16. How many fruits were there in Crate B in the end?

Ans:_____ [5]

-- End of Paper 2 --

SCHOOL   :   **PEI HWA PRESBYTERIAN PRIMARY SCHOOL**
LEVEL   :   **PRIMARY 6**
SUBJECT :   **Maths**
TERM   :   **SEMESTRAL ASSESSMENT 1**

CONTACT :

PAPER 1 BOOKLET A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	4	2	2	1	3	4	3	2

Q11	Q12	Q13	Q14	Q15
3	3	2	2	3

PAPER 1 BOOKLET B

Q16)	$9 \times 3 + (16 - 4) \div 3 = 9 \times 3 + 12 \div 3 = 27 + 4 = 31$
	Ans : 31

Q17)	$7K + 7 - 3K + 5 - 2 + 4K = 7K - 3K + 4K + 7 + 5 - 2 = 8K + 10$
	Ans : 8K + 10

Q18)	$\angle PQR = 47°$ $\angle X = 180° - 64° - 47° = 69°$
	Ans: 69°

Q19)	$8 \div \frac{1}{4} = 8 \times 4 = 32$
	Ans : 32

Q20)	C : S : CH : Total 4 : 3 : 5 : 12 Fraction of CH $= \frac{5}{12}$
	Ans : $\frac{5}{12}$
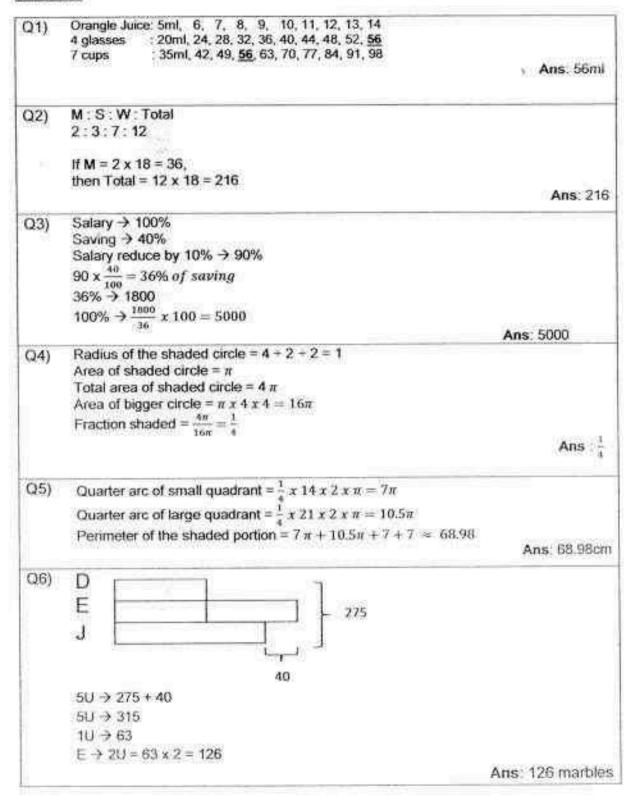
Pg.1
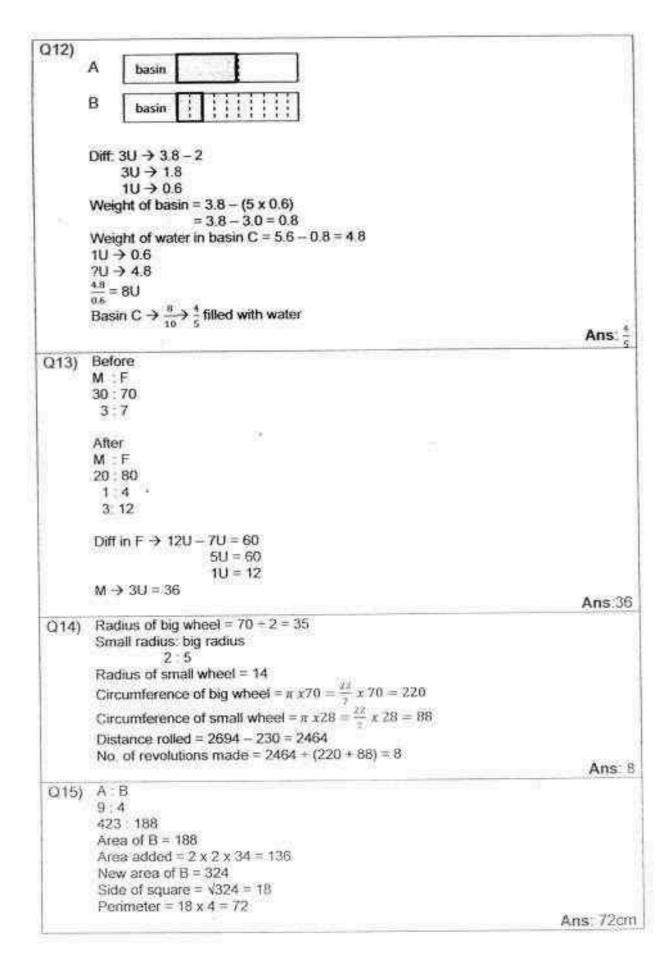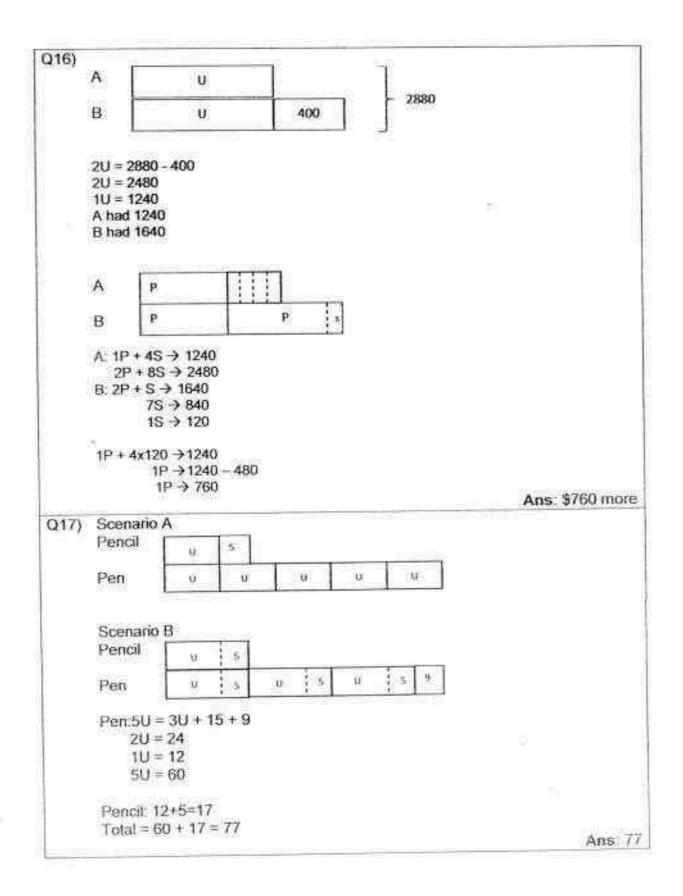
Q21)	$\frac{B}{G} = \frac{4}{5} \times 100\% = 80\%$
	Ans: 80%
Q22)	Diameter = 18.2 x 2 = 36.4
	Ans: 36.4cm
Q23)	$\frac{1}{4} \times 10 \times 10 \times 3.14 = 78.5$
	Ans: 78.5 cm²
Q24)	Since $\triangle PQS = \triangle QSR$, A = B and C = D So, M = N Ratio is 1:1
	Ans: 1:1
Q25)	Area of $\triangle = \frac{1}{2} \times b \times h = 117$ b = length of rectangle h = breadth of rectangle Area of rectangle = 117 x 2 = 234
	Ans: 234cm²
Q26)	Daughter → 8x ÷ 4 = 2x In five years time, sum of their age = 8x + 5 + 2x + 5 = 10x + 10
	Ans: (10x+10) years old
Q27)	$\angle AEB = 60°$ $\angle AED = 60° + 90° = 150°$ $\angle EAD = (180° - 150°) ÷ 2 = 15°$ $\angle BFA = 15° + 60° = 75°$
	Ans: 75°
Q28)	Half of the square = A triangle = $\frac{1}{2} \times 12 \times 6 = 36$ Area of the square = 36 x 2 = 72
	Ans: 72cm²
Q29)	Price of book = 100% Price o pen = 60% Diff → 40% = $10 Total → 160% = $\frac{10}{40} \times 160 = 40$
	Ans: $40
Q30)	Breadth of small rectangle = 1U Length of small rectangle = 3.5U Length of AB = 7U Length of AD = 4.5U Perimeter of ABCD → 7U + 7U + 4.5U + 4.5U = 46 23U = 46 1U = 2 Perimeter of a small rectangle → 1U + 1U + 3.5U + 3.5U = 9U = 18
	Ans: 18cm

PAPER 2

Q1)	Orangle Juice: 5ml, 6, 7, 8, 9, 10, 11, 12, 13, 14 4 glasses : 20ml, 24, 28, 32, 36, 40, 44, 48, 52, **56** 7 cups : 35ml, 42, 49, **56**, 63, 70, 77, 84, 91, 98 **Ans. 56ml**
Q2)	M : S : W : Total 2 : 3 : 7 : 12 If M = 2 x 18 = 36, then Total = 12 x 18 = 216 **Ans: 216**
Q3)	Salary → 100% Saving → 40% Salary reduce by 10% → 90% $90 \times \frac{40}{100} = 36\%$ of saving 36% → 1800 $100\% \to \frac{1800}{36} \times 100 = 5000$ **Ans: 5000**
Q4)	Radius of the shaded circle = 4 ÷ 2 ÷ 2 = 1 Area of shaded circle = π Total area of shaded circle = 4π Area of bigger circle = $\pi \times 4 \times 4 = 16\pi$ Fraction shaded = $\frac{4\pi}{16\pi} = \frac{1}{4}$ **Ans** $\frac{1}{4}$
Q5)	Quarter arc of small quadrant = $\frac{1}{4} \times 14 \times 2 \times \pi = 7\pi$ Quarter arc of large quadrant = $\frac{1}{4} \times 21 \times 2 \times \pi = 10.5\pi$ Perimeter of the shaded portion = $7\pi + 10.5\pi + 7 + 7 = 68.98$ **Ans: 68.98cm**
Q6)	 5U → 275 + 40 5U → 315 1U → 63 E → 2U = 63 x 2 = 126 **Ans: 126 marbles**

Q7)	$\frac{2}{7}$ of Tevin $= \frac{3}{5}$ of Ryker
	$\frac{6}{21}$ of Tevin $= \frac{6}{10}$ of Ryker
	Total lego blocks = 21 + 10 = 31
	31U → 930
	1U → 30
	Tevin has 21U → 21 x 30 = 630
	Ans: 630

Q8)	After
	P : C : B
	8 : 3 : 5
	After selling $\frac{3}{7}$, P has $\frac{4}{7}$ → 8U
	So, before selling, $\frac{7}{7}$ → 14U
	14U + (3U+22) + 5U = 550
	22U = 550 -22
	22U = 528
	1U = 24
	B → 5U = 5 x 24 = 120
	Ans: 120

Q9)	After 20% discount, price → 30 x $\frac{80}{100}$ = 24
	With 7% GST, price → 24 x $\frac{107}{100}$ = 25.68
	Change she received → 50 – 25.68 = 24.32
	Ans: $24.32

Q10)	Diameter of 3 small semi-circles = 30
	Diameter of 2 big semi-circles = 32
	Circumference of 3 small semi-circles = 3 x $\frac{1}{2}$ x 2 x 5 x 3.14 = 47.1
	Circumference of 2 big semi-circles = 3 x $\frac{1}{2}$ x 2 x 8 x 3.14 = 50.24
	Total length of wire = 47.1 + 50.24 + 30 + 32 = 159.34
	Ans: 159.34cm

Q11)	a) $\angle X = 13° + 45° = 58°$
	b)
	$\angle a = 13° + 58° = 71°$
	$\angle Y = 71° - 45° = 26°$
	Ans: (a) 58°
	(b) 26°

Q12)

A | basin | |
B | basin | : : : : : : : |

Diff: $3U \rightarrow 3.8 - 2$
$\qquad 3U \rightarrow 1.8$
$\qquad 1U \rightarrow 0.6$
Weight of basin $= 3.8 - (5 \times 0.6)$
$\qquad\qquad\qquad = 3.8 - 3.0 = 0.8$
Weight of water in basin C $= 5.6 - 0.8 = 4.8$
$1U \rightarrow 0.6$
$?U \rightarrow 4.8$
$\frac{4.8}{0.6} = 8U$
Basin C $\rightarrow \frac{8}{10} \rightarrow \frac{4}{5}$ filled with water

Ans: $\frac{4}{5}$

Q13) Before
M : F
30 : 70
3 : 7

After
M : F
20 : 80
1 : 4
3 : 12

Diff in F $\rightarrow 12U - 7U = 60$
$\qquad\qquad\qquad 5U = 60$
$\qquad\qquad\qquad 1U = 12$
M $\rightarrow 3U = 36$

Ans: 36

Q14) Radius of big wheel $= 70 \div 2 = 35$
Small radius : big radius
$\qquad\qquad 2 : 5$
Radius of small wheel $= 14$
Circumference of big wheel $= \pi \times 70 = \frac{22}{7} \times 70 = 220$
Circumference of small wheel $= \pi \times 28 = \frac{22}{7} \times 28 = 88$
Distance rolled $= 2694 - 230 = 2464$
No. of revolutions made $= 2464 \div (220 + 88) = 8$

Ans: 8

Q15) A : B
9 : 4
423 : 188
Area of B $= 188$
Area added $= 2 \times 2 \times 34 = 136$
New area of B $= 324$
Side of square $= \sqrt{324} = 18$
Perimeter $= 18 \times 4 = 72$

Ans: 72cm

Q16)

A [U]

B [U | 400] } 2880

$2U = 2880 - 400$
$2U = 2480$
$1U = 1240$
A had 1240
B had 1640

A [P | ┊┊┊]

B [P | P | s]

A: 1P + 4S → 1240
   2P + 8S → 2480
B: 2P + S → 1640
   7S → 840
   1S → 120

1P + 4×120 → 1240
   1P → 1240 − 480
   1P → 760

Ans: $760 more

Q17) Scenario A

Pencil [u | s]

Pen [u | u | u | u | u]

Scenario B

Pencil [u | s]

Pen [u | s | u | s | u | s | 9]

Pen: 5U = 3U + 15 + 9
   2U = 24
   1U = 12
   5U = 60

Pencil: 12+5=17
Total = 60 + 17 = 77

Ans 77

Q18)   Crate A
       Before:
       M : P : Total
       11 : 8 : 19

       After:
       M: P : Total
       11: 4 : 15

       15U → 195
       1U → 13
       Papaya transferred: 4U = 13 x 4 = 52

       Crate B
       Before:
       M : P
       5: 6
       45: 54

       After:
       M : P
       9: 16
       45: 80

       Diff in P → 80U – 54U = 26U
       26U → 52
       1U → 2

       Total fruits in B → 45U+80U = 125U = 125 x 2 = 250

                                                    Ans: 250

RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION
MATHEMATICS (PAPER 1)
PRIMARY 6

Name: _____ (   )

Form Class: P6 _____

Date: 24 August 2016

Duration: 50 min

Your Score (Out of 100 marks)	
Paper 1 (Out of 40 marks)	
Paper 2 (Out of 60 marks)	
Overall (Out of 100 marks)	

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.

2. Follow all instructions carefully.

3. Answer **ALL** questions and show all working clearly.

4. **NO** calculator is allowed for this paper.

Questions **1** to **10** carry 1 mark each. Question **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer (1, 2, 3 or 4) on the OAS provided. All diagrams are not drawn to scale.

1. The value of the digit 5 in 9<u>5</u>7 321 is _____.

    (1)   500

    (2)   5 000

    (3)   50 000

    (4)   500 000

2.
$$\frac{12}{15} = \frac{8}{\boxed{?}}$$

What is the missing number in the box?

    (1)   9

    (2)   10

    (3)   11

    (4)   12
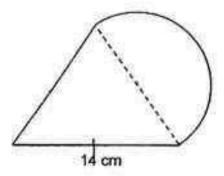
3. In the numeral 7.539, the digit 3 stands for _____.

    (1)   3 tens

    (2)   3 tenths

    (3)   3 hundredths

    (4)   3 thousandths

4. Express 40.32 litres in millilitres.

    (1)   432 ml

    (2)   4 032 ml

    (3)   4 320 ml

    (4)   40 320 ml

5. There are 4 800 books in a library. 20% of them are non-English books and the rest of them are English books. How many English books are there in the library?

    (1)   384
    (2)   960
    (3)   2880
    (4)   3840

6. A number becomes 70 000 when rounded off to the nearest thousand. Which one of the following could the number be?

    (1)   79 567
    (2)   70 893
    (3)   69 978
    (4)   69 499

7. Jim baked some cakes for sale. After selling $\frac{3}{8}$ of the cakes in the morning and 20 cakes in the afternoon, he had 10 cakes left. How many cakes did he bake?

   (1) 16

   (2) 32

   (3) 48

   (4) 80

8. Express $4\frac{1}{25}$ as a decimal.

   (1) 4.04

   (2) 4.1

   (3) 4.25

   (4) 4.4

9. A movie lasted 135 minutes. If the movie ended at 7 p.m., what time did it start?

   (1) 4.45 p.m.

   (2) 5.25 p.m.

   (3) 8.35 p.m.

   (4) 9.15 p.m.
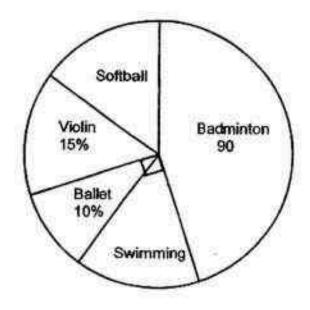
10. The figure below consists of an equilateral triangle and a semi-circle. One of the sides of the triangle is 14 cm. What is the perimeter of the figure?

Take $\pi = \dfrac{22}{7}$.

14 cm
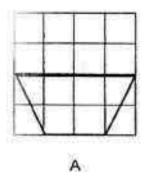
(1) 50 cm

(2) 64 cm

(3) 105 cm

(4) 366 cm

11. The length and breadth of a rectangle are both whole numbers. The length is three times as long as its breadth. Which of the following is not a possible perimeter of the rectangle?

(1) 8 cm

(2) 16 cm

(3) 28 cm

(4) 40 cm
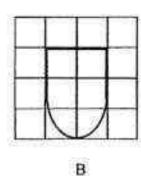
12. Some Primary 4 pupils were asked to name the CCA they liked the most.
Their choices were represented in the pie chart below.
There was an equal number of pupils who liked swimming and softball.
Find the total number of Primary 4 pupils who took part in the survey.
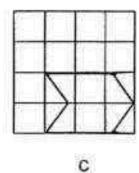
(1) 110

(2) 120

(3) 180

(4) 200

13. There were 130 members in a club in October. This was 30% more than the number of members in September. In November, 20 members left the club. What is the percentage increase in the number of members in November compared to September?

(1) 10%

(2) 20%

(3) 22%

(4) 50%

14. There are 3 unit shapes below. Which of the shape(s) below can be tessellated?

A
B
C

(1) A only

(2) B only

(3) A and C only

(4) B and C only

15. Some children are folding paper cranes during a craft lesson. In 9 minutes, 5 children can fold 10 paper cranes. How long does it take for 3 children to fold 72 paper cranes altogether?

(1) 24 min

(2) 36 min

(3) 1 h 8 min

(4) 1 h 48 min

SECTION B (20 marks)

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

16. Arrange the following numbers from the smallest to the largest.

    94 127,   94 172,   96 321,   96 231

    Ans: _____ , _____ , _____ , _____

17. Find the value of $\frac{3}{4} \div 9 \times 2$.

    Give your answer as a fraction in the simplest form.

    Ans: _____
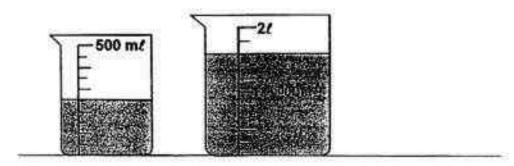
18. Find the value of 0.9 x 70.

    Ans: _____

19. What is the total amount of water in the two containers below?

Ans: _____ ml
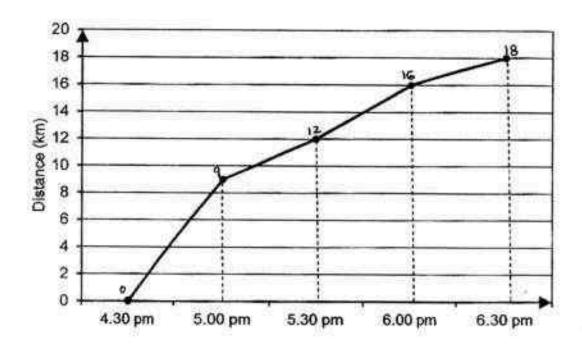
20. The base area of a cube is 16 cm². What is the volume of the cube?

Ans: _____ cm³

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21. The line graph below shows the distance Mr Leong jogged yesterday over a period of time. What was Mr Leong's average speed for the whole journey?
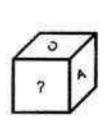
Ans: _____ km/h
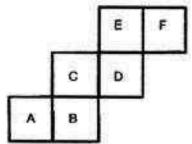
22. Express 50 m as a percentage of 2 km.

Ans: _____ %

23. Express 8.55 as a mixed number in its simplest form.

Ans: _____

24. The diagram below shows a cube and its net. What is the letter, B, D, E or F on the missing face?

Ans: _____

25. Mr Singh spent $\frac{2}{7}$ of his salary on transport. Mr Mani spent $\frac{3}{8}$ of his salary on transport. They spent the same amount of money on transport. What was the ratio of Mr Singh's salary to Mr Mani's salary?
Express your answer in its simplest form.
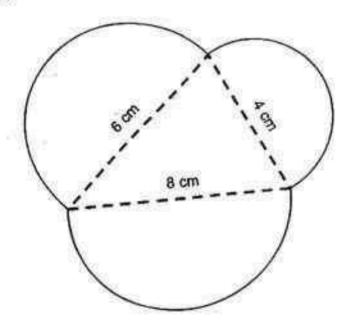
Ans: _____

Questions **26** to **30** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the space provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

26. Samy earns $5 for every chair he sells. For every 10 chairs that he sells, he will get an additional $50. How many chairs must he sell to earn $330?

Ans: _____

27. A wire is bent to make the figure below. It consists of 3 semicircles. Find the length of the wire.

Take $\pi = 3.14$.

6 cm

4 cm

8 cm

Ans: _____ cm

28.

Buy 2 get 1 free!
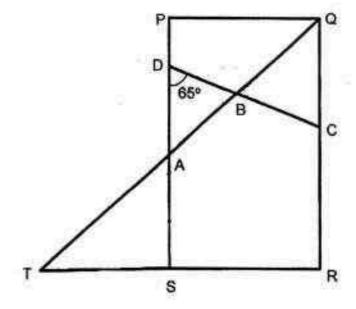
Joshua wants to spend the least amount of money to buy 25 muffins for his party. Each muffin is sold at $m. He has $100. How much money will he have left after paying for the muffins? Express your answer in terms of m.

Ans: $_____
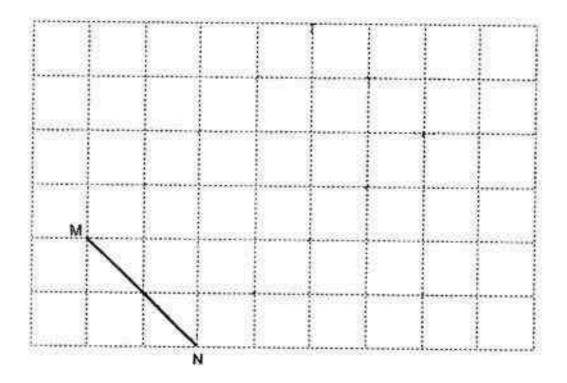
29. In the figure below, PQRS is a rectangle and TS = SA. TABQ, TSR and DBC are straight lines. Given that ∠ADB is 65°, find ∠QBC.

Ans: _____°

30. MN forms one side of a rectangle LMNO. LM is twice the length of MN. Complete the drawing of the rectangle LMNO in the square grid below. [2]

RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION
MATHEMATICS (PAPER 2)
PRIMARY 6

Name: _____ (   )

Form class: P6 _____

Date: 24 August 2016   Duration: 1 h 40 min

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.

2. Follow all instructions carefully.

3. Answer **ALL** questions and show all working clearly.

4. The use of calculator is allowed for this paper.

Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. All the diagrams are not drawn to scale.   (10 marks)
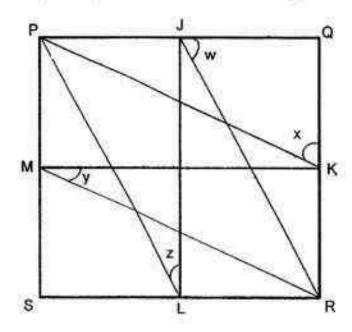
1. There were 17 bottles of candies. Each bottle contained *b* candies. 2 bottles of candies were sold. The remaining candies were shared equally among 3 girls. How many candies did each girl receive?

    Express your answer in terms of *b*.

    Ans: _____ [2]

2. The original price of a gown was $780. It was sold at a discount of 15%. As a member of the store, Siti was given a further discount of $50. How much did Siti pay for the gown?

    Ans: $_____ [2]

3. In the diagram below, PQRS is a square. J, K, L and M are midpoints of PQ, QR, RS and SP respectively. Find the sum of ∠w, ∠x, ∠y and ∠z.

Ans: _____° [2]

4. Fill in the missing fraction below.

$$\frac{4}{9}, \quad \frac{11}{18}, \quad \boxed{?}, \quad \frac{17}{18}, \quad 1\frac{1}{9}$$

Ans: _____ [2]

5. Fill in the missing operations (+ , - , × or ÷) in the boxes.

90 ☐ 3 + 2 × (43 ☐ 15) = 146 [2]

☐

☐

For questions **6** to **18**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(50 marks)

6. Empty box P has a mass of 1.8 kg. Box P with 8 packets of flour and 6 packets of salt has a mass of 21.4 kg. Each packet of flour has a mass of 2 kg 60 g.

What is the mass of each packet of salt?

Give your answer in kilograms.

Ans: _____ [3]

7. Miss Pang bought *n* pens at $2 each to give to her pupils in 3 classes. Each class has the same number of pupils.

(a) How much did she spend on the pens for each class? Express the answer in terms of *n*.

(b) Given that *n* = 78, how much did she spend on the pens for each class?

Ans: (a) _____ [1]

(b) _____ [2]

Page 5 of 15
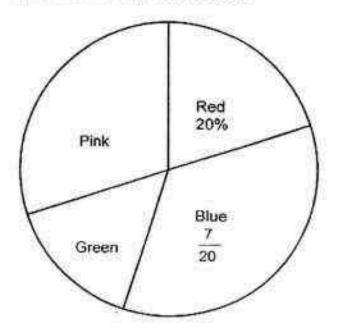
8. Mrs Eng packed some beads equally into 10 bags. 4 bags were found to be torn, so she transferred the beads from the 4 torn bags equally into each of the remaining bags. The remaining bags each had 20 more beads as a result. How many beads were there altogether?

Ans: _____ [3]

9. Mary had 650 red pens and 100 blue pens. After selling $\frac{2}{5}$ of the red pens and some blue pens, she had 450 red and blue pens left.
How many blue pens did he sell?

Ans: _____ [3]

10. A group of Primary 1 pupils were asked to vote for the colour they liked the most. The results were represented in the pie chart below.

Half of the number of pupils voted for red and pink colour.

(a) 12 more pupils voted for pink colour than green colour. How many pupils voted for red colour?

(b) 10 additional pupils were asked to vote. They voted for pink colour. What fraction of all the pupils voted for pink colour?

Ans: (a) _____ [2]

(b) _____ [2]

11. The table below shows the prices of prawns in a market.

Weight of prawns	Price
First 2 kg	$16 per kg
Every additional 1 kg	$14 per kg
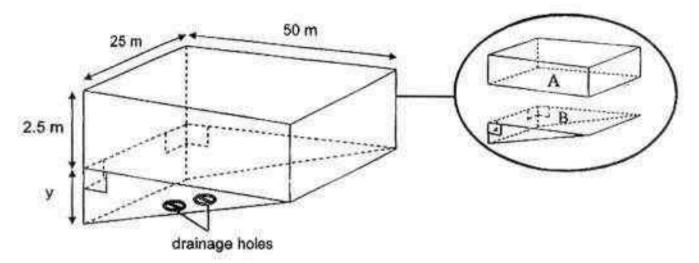
(a) James bought 6 kg of prawns. How much did he pay?

(b) Michelle paid $130 for some prawns. How many kilograms of prawns did she buy?

Ans: a) _____ [2]

b) _____ [2]

12   The cost of a plate was 5 times the cost of a spoon. At first, Siti used $\frac{5}{9}$ of her money to buy 4 plates and 30 spoons. Then, she decided to buy some more plates with $\frac{3}{8}$ of her remaining money. How many more plates did Siti buy?

Ans: _____ [4]

13. The figure below shows the cross-section of a swimming pool with a sloping depth. The swimming pool is made up of 2 sections, A and B. The volume of Section B is 40% of the volume of Section A.

drainage holes

(a) Given that the dimensions of Section A is 50 m by 25 m by 2.5 m, find the height y.

(b) There are two drainage holes at the bottom of the swimming pool. The two holes allow water to drain out at an equal rate and it takes 2.5 hours to drain out all the water in the swimming pool.
Find the amount of water drained in 1 hour by each hole.
Give your answer in m^3.

Ans: (a) _____ [2]

(b) _____ [2]

14 Calvin and David each saved a fixed amount of money daily. David saved $4 daily and he started saving before Calvin. When David saved for 15 days, Calvin had saved $40. When David saved for 20 days, each of them had saved an equal amount of money in total.

amount of money in total.

How much did Calvin save a day?

Ans : _____ [3]

15. Amy drove Beatrice from their home to the market. From the market, Beatrice walked 2 km to the shopping centre at a speed of 4 km/h. At the same time, Amy drove home from the market to pick her son up. She then drove along the same route from home to meet Beatrice at the shopping centre. Amy drove at an average speed of 80 km/h throughout the journey. All of them reached the shopping centre at the same time. Find the distance between their home and the shopping centre.

Home		Market		Shopping Centre

Ans: _____ [4]

16. There were some girls in the hall at first. $\frac{5}{8}$ of the girls left the hall for their

recess. Later, $\frac{1}{6}$ of the remaining girls left the hall too.

(a) What fraction of the girls remained in the hall then?

(b) After recess, 225 girls entered the hall. The ratio of the number of girls in the end to the number of girls at first was 7 : 8.

How many girls were there in the hall at first?

Ans: (a) _____ [2]

(b) _____ [3]
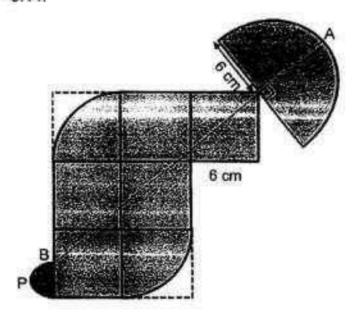
17. There were 286 more balloons than soft toys at a carnival at first. There were 16% more balloons sold than soft toys sold. The number of soft toys left was 162 more than the number of balloons left.

(a) How many more balloons than soft toys were sold?

(b) How many balloons were sold?

Ans: (a) _____ [2]

(b) _____ [3]

18. The figure below consists of 5 squares of side 6 cm, 2 quadrants and 2 semi-circles.

    (a)   Find the area of the shaded parts.

    (b)   The dotted line AB divides the shaded area into 2 equal parts.

            Find the area of semi-circle P.

            Take π = 3.14.

6 cm

6 cm

EXAM PAPER 2016

SCHOOL : RAFFLES GIRLS'

SUBJECT : MATHEMATICS

TERM : PRELIM (SA2)

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	3	4	4	3	3	1	1	1

Q11	Q12	Q13	Q14	Q15
3	4	1	3	4

16) 94127, 94172, 96231, 96321

17) $1/6 \div 2 = 1/12$

$1/12 \times 9 = 9/12 = ¾$

18) $0.9 \times 70 = 9 \times 7 = 63$

19) $1600 + 250 = 1850$ ml

20) $\sqrt[3]{63} = 4$

$4 \times 4 = 16$ cm³

21) 9 km/h

22) 2.5%

23) $8\,11/20 = 8\,11/20$

24) E

25) 21 : 16

26) $330 \div 100 = 3$ R 30

$30 \div 5 = 6$

$3 \times 10 + 6 = 36$

27) $½ \times 3.14 \times 6 = 9.42$

$½ \times 3.14 \times 4 = 6.28$

$½ \times 3/14 \times 8 = 12.56$

$12.56 + 6.28 + 9.42 = 28.26$ cm

28) $25 \div 3 = 8$ R1

$2 \times M = 2M$

$8 \times 2 = 16M$

$1M = M$

$100 - (16M + M) = \$ (100 - 17M)$

29) $180° - 90° / 2 = 45°$

$180° - 65° = 45°$

$= 180° - 110° = 70°$

Paper 2

1) $17 - 2 = 15$

$15 \times b/3 = 15b/3 = 5b$ candies
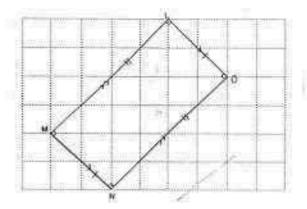
2) $100\% - 15\% = 85\%$

$780 \times 85\% = 663$

$663 - 50 = \$613$

3) $\angle w = \angle x$

$\angle y = \angle z$

$\angle z + \angle x = 90°$

$\angle z + \angle x \angle y + \angle w$

$= 90° \times 2 = 180°$

4) $14/18 = 7/9$

5) $\div +$

6) $21.4 - 16.48 - 1.8 = 3.12$

$3.12 \div 6 = 0.52$kg

7)a) $n \times 2/3 = \$(2n/3)$

b) $(2 \times 78) \div 3 = \$52$

30)

8) $10 - 4 = 6$

    $20 \times 6 = 120$

    $120 \div 4 = 30$

    $30 \times 10 = 300$

9) $650 \times 3/5 = 390$

    $450 - 390 = 60$

    $100 - 60 = 40$

10) $50\% - 20\% = 30\%$

    $50\% - 35\% = 15\%$

    $30\% - 15\% = 15\%$

    $15\% \rightarrow 12$

    $5\% \rightarrow 12 \div 3 = 4$

    $20\% \rightarrow 4 \times 4 = 16$

    $100\% \rightarrow 5 \times 16 = 80$

    $30\% \rightarrow 6 \times 4 = 24$

    $24+10/80+10 = 17/45$

    a) 16

    b) 17/45

11) a) $2 \times 16 = 32$

    $6 - 2 = 4$

    $4 \times 14 = 56$

    $56 + 32 = \$88$

    b) $2 \times 16 = 32$

    $130 - 32 = 98$

    $98 \div 14 = 7$

    $7 + 2 = 9kg$

12) $5/9 \rightarrow 4p + 30s = 4 \times 5u + 30 \times 1u = 20u + 30u = 50u$

$1/9 \rightarrow 50u \div 5 = 10u$

$9 - 5 = 4$

$4/9 \rightarrow 4 \times 10u = 40u$

$3/8 \times 40u = 15u$

$15u \div 5u = 3$

13) a) $50 \times 25 \times 2.5 = 3125$

$3125 \div 5 \times 2 = 1250$

$1250 \div 25 = 50$

$50 \times 2 = 100$

$100 \div 50 = 2m$

b) $3125 + 1250 = 4375$

$4375 \div 2.5 = 1750$

$1750 \div 2 = 875m_3$

14) $4 \times 15 = 60$

$60 - 40 = 20$

$20 - 15 = 5$

$20 \div 5 = 4$

$4 + 4 = \$8$

15) $2 \div 4 = \frac{1}{2}$

Amy took ½ h to drive from M to H them to SC

$2 \div 80 = 1/40$

$\frac{1}{2} - 1/40 = 19/40$

$19/40 \div 2 = 19/80$

$19/80 \times 80 = 19$

$19 + 2 = 21km$

16) a) 5/6 x 3/8 = 5/16

b) 5/16 G + 225 = 7p

16/16 G = 8p

2/16 G = 1p

14/16 G = 7p

14/16 G – 5/16 G = 9/16 G

225 ÷ 9 x 16 = 400

17) (100u + 286 + 162) – 116p = 100u – 100p

(100u + 448) – 116p = 100u – 100p

(100u + 448) – 16p = 100u

100u + 448 = 100u + 16p

16p = 448

1p = 448 ÷ 16 = 28

116p = 116 x 28 = 3248

a) 448

b) 3248

18) ½ x 3.14 x 6 x 6 = 56.52

5 x 6_2 = 180

½ x 3.14 x 6 x 6 = 56.52

56.52 x 2 + 180 = 293.04

293.04 ÷ 2 = 146.52

146.52 – 56.52 ÷ 2 = 118.26   18 – 14 = 4

6_2 – 56.5 ÷ 2 = 7.74   4 ÷ 2 = 2

118.26 + 7.74 = 126   ½ x 3.14 x 2 x 2 = 6.28

126 x 2 = 252   a) 293.04 cm_2

252 ÷ (3 x 6) = 14   b) 6.28 cm_2

6 x 3 = 18

NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2016

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	/ 20
Booklet B	/ 20

Paper 1 Total:
/ 40

Name _____ ( )

Class: Primary 6 ( )

Date _____

Any query on marks awarded should be raised by 6 September. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's Signature _____

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY
ANSWER ALL QUESTIONS

YOU ARE **NOT** ALLOWED TO USE A CALCULATOR

PAPER 1 (BOOKLET A)

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

1 Which one of the following numbers has the digit 5 in the ten thousands place?

(1) 435 224

(2) 321 051

(3) 223 543

(4) 152 234

2 In the number line below, which point, A, B, C or D, represents the number 245?

(1) A

(2) B

(3) C

(4) D

1
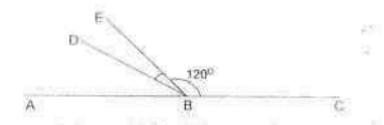
3   What is the lowest common multiple of 4 and 8?

    (1)   1

    (2)   32

    (3)   8

    (4)   4

4   Express 2 tens and 32 thousandths as a decimal
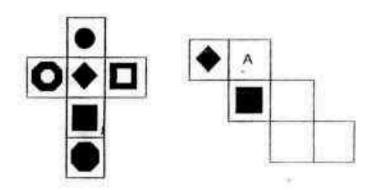
    (1)   2.032

    (2)   2.32

    (3)   20.032

    (4)   20.32

5   The cost of 4 similar books is $12.80. What is the cost of 2 such books?

    (1) $3.20

    (2) $6.40

    (3) $19.20

    (4) $25.60

2

6   What is the difference in volume between a 2-cm cube and a 3-cm cube?

   (1)   8 cm³

   (2)   19 cm³

   (3)   27 cm³

   (4)   35 cm³

7   In the figure below, ABC is a straight line. ∠ABD is twice the size of ∠DBE and ∠EBC = 120°. Find ∠DBE

   (1)   20°

   (2)   40°

   (3)   60°

   (4)   80°

3

8   The figures below show 2 nets of the same cube.
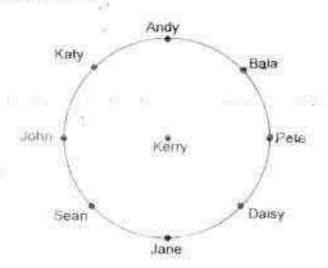
Which one of the shapes given below is represented by the letter A in
the net?

(1) ⬡

(2) ■

(3) ◻

(4) ◎

9   Liyan is 10 kg heavier than Kenny. Their total mass is 60 kg. Find the
     ratio of Kenny's mass to Liyan's mass.

(1)   5 : 7

(2)   5 : 12

(3)   7 : 5

(4)   12 : 7

4

10   Min Ho deposited $20 000 into a bank at the beginning of the year. The annual interest for depositing money into the bank was 5%. How much did Min Ho have in the bank at the end of the year if he did not take out any money from the bank?

(1) $1000

(2) $19 000

(3) $21 000

(4) $31 000

11   Yu Na took 2 hours and 30 minutes to finish her homework. She took 1 hour to finish her Science homework. $\frac{1}{3}$ of the remaining time on English homework and the rest of the time on Math homework. How much time did she take to finish her Math homework?
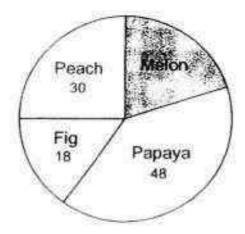
(1)   150 minutes

(2)   120 minutes

(3)   90 minutes

(4)   60 minutes

12   A container measuring 50 cm by 60 cm by 20 cm is half-filled with water.
     What is the volume of the water in the container?

   (1)   7500 cm³

   (2)   15 000 cm³

   (3)   30 000 cm³

   (4)   60 000 cm³

13   A group of 8 students stood around a circle, dividing its circumference
     into 8 equal parts. Kerry stood facing Daisy at first. Then, Kerry
     made a 90° anticlockwise turn, followed by a 135° clockwise turn.
     Who did Kerry face in the end?

   (1)   Pete

   (2)   Jane

   (3)   John

   (4)   Andy

14. The pie chart below shows the different types of fruits sold at a fruit store. 40% of them are peaches and figs. What percentage of the fruits are melons?

(1) 20%

(2) 24%

(3) 40%

(4) 80%

15. Shirley had (18y + 10) metres of cloth. She made 2 identical dresses using 5y metres each. How much cloth did Shirley have left?

(1) 8y metres

(2) (8y + 10) metres

(3) 13y metres

(4) (13y + 10) metres

7

PAPER 1 (BOOKLET B)

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

16 Fill in the boxes below with any 2 digits from 0 to 9 to complete the multiplication algorithm. Use each digit only once.

```
        4   4   9
    ×     [   ]   3
    ———————————————
    1   3   4   7
    8   [   ]   8   0
    ———————————————
    1   4   3   2   7
```

17 Joanne cycled 36 km in 2 hours. What is her average speed?

Ans: _____ km/h
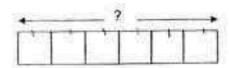
18 Find the value of $7 \times \dfrac{5}{4}$.

Ans _____

19 Soong Ki's height is 1.85 m. Round off his height to the nearest tenth.

Ans _____ m
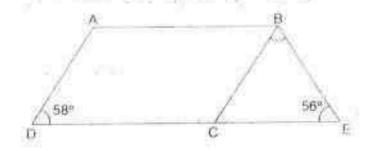
20 Siti went to bed at 22 00 and woke up the next day at 06 10. How long did Siti sleep? Give your answer in hours and minutes.

Ans _____ h _____ mm

9

21 The rectangle below is made up of 6 identical squares with an area of 81 cm² each.   What is the length of the rectangle?

Ans: _____ cm
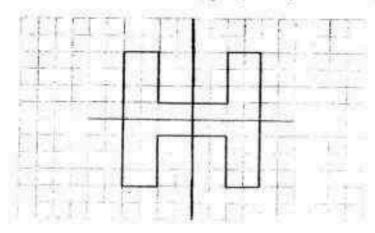
22 In the figure below, ABCD is a parallelogram and DCE is a straight line. ∠ADC = 58° and ∠CEB = 56°   Find ∠CBE.

Ans _____ °

10

23 In the grid below, draw 2 lines of symmetry for the letter H.

24 Darren has 100 stamps. The ratio of Darren's number of stamps to Kelly's number of stamps is 4 : 5. Find the difference between Kelly's number of stamps and Darren's number of stamps.

Ans: _____

25 The mass of a bag of rice is $1\frac{1}{2}$ kg. The mass of another bag of rice is $\frac{1}{4}$ kg less. What is the total mass of the 2 bags of rice?

Ans: _____ kg

11

Questions **26** to **30** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

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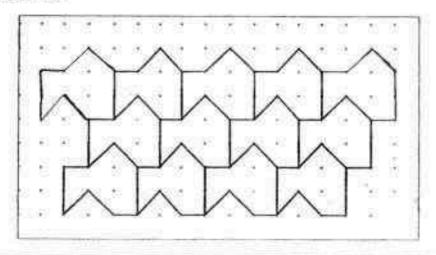
26 The total length of 3 metal rods is $\dfrac{11}{12}$ m. What is the average length of the 3 metal rods?

Ans _____ m

---

27 The perimeter of a rectangle is 56 cm. The breadth is $\dfrac{1}{3}$ of its length. What is the length of the rectangle?

Ans: _____ cm

12

28   The pattern in the box below shows part of a tessellation.   Extend the
      tessellation by drawing **two** more unit shapes in the space provided
      within the box.

29   Jack is 5 years older than his sister Jill.   Their combined age was 36m
      years old *m* years ago.   How old is Jack now?

Ans _____

30 Four classes, 6A, 6B, 6C and 6D, folded paper planes to decorate the school.   The table below shows the number of paper planes each class had folded.   The information for class 6D was missing.

Class	Number of paper planes folded
6A	20
6B	30
6C	40
6D	?

Class 6D folded 3 more paper planes than the average number of paper planes that the 4 classes folded. The number of paper planes folded are in whole numbers.   How many paper planes did the 4 classes fold altogether?

Ans _____

NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION
2016

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	/ 60
GRAND TOTAL	/ 100

Name: _____ ( )

Class: Primary 6

Date: _____

Any query on marks awarded should be raised by <u>6 September</u>. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's Signature: _____

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PAPER 2

Questions **1 to 5** carry 2 marks each.   Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

---

1   Fill in the boxes with +, -, × and/or ÷ to make the number statement true. Use each operation only once.

$$45\ \boxed{}\ 3\ \boxed{}\ (\,5\ \boxed{}\ 2\,)\ =\ 24$$

---

2   Find the perimeter of the figure below.

Ans: _____ cm

---
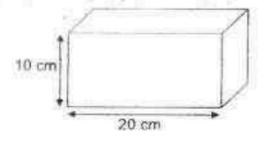
3   In the year 2014, the cost of a television was $750. In the year 2015, the cost of the same television was $600. What was the percentage decrease in the price of the television from 2014 to 2015?

Ans: _____ %

4   The figure below shows a box that can be completely filled with two hundred 2-cm cubes. What is the breadth of the cuboid?

Ans: _____ cm
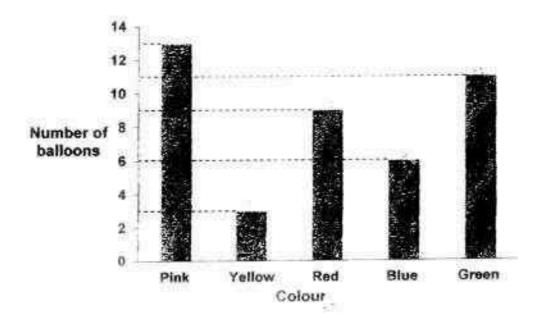
5   Timothy wrote the numbers 3, 7, 19, 29 and 43 on a board.   He then erased one of the numbers and calculated the average of the remaining numbers.   The average of the remaining numbers was a whole number.   Which one of the above numbers did Timothy erase?

Ans: _____

3

For questions **6** to **18**, show your working clearly in the space provided for each question and write your answers in the spaces provided.

The number of marks available is shown in brackets [   ] at the end of each question or part-question.

(50 marks)

---

6   In a camp, there were 280 more boys than girls. 30% of the participants were girls. How many boys were there in the camp?

Ans: _____ [3]

---

7   Study the pattern below and answer the following questions

Pattern   ◊ ○ Σ Δ © ◊ ○ Σ Δ © ◊ ○ Σ Δ © ◊ ○

Position   10   18

(a)   What is the symbol in Position 1? Draw the symbol.

(b)   What is the symbol in Position 153? Draw the symbol.

Ans: (a) _____ [1]

         (b) _____ [2]

4

8   Mrs Tan bought some pink, yellow, red, blue and green balloons for a party. The chart below shows the number of balloons of each colour.
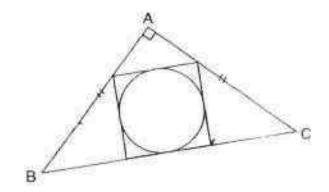
(a) How many balloons did Mrs Tan buy altogether?

(b) Each blue balloon cost $0.10 more than each yellow balloon. Mrs Tan spent a total amount of $10.50 on blue balloons and yellow balloons. Find the cost of each blue balloon.

Ans: (a) _____ [2]

(b) _____ [2]

5
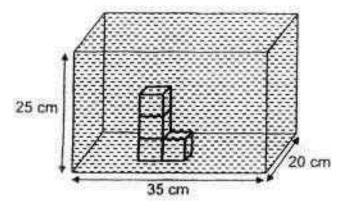
10   The figure below is made up of a right-angled isosceles triangle ABC, a
      square and a circle.   The area of triangle ABC is 18 cm².   The diameter
      of the circle is the same as the side of the square.   Find the area of the
      circle.   Leave your answer in terms of π.

Ans: _____ [3]
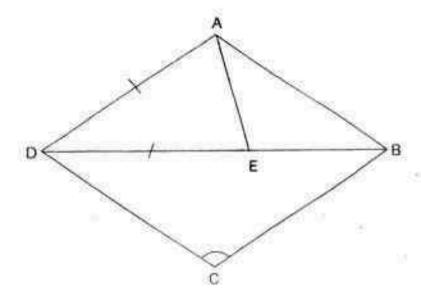
11   John had a container measuring 35 cm by 20 cm by 25 cm.   He placed a
     solid made of 4 identical 5-cm cubes in the tank and then filled the tank
     completely with water as shown in the figure below. He then poured out
     11387.5 ml of water.   What was the height of the water in the tank in the
     end?

Ans: _____ [4]

12   In the figure below, ABCD is a rhombus. DEB is a straight line and DA = DE. ∠AED is 39° more than ∠ADE. Find ∠DCB.

Ans: _____ [4]

13 Si Jin had $\frac{6}{5}$ as many beads as Aminah. Si Jin gave $\frac{3}{10}$ of his beads to Aminah. Aminah then gave $\frac{1}{2}$ of her beads to Si Jin. In the end, Si Jin had 252 more beads than Aminah. How many beads did Si Jin have at first?

Ans: _____ [5]

14   Study the following number pattern.

    11 , 13 , 15 , 17 , 19 , 31 , 33 , 35 , ... 97 , 99

The pattern above consists of only 2-digit whole numbers. Both the digits in the ones and tens place in these 2-digit numbers are odd numbers.

(a) How many numbers are there altogether?

(b) Find the sum of all the numbers in the pattern.

                                                Ans: (a) _____ [2]

                                                      (b) _____ [2]

15   At 8 a.m., Mingwei started travelling from Town A to Town B.   At 8.40 a.m., Ali started travelling from Town B to Town A.   Mingwei's speed and Ali's speed were 45 km/h and 30 km/h respectively.   They did not change their speeds throughout the journey.   When they met each other, their distance from Town A was twice their distance from Town B.   Find the distance between Town A and Town B.

Ans: _____ [3]

16 Valerie, Jake and Zechariah shared the cost of a present. $\frac{3}{5}$ of Zechariah's share was equal to $\frac{1}{3}$ the total of Jake's and Valerie's share. $\frac{2}{3}$ of Jake's share was equal to $\frac{1}{3}$ the total of Zechariah's and Valerie's share. Valerie paid $30 less than Zechariah. How much did the present cost?

Ans: _____ [5]

17 Rectangle ABCD and rectangle MNPQ have the same perimeter. The breadth of rectangle ABCD is twice the breadth of rectangle MNPQ. The ratio of the length of rectangle ABCD to that of rectangle MNPQ is 11 : 13. The breadth of rectangle ABCD is 28 cm shorter than its length. Find the area of rectangle MNPQ.

Ans: _____ [5]

18 Abbey and Ben had some money each. The amount of money that Abbey had was a whole number. Abbey wanted to buy a watch using all her money but she was short of $90.50. Ben wanted to buy the same watch using all his money but he was short of $1.80. The total amount of money that both of them had was still not enough to buy the watch. How much was the watch?

Ans _____ [3]

++++END OF PAPER++++

YEAR : 2016
LEVEL : PRIMARY 6
SCHOOL : NANYANG PRIMARY
SUBJECT : MATHEMATICS
TERM : PRELIMINARY EXAMINATION

Paper 1

Q1	4	Q4	3	Q7	1	Q10	3	Q13	2
Q2	2	Q5	2	Q8	3	Q11	4	Q14	1
Q3	3	Q6	2	Q9	1	Q12	3	Q15	2

Q16

$$\frac{2}{9}$$

Q17 $36 \times 2 = 18$ km/h

Q18 $1\frac{5}{7} = \frac{19}{7}$ $8\frac{5}{7}$

Q19

Q20 4×19 mm

Q21

Q24
    1010 × 100 ÷ 4 = 25 stamps

Q25 $61 \to 1\frac{1}{2}$ kg = $1\frac{2}{4}$ kg
      $62 = 1\frac{2}{4}$ kg = $1\frac{1}{4}$ kg
      Total = $1\frac{3}{4}$ kg + $1\frac{2}{4}$ kg = $2\frac{3}{4}$ kg
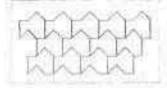
Q26 $\frac{11}{12} \times 3 = \frac{11}{36}$ m

Q27 $B \rightarrow 1, L \rightarrow 3$
$1 + 3 + 1 + 3 = 8$
$1u \rightarrow 56 \div 8 = 7$
$3u \rightarrow 7 \times 3 = \underline{21 \text{ cm}}$

Q28

Q29 $36m + m + m = 38m \Rightarrow \frac{38m + 5}{2}$ years old

Q30 $90 + 3 = 93$
$93 + 3 = 31$
$31 \times 4 = \underline{124}$ paper planes

Paper 2

Q1 $45 - 3 \times (5 + 2) = 24$

Q2 $4 + 4 + 2 + 3 + 3 + 2 + 6 + 6 = \underline{30} \text{ cm}$

Q3 Decrease $\rightarrow 750 - 600 = 150$
% Decrease $\rightarrow \frac{150}{750} \times 100 = \underline{20} \%$

Q4 $4 \times 2 = \underline{8 \text{ cm}}$

Q5 29.

Q6 $B \rightarrow \frac{7}{10}$
More $\frac{7}{10} - \frac{3}{10} = \frac{4}{10}$
$4u \rightarrow 280$
$7u \rightarrow \frac{280}{4} \times 7 = \underline{490}$ boys

Q7a O

Q7b Δ

Q8a $13 + 3 + 9 + 6 + 11 = \underline{42}$ balloons

Q8b $6 \times 0.10 = 0.60$
$9u \rightarrow 10.50 - 0.60 = 9.90$
$1u \rightarrow 9.90 \div 9 = 1.10$
Blue $\Rightarrow 1.10 + 0.10 = \underline{\$1.20}$

2

Q9 1 full area $\to (4 + 2) \times (4 + 5 + 3) = 72$
$A \to \frac{1}{2} \times 3 \times (4 + 5 + 3) = 18$
$B \to 3 \times 3 = 9$
$C \to \frac{1}{2} \times 6 \times (4 + 5) = 27$
Shaded $\Rightarrow 72 - 27 - 9 - 18 = \underline{18 \text{ cm}^2}$

Q10 9 small $\triangle$
1 small $\triangle \to 18 \div 9 = 2$
1 square $\to 2 \times 4 = 8 \Rightarrow 8 \div 4 = \underline{2}\,\pi$

Q11 8.5 cm

Q12 $\angle AED \to \angle ADE + 39°$
$\angle ADE \to (180° - 39° - 39°) \div 3 = 34°$
$\angle DCB \to 180° - 34° - 34° = \underline{112°}$

Q13 $SJ \to 6 \times 10 = 60$
$A \to 5 \times 10 = 50$
Gave SJ $A \to \frac{60}{10} \times 3 = 18$, now SJ $\to 42$ & $A \to 68$
A gave SJ $\to 68 \div 2 = 34$, now SJ $\to 76$ & $A \to 34$
$252 \to 42u$
$1u \to 252 \div 42 = 6$
$60u \to 6 \times 60 = \underline{360 \text{ beads}}$

Q14a 25 members

Q14b $11 + 99 = 110$
$25 \times 2 = 12.5$
$12.5 \times 110 = \underline{1375}$

Q15 $30 + 45u = 2 \times 30u$
$30 + 45u = 60u$
$15u \to 30$, $1u \to 30 \div 15 = 2$
$30 \times 2 = 60 \Rightarrow 60 \times 3 = \underline{180 \text{ km}}$

Q16 $V \to 84 - 45 = 39$
$30 \to 45 - 39 = 6$
$1u \to 30 \div 6 = 5$
$126u \Rightarrow 126 \times 5 = \underline{\$630}$

Q17 $1u \to 28 \div 7 = 4$
$2 \times 4 = 8$
$13 \times 4 = 52$
$52 \times 8 = \underline{416 \text{ cm}}$

Q18 $1 + \$90.50 = \underline{\$91.50}$

End

3

Index No. ☐☐☐☐☐☐

NAN HUA PRIMARY SCHOOL
PRELIMINARY EXAMINATION – 2016
PRIMARY 6

MATHEMATICS

Paper 1

Section A: 15 Multiple Choice Questions (20 marks)

Section B: 15 Short Answer Questions   (20 marks)

Total Time for Paper 1:   50 minutes

INSTRUCTION TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided for Questions 1-15.
6. You are not allowed to use calculator for Paper 1.

Marks Obtained

Paper 1	Booklet A		/ 40
	Booklet B		
Paper 2			/ 60
Total			/ 100

Name : _____ (   )

Class : 6_____

Date : 24 August 2016   Parent's Signature : _____

Section A (20marks)

Questions 1 to 10 carry 1 mark each.
Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which digit in 1 285 697 is in the ten thousands place?

    (1)   5
    (2)   2
    (3)   6
    (4)   8

2. Find the value of 64.5 × 100.

    (1)   0.645
    (2)   6.45
    (3)   645
    (4)   6 450

3. There are 19 938 seats in a football stadium. Round the number of seats to the nearest hundred.

    (1)   19 000
    (2)   19 900
    (3)   19 940
    (4)   20 000

1

4. What is the length of the pencil shown below?

(1) 3.6 cm
(2) 3.8 cm
(3) 5.8 cm
(4) 5.9 cm

5. How many more stars must be shaded so that the fraction of the number of shaded stars is $\frac{1}{3}$ of the total number of stars?

(1) 1

(2) 2

(3) 3

(4) 5

2

6.   The figure below shows a cube.
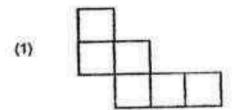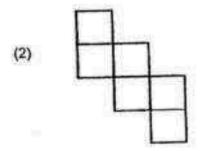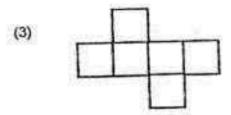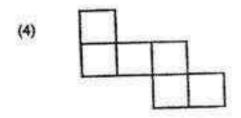
Which one of the following is **not** a possible net of the cube?

(1)

(2)

(3)

(4)

3

7. The distance between Mr Goh's house and his workplace is 5 km. He jogs at 10 km/h to his workplace every day. If he cycles at 15 km/h, how much faster will he be?

   (1) 10 minutes

   (2) 20 minutes

   (3) 30 minutes

   (4) 60 minutes

8. The ratio of the number of boys to the number of girls in a class is 2 : 3. There are 30 pupils in the class. How many girls are there?

   (1) 12

   (2) 18

   (3) 20

   (4) 45

9. Mary saved $40 last month. She saved $50 this month.
   Find the percentage increase in her savings this month.

   (1) 20%

   (2) 25%

   (3) 80%
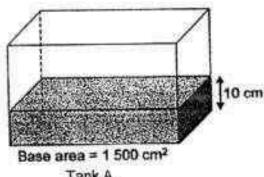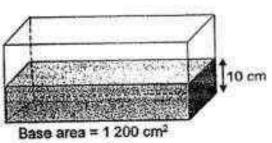
   (4) 125%

10. Mrs Ng has $\frac{9}{10}$ kg of flour. She uses $\frac{3}{5}$ of it to make some tarts.
Find the mass of the remaining flour.

(1) $\frac{3}{10}$ kg

(2) $\frac{1}{2}$ kg

(3) $\frac{9}{25}$ kg

(4) $\frac{27}{50}$ kg

11. Two rectangular tanks are shown below. The base areas of Tank A and Tank B are 1 500 cm² and 1 200 cm² respectively. At first, Tank A contained some water while Tank B was empty. Some water from Tank A was then transferred to Tank B such that the height of the water level in each tank became 10 cm as shown below. What was the volume of water in Tank A at first ?

Base area = 1 500 cm²
Tank A

Base area = 1 200 cm²
Tank B

10 cm

10 cm

(1) 3 000 cm³

(2) 6 000 cm³

(3) 27 000 cm³

(4) 54 000 cm³

5
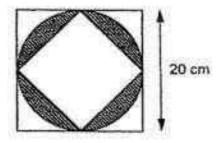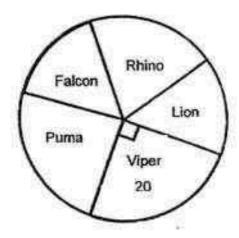
12. After Adam had spent $\frac{3}{5}$ of his money and Bala had spent $\frac{2}{3}$ of his money, they had the same amount of money left. Express in ratio, the amount of Adam's money at first to the amount of Bala's money at first.

   (1)   5 : 3

   (2)   5 : 6

   (3)   8 : 5

   (4)   9 : 10

13. In the figure below, a circle is touching two squares at exactly four points. Given that the side of the bigger square is 20 cm, find the area of the shaded parts. (Leave your answer in terms of π)
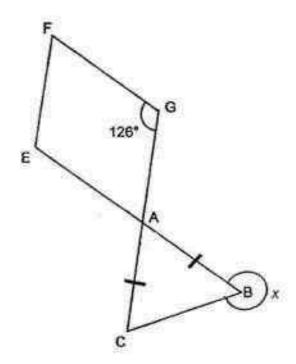
   (1) $(100\pi - 100)$ cm^2

   (2) $(100\pi - 200)$ cm^2

   (3) $(400 - 100\pi)$ cm^2

   (4) $(800 - 100\pi)$ cm^2

14. The pie chart below shows the Houses that a group of pupils belong to. The number of pupils who belong to Falcon and Lion is the same. There are 3 more pupils in Rhino than Lion. $\frac{1}{5}$ of the pupils belong to Rhino and there are 20 pupils in Viper. How many pupils are there in Puma?

(1)   13

(2)   15

(3)   16

(4)   18

15. The figure below, not drawn to scale, shows a triangle ABC and a parallelogram AEFG. EB and GC are straight lines. Given that AB = AC and ∠FGA = 126°, find ∠x.

(1) 333°

(2) 306°

(3) 300°

(4) 297°

8

Section B (20 marks)

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.
[10 marks]

Do not write in this space

16. Find the value of $20 - (25 - 10) + 5 \times 3$

Ans: _____

17. Find the value of $\frac{1}{6} + \frac{4}{9}$
Give your answer in the simplest form.

Ans: _____

18. Find the value of $8w - \frac{3w}{2}$ if $w = 4$.

Ans: _____

9

19. Jane took 10 minutes to cycle from her house to the park which was 3 km away. What was Jane's average speed?

Ans: _____ km/h

20. Find the edge of a cube given that its volume is 27 cm³.

Ans: _____ cm

21. In the figure below, AYB is a straight line. Given that $\angle AYZ = 104°$ and $\angle XYB = 108°$, find $\angle XYZ$.

Ans: _____ °

22. The table below shows the number of books read by a class in a week.

Number of books read per pupil	Number of pupils
1	13
2	21
More than 2	4

What fraction of the pupils read less than 2 books in that week?

Ans: _____
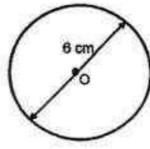
23. For every $2 Rachel saved in her piggy bank, her mother would put in another $1. If there was $216 in her piggy bank, how much of it was contributed by Rachel?

Ans: $ _____
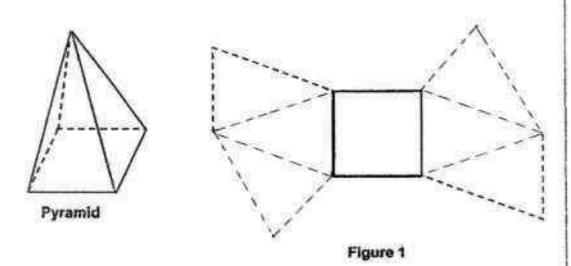
24. Find the area of a circle which has a diameter of 6 cm. (Take π = 3.14)

6 cm

O

Ans: _____ cm²

25. Shade only 4 of the triangles in Figure 1 to make it a possible net of the Pyramid as shown below.
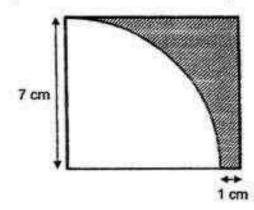
Pyramid

Figure 1

12

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For each questions which require units, give your answers in the units stated.   [10 marks]

---

26. The figure below shows a quarter circle in a rectangle. Find the area of the shaded part. (Take $\pi = \frac{22}{7}$)

7 cm

1 cm

Ans: _____ cm²
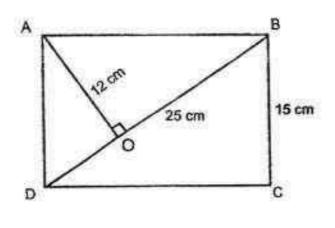
27. In the figure below, not drawn to scale, ABCD is a rectangle. Given that AO = 12 cm, BC = 15 cm and DB = 25 cm, find the length of DC.

A   B

12 cm

25 cm   15 cm

O

D   C

Ans : _____ cm

13
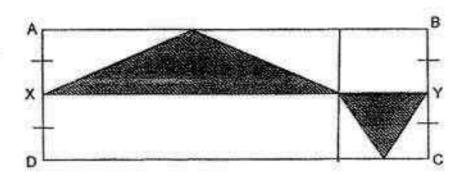
28. In the figure below, not drawn to scale, the area of Rectangle ABCD is 168 cm². Given that AX = XD and BY = YC, find the total area of the **unshaded** parts.

Ans : _____ cm²
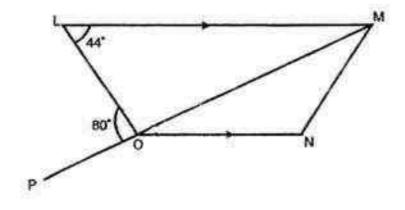
29. In the figure below, not drawn to scale, LMNO is a trapezium with LM parallel to ON, and MOP is a straight line. Find ∠MON.

Ans : _____

14
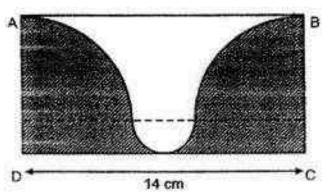
30. The figure below, not drawn to scale, shows a rectangle ABCD, 2 identical quadrants and a semicircle. Given that DC = 14 cm, find the total perimeter of the shaded parts.

(Take $\pi = \frac{22}{7}$).

Ans: _____ cm

END OF PAPER

15

Index No. ☐☐☐☐☐☐

NAN HUA PRIMARY SCHOOL
PRELIMINARY EXAMINATION – 2016
PRIMARY 6

MATHEMATICS

Paper 2

Total Time for Paper 2: 1 hour 40 minutes

5   Short Answer Questions   (10 marks)

13 Structured / Long Answer Questions (50 marks)

<u>INSTRUCTION TO CANDIDATES</u>

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully
4. Answer all questions and show your workings clearly.
5. You are allowed to use a calculator.

Marks Obtained

Total		/ 60

Name : _____(   )

Class : 6_____

Date : 24 August 2016   Parent's Signature :_____

Questions 1 to 5 carry 2 marks each. Show your workings clearly in the space below it and write your answer in the space provided. Give your answers in the units stated.

1. Jason has *k* erasers. Mervin has twice as many erasers as him. Ian has 6 lesser erasers than Mervin. Express the total number of erasers the 3 boys have in terms of *k*.

Ans: _____

2. The figure below is made up of a right-angled triangle and a circle whose centre is O. The area of the triangle is $\frac{2}{3}$ the area of the circle.

What fraction of the figure is shaded?

Ans: _____

1
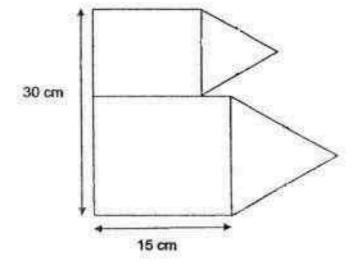
3. Mrs Heng bought 3 chocolate muffins for $4 and 5 blueberry muffins for $8. What is the average price of a muffin?

Ans: $ _____
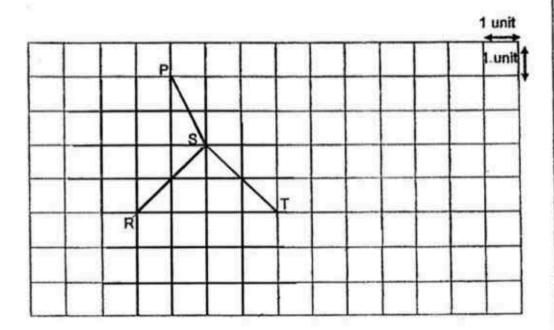
4. The figure below, not drawn to scale, is made up of 2 equilateral triangles and 2 rectangles. Find the perimeter of the figure.

30 cm

15 cm

Ans: _____ cm

2

5. In the square grid, SR is one side of a parallelogram PQRS and also one side of a rhombus, RSTU. Complete and label the drawing of the parallelogram PQRS and rhombus RSTU within the grid.
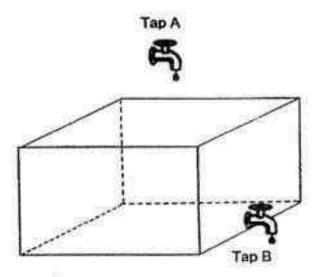
1 unit

1.unit

For each question from 6 to 18, **show your workings clearly in the space below** it and **write your answer in the space provided**. The number of marks available is shown in brackets [ ] at the end of each question or part-question.
Remember to include the units wherever possible.

6. The average mass of a group of children was 36.5 kg. John's mass was 46.5 kg. John joined the group of children and the average mass became 38.5 kg. How many children were there in the group at first?

Ans: _____ [3]

7. Mr Goh and Mr Lee starting driving in opposite directions from the same starting point. Mr Goh's average speed was 12km/h faster than Mr Lee's average speed. They were 90 km apart after 45 minutes. What was Mr Goh's average speed?

Ans: _____ [3]

4

8. An empty rectangular tank has a Tap B attached to it and a Tap A above it. Tap A takes 2 minutes to fill up the tank completely. Tap B can drain water out of the tank, if it was filled completely, in 3 minutes. If both taps are turned on at the same time, what is the capacity of the tank if it contains 80 litres of water after 5 minutes?

Tap A

Tap B

Ans: _____ [3]

5
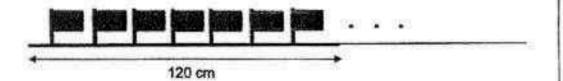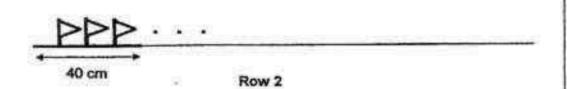
9. Flags are on display along two sides of a road. On one side, there are 7 identical rectangular flags along every 120 cm. On the other side, there are 3 identical triangular flags along every 40 cm as shown in the diagram below.

120 cm

40 cm

Row 2

There are 196 more triangular flags than rectangular flags from the start till the end of the road. How long is the road?

Ans: _____ [3]

6
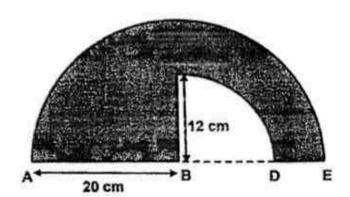
10. The figure below, not drawn to scale, shows a quarter circle in a semicircle with centre B.

Given that AB is 20 cm, BC is 12 cm and π = 3.14. find

(a) the area of the shaded part.

(b) the perimeter of the shaded part.

Ans: (a) _____ [2]

(b) _____ [3]

7

11. Basket A and Basket B each contained some red and green apples. The ratio of the number of apples in Basket A to the number of apples in Basket B was 7 : 6 at first. $\frac{3}{7}$ of the apples in Basket A and $\frac{7}{12}$ of those in Basket B were red. Some red apples were moved from Basket B to Basket A. Thereafter, some green apples were moved from Basket A to Basket B. In the end, there was an equal number of red and green apples in each basket. If a total of 36 apples were moved, how many apples were there in Basket A at first?

Ans: _____ [3]

8

12. Michael bought two pairs of pants and three shirts for $92.30. With the remaining money, he could not buy another pair of pants as he was short of $3.70. Instead, he bought another shirt and had $1.20 left.

(a) How much more did a pair of pants cost than a shirt?

(b) How much money did Michael have at first?

Ans: (a) _____ [1]

(b) _____ [3]

9
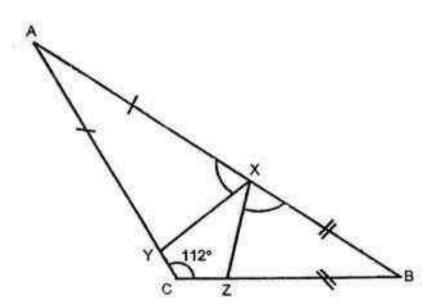
13. May had some local and foreign stamps. 70% of her stamps were local stamps. After using 30 local stamps, the number of local stamps decreased to 40% of the total number of stamps in the end. How many stamps did May have at first?

Ans: _____ [4]

10

14. In the figure below, not drawn to scale, ABC is a triangle. X, Y and Z are points on the triangle such that AY = AX and BX = BZ.

If ∠ACB = 112°, find the sum of ∠AXY and ∠BXZ.

Ans: _____ [3]

11

15. Jack and Kate had some money. If Jack gave Kate $20, the ratio of Jack's money to Kate's money became 3 : 5. If Jack gave Kate $70, the ratio of Jack's money to Kate's money became 1 : 3. How much did each of them have?

Ans: _____ [5]

16. Fatimah baked some tarts to sell. $\frac{2}{5}$ of them were durian tarts and the rest were orange tarts. After selling 120 durian tarts and $\frac{5}{6}$ of the orange tarts, she had $\frac{1}{5}$ of the original number of tarts left. How many

Ans: _____ [5]

13

17. Isaac drew some dots and triangles (of different sizes) in a certain pattern. The first four figures are shown below.

Figure 1   Figure 2   Figure 3
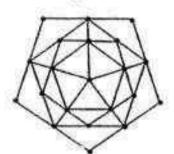
Figure 4

(a) Study the above figures and complete the table for Figure 5.
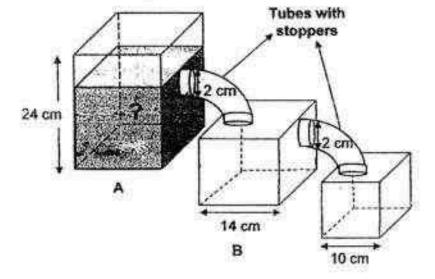
Figure number	Number of dots	Number of non-overlapping triangles
1	6	5
2	11	10
3	16	20
4	21	25
5	(i)_____ [1]	(ii)_____ [1]

(b) In which Figure number will there be 230 non-overlapping triangles?

Ans: (b) _____ [2]

14

18. The figure below shows 3 Tanks, A, B and C. Tank A has a height of 24 cm. Tank B measures 14 cm on every edge and Tank C measures 10 cm on every edge. Tanks A and B each has a tube of diameter 2 cm and a stopper attached. At first, Tank A is $\frac{3}{4}$ filled with water while Tanks B and C are empty. When the stoppers of both Tanks A and B are removed at the same time, water will flow out of Tank A until the water level in Tank C reaches a height of 2 cm. Assuming that no water is lost during the process, find the volume of water in Tank A at first.

Ans: _____ [5]

End-of-Paper

EXAM PAPER 2016

SCHOOL : NAN HUA

SUBJECT : MATHEMATICS

TERM : SA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	4	2	1	3	1	1	2	2	3
Q11	Q12	Q13	Q14	Q15					
3	2	2	4	4					

16)11   17)3/8   18)26   19)18km/h   20)3 cm

21)32°   22)13/38   23)$144   24)28.26cm$_2$ 25)

26)7 x 8 =56   27)½ x 12 x 25 = 150

22/7 x 7 x 7 = 38.5   150 x 2 = 300

56 – 38.5 = 17.5cm$_2$ 300 ÷ 15 = 20cm

28)168 x ¾ = 126 cm$_2$ 29)180 – 44 = 136

180 – 80 = 100

136 – 100 = 36°

30) ½ x 22/7 x 14 = 22

22 + 14 + 14 = 50 cm
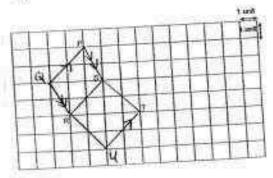
Paper 2

1) K x 2 = 2K

   2K − 6 = (2K − 6)

   K + 2K + (2K − 6)

   Ans: (5K − 6)

2) 2/3 = 8/12

   Ans: 3/12

3) 12 ÷ 8 = $1.5

4) 30 ÷ 2 = 60

   30 + 15 + 15 + 60 = 120 cm

5)

6) 46.5 − 38.5 = 8

   38.5 − 36.5 = 2

   8 ÷ 2 = 4

7) 30 + 3 x 4 = 120

   120 ÷ 12/2 = 66 km/h

8) 80 ÷ 5 = 16

   16 x 6 = 96

   96000cm³

9) 3 x 3 = 9

   196 ÷ 2 = 98

   98 x 120 = 11760 cm

10) a) ½ x 3.14 x 20 x 20 = 628

    ¼ x 3.14 x 12 x 12 = 113.04

    628 − 113.04 = 514.96 cm²

    b) ½ x 3.14 x 40 = 62.8

    ¼ x 3.14 x 24 = 18.84

    20 + 12 + 8 = 40

    62.8 + 18.84 + 40 = 121.64 cm

11) 7 − 6 / 2 = 0.5

    8 − 5 / 2 = 1.5

    36 ÷ 2 = 18

    18 x 14 = 252

12) a) 1.2 + 3.7 = $4.90

    b) 4.9 x 2 = 9.8

    92.3 − 9.8 = 82.5

    82.5 ÷ 5 = 16.5

    16.5 + 1.2 = 17.7

    92.3 + 17.7 = $110

13) $14 - 4 = 10$

$30 \div 10 = 3$

$3 \times 20 = 60$

14) $180 - 112 = 68$

$360 - 68 = 292$

$292 \div 2 = 146°$

15) $3p + 20 \rightarrow 1u + 70$

$8p \rightarrow 4u$

$2p \rightarrow u$

$3p + 20 \rightarrow 2p + 70$

$2p \rightarrow 2p + 50$

$P \rightarrow 50$

$3p \rightarrow 150$

$150 + 20 = 170$

$5p \rightarrow 250$

$250 - 20 = 230$

Kate : $230

Jack : $170

16) $120 \rightarrow 3u$

$u \rightarrow 40$

$5u \rightarrow 200$

$200 + 120 = 320$

17) a) i) 26

ii) 35

b) $230 - 5 = 225$

$225 \div 150 = 15$

$15 \times 2 + 1 = 31$

18) $12 \times 14 \times 14 = 2352$

$10 \times 2 \times 10 = 200$

$200 + 2352 = 2552$

$2552 \div 2 = 1276$

$1276 \times 18 = 22968 \text{ cm}_2$

Rosyth School
Preliminary Examination 2016
Primary 6 Mathematics

Name: _____   Register No. _____

Class: Pr 6 - _____

Date: 23rd August 2016   Parent's Signature: _____

Total Time for Booklets A and B : 50 minutes

PAPER 1
(Booklet A)

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. Shade your answers in the Optical Answer Sheet (OAS) provided.
4. You are **not** allowed to use a calculator.
5. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet A)	20	

* This booklet consists of 7 printed pages (including this cover page)

1

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

All diagrams in this paper are not drawn to scale unless stated otherwise.

(20 marks)

1. The value of the digit 5 in 257 041 is _____.

   (1) 500
   (2) 5 000
   (3) 50 000
   (4) 500 000

2. $$\frac{6}{18} = \frac{15}{\boxed{?}}$$
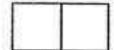
   What is the missing number in the box?

   (1) 27
   (2) 36
   (3) 45
   (4) 54

3. A number becomes 80 000 when rounded off to the nearest thousand. Which one of the following could the number be?

   (1) 79 187
   (2) 79 783
   (3) 80 978
   (4) 81 879

2

4.   What is the value of 60 ÷ 240?

   (1) 0.025
   (2) 0.25
   (3) 40
   (4) 4

5.   Jacob wanted to fill up the box below with 1-cm cubes. He found out
   that he could only put 72 such cubes into the box.
   What is the minimum height of the container?

4 cm

3 cm

   (1) 6 cm
   (2) 9 cm
   (3) 3 cm
   (4) 12 cm

6.   The figure below is made up of two identical squares. The perimeter of the
   figure is 60 cm. Find its area.
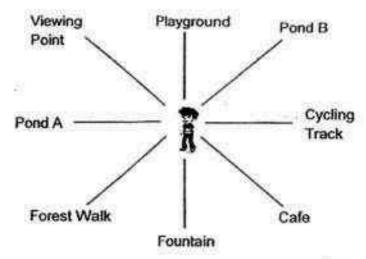
   (1) 100 cm²
   (2) 112.5 cm²
   (3) 200 cm²
   (4) 450 cm²

3

7. The table below shows the time taken by 4 swimmers to swim 200m before and after a month's training. Which swimmer made the most improvement?
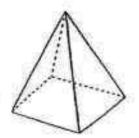
Names of Swimmers	Time taken before training (in seconds)	Time taken after training (in seconds)
Howe Kit	165	143
Nelson	195	148
Fadley	166	145
Kaspir	149	147

(1) Howe Kit

(2) Nelson

(3) Fadley

(4) Kaspir

8. Willy was facing the fountain when he first reached the park. He made a $\frac{3}{4}$-turn anticlockwise. After making the turn, which direction was Willy facing?
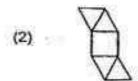
(1) Viewing Point

(2) Pond A

(3) Café

(4) Cycling Track

4

9. A train took 10 h to travel from Town X to Town Y. It travelled at an average speed of 3y km/h. How many metres did the train travel?

    (1) 0.3y m

    (2) 30y m

    (3) 3 000y m

    (4) 30 000y m

10. The figure shows a solid. Which one of the following is **not** a net of the solid?

    (1)

    (2)

    (3)

    (4)

5
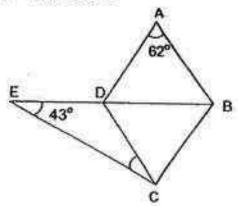
11. Jake had a total of 60 chocolates and sweets for sale. After selling $\frac{1}{3}$ of the chocolates and $\frac{2}{3}$ of the sweets, he had twice as many sweets left as chocolates. How many sweets did Jake sell?

(1) 16
(2) 24
(3) 32
(4) 4

12. A rectangular tank with base measuring 40 cm by 50 cm has a capacity of 100 litres. It is half-filled with water. Find the height of the water in the tank.

(1) 2.5 cm
(2) 25 cm
(3) 50 cm
(4) 500 cm

13. The total amount of money Muthu saved was $330. He had only $2 and $5 notes in his savings. The number of $2 notes was thrice the number of $5 notes. Find the value of the $2 notes.

(1) $30
(2) $90
(3) $150
(4) $180

6

14. In the figure, ABCD is a rhombus and BCE is a triangle. $\angle BAD = 62°$ and $\angle CED = 43°$. Find $\angle DCE$.

    (1) 16°

    (2) 19°

    (3) 28°

    (4) 75°

15. Mr Lee took 6 hours to drive from Town X to Town Y while Mdm Ong took 4 hours to drive from Town Y to Town X. Both of them started driving at 9 a.m., what time did the two of them pass each other?

    (1) 11.00 a.m.

    (2) 11.24 a.m.

    (3) 12.36 p.m.

    (4) 2.00 p.m.

Rosyth School
Preliminary Examination 2016
Primary 6 Mathematics

Name: _____   Register No. _____

Class: Pr 6 - _____

Date: 23rd August 2016   Parent's Signature: _____

Total Time for Booklets A and B : 50 minutes

PAPER 1
(Booklet B)

<u>Instructions to Pupils:</u>

1. Do not open this booklet until you are told to do so.

2. Follow all instructions carefully.

3. You are **not** allowed to use a calculator.

4. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet B)	20	

* This booklet consists of 7 printed pages (including this cover page)

1

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

All diagrams in this paper are not drawn to scale unless stated otherwise.

(10 marks)

16. Find the value of 50.5 − 7.98.

Ans: _____

17. Find the value of $3 + \dfrac{4}{5} - \dfrac{1}{2}$. Give your answer as a mixed number in the simplest form.

Ans: _____

18. Find the value of 55 − (15 + 8) − 6 × 3.

Ans: _____

19. The volume of a cuboid with a base area of 60 cm² is 1380 cm³. What is the height of the cuboid?

Ans: _____ cm

2

20. A rectangle has an area of 7.5 m². The length is 3 m. What is the breadth of the rectangle?

Ans: _____ m

21. Mrs Trina bought 6 apples for $12 and 5 pears for $7. How much more did an apple cost than a pear?

Ans: $_____

22. Primary 4 and Primary 5 students participated in a school fund raising event. There are an equal number of Primary 4 boys and Primary 5 boys. $\frac{5}{12}$ of the Primary 4 students and $\frac{1}{6}$ of the Primary 5 students are boys. There are 84 students altogether. How many male students are there altogether?

Ans: _____

3

23. At the supermarket, all items have to be charged a 7% GST.
The price of a pack of diapers without GST is $20. If Mr Lee wants to buy a pack of diapers, how much does he need to pay?

Ans: $ _____

24. Draw **three** straight lines to form a symmetric figure with AB as the line of symmetry.

A

B

25. In the figure below, $\angle f = 126°$ and $\angle h = 104°$.
Find the sum of $\angle a$, $\angle b$, $\angle c$ and $\angle d$.

Ans: _____

4

Questions 26 to 30 carry 2 marks each. Show your workings clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

All diagrams in this paper are not drawn to scale unless stated otherwise.

(10 marks)

26.   The table below shows the stamps Ahmad and Sam had.

	Singapore	Malaysia	Total
Ahmad	17	19	
Sam	13		24

a)   Complete the table. [1]

b)   What fraction of the total number of stamps were Singapore stamps?
     Give your answer in the simplest form.

b) Ans: _____ [1]

27.   Find the volume of a cube if the total surface area of a cube is 216 cm².

Ans: _____ cm³

5

28. The bar graph below shows the number of chickens sold at a market over 4 days.

How many more chickens would need to be sold on Wednesday for the average number of chickens sold to be 45?

Ans: _____

29. Nancy cut squares from a rectangular cardboard measuring y metres by 2 metres. Each square had an area of 400 cm². What was the maximum number of squares she had cut?

Ans: _____

30. The pie chart represents the different kinds of ice-cream flavours sold by Mdm Chua. $\frac{3}{7}$ of the ice-cream sold were strawberry ice-cream. She sold 40 more chocolate ice-cream than strawberry ice-cream. How many strawberry ice-cream did she sell?

Ans: _____

7

End of paper. Have you checked your work?

Rosyth School
Preliminary Examination 2016
Primary 6 Mathematics

Name: _____   Register No. _____

Class: Pr 6 - _____

Date: 23rd August 2016   Parent's Signature: _____

Time: 1 hour 40 minutes

PAPER 2

<u>Instructions to Pupils:</u>

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. **Show your workings clearly** as marks are awarded for correct working.
4. Write your answers in this booklet.
5. You are allowed to use a calculator.
6. Answer all questions.

Questions	Maximum Mark	Marks Obtained
Q 1 to 5	10	
Q 6 to 18	50	

Section	Maximum Mark	Marks Obtained
Paper 1	40	
Paper 2	60	
Total	100	

* This booklet consists of 15 printed pages (including this cover page)

1

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

All diagrams in this paper are not drawn to scale unless stated otherwise.

1. During a school event, 16 prefects stood in a straight row at equal distances from each other. The distance between the fourth and eleventh pupil was 16.73 m. What was the distance between the first and last pupil?

Ans: _____ m

2. Roy had some pens. 20% of them are red and the rest are black. He sold half of his red pens and 20% of his black pens. What percentage of his pens was sold?

Ans: _____ %

2

3. The average number of durians in 5 baskets was 53. When another basket of durians was added, the average number of durians became 49. How many durians were there in the last basket?

Ans: _____

4. The figure below shows 8 identical cubes which are glued together to form a solid.

The whole solid, including the base, is then painted green. How many faces are not painted green?

Ans: _____

3

5. The figure below is formed by overlapping a square BGFE and a rectangle ABCD. Given that C is the centre of the square and E is the mid-point of DC, what fraction of the figure is unshaded? Give your answer in the simplest form.

Ans: _____

4

For Questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. For questions which require units, give your answers in the units stated.

All diagrams in this paper are not drawn to scale unless stated otherwise.

(50 marks)

6. Mabel left her house for work at 8 a.m. After driving for some time, she passed her father who was driving at an average speed of 68 km/h in the opposite direction. After driving for another 45 minutes, Mabel reached her work place while her father was 3 km away from their house. Given that Mabel reached her work place at 9.15 a.m., what was her average speed?

Ans: _____ [3]

5

(Go on to the next page)

7. Mr Shah spent $\frac{1}{4}$ of his money on 7 pens and 9 highlighters. Each pen cost 3 times as much as a highlighter. He bought some more pens with $\frac{2}{3}$ of his remaining money. How many pens did Mr Shah buy altogether?

Ans: _____ [3]

8. A tank which is $\frac{5}{7}$ filled with water has a total mass of 231 kg. The same tank has a total mass of 183 kg when it is $\frac{1}{3}$ filled with water. Find the mass of the empty tank.

Ans: _____ [3]

6

(Go on to the next page)

9. The table below shows the number of pupils from 5 classes attending a holiday camp. The total number of students from the 5 classes was less than 100. If they are grouped into teams of 5 pupils each, 1 pupil is left out. If they are grouped into teams of 7 pupils each, 5 pupils are left out. How many pupils are there in class 4C?

Class	Number of pupils
4A	32
4B	28
4C	?
4D	11
4E	6

Ans: _____ [3]
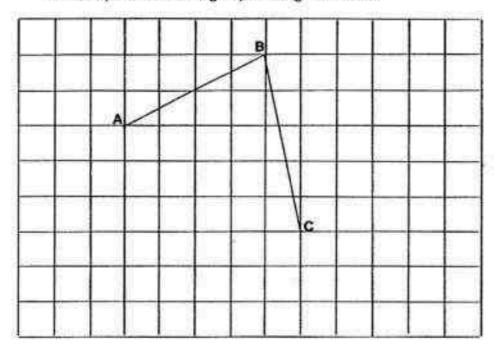
10. Mrs Siva baked a total of 315 butter and chocolate cookies in the ratio of 7 : 8 respectively. After she sold an equal number of each type of cookie, the ratio of the number of butter cookies left to the number of chocolate cookies left became 2 : 5. How many cookies did she sell altogether?

Ans: _____ [3]

(Go on to the next page)

11. In the square grid below, AB and BC are straight lines.
    a) Measure and write down the size of ∠ABC.
    b) AB and BC form two sides of a parallelogram ABCD. AB is parallel to CD. Complete the drawing of parallelogram ABCD.

[2]

Ans: (a) _____ [1]

(Go on to the next page)
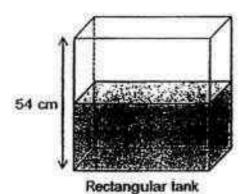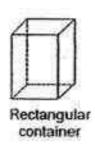
12. Charles and Keith went shopping with $174.50 and $124.50 respectively. Each of them paid the same amount of money for a bag and a T-shirt. As a result, Charles had 3 times as much money left as Keith. Given that the bag cost 4 times as much as the T-shirt, find the cost of the bag.

Ans: _____ [4]

(Go on to the next page)

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13. When 41 472 cm³ of water was poured into an empty rectangular tank of height 54 cm, $\frac{4}{9}$ of the rectangular tank was filled.

(a) Find the base area of the rectangular tank.

(b) When some water from this rectangular tank was transferred into another empty rectangular container which had a base area of 270 cm², the water level in the rectangular tank became 21.5 cm, what was the water level in the rectangular container?

54 cm

Rectangular tank

Rectangular container

Ans: (a) _____ [1]

Ans: (b) _____ [3]

10

(Go on to the next page)

14. Jimmy set a target score for his Math test. After the Math teacher returned his test paper to him, he realised that if he increased his target score by 10%, he would need 1 more mark to reach his actual test score. If he increased his target score by 15%, this target score would exceed his actual test score by 3 marks. Find his actual test score.

Ans: _____ [4]

15. The figure below is drawn on a square piece of paper as shown below. The length is 12 cm. Its outline consists of a rectangle, a large semicircle and 2 identical smaller semicircles.

a) What is the perimeter of the figure?
b) What is its area?

Take π = 3.14

12 cm

Ans: (a) _____ [2]

Ans: (b) _____ [3]

(Go on to the next page)

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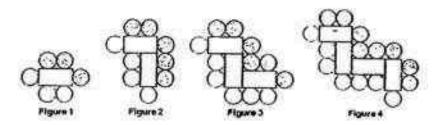
16. At a market, apples were sold at 5 for $3.30 and mangoes were sold at 4 for $6.80. Akiel bought an equal number of apples and mangoes and he paid $62.40 more for the mangoes than for the apples. How much did he pay for all the fruits he bought?

Ans: _____ [5]

17. The pattern shown below is made up of rectangles, grey circles and white circles.

Figure 1   Figure 2   Figure 3   Figure 4

The table below shows the number of rectangles, grey circles and white circles for each figure.

Figure Number	Number of Rectangles	Number of Grey Circles	Number of White Circles
1	1	3	3
2	2	5	4
3	3	6	6
4	4	8	7
5	5	9	9
...	...	...	...
10	10	17	16
...	...	...	...
20	20		31

a) Complete the table by indicating the number of grey circles needed for Figure 20. [1]

b) Find the number of white circles in Figure 37.

c) Find the number of rectangles when there are 150 grey circles.

Ans: (b) _____ [2]

Ans: (c) _____ [2]

14

(Go on to the next page)

18. Julie's weekly allowance is $11.80 more than Steven's. Steven spends $12.50 more than Julie every week. Julie spends $\frac{5}{11}$ of her allowance every week. Steven saves $\frac{1}{2}$ as much as Julie every week. How much did Steven spend after 7 weeks?

Ans: _____ [5]

15

End of Paper

YEAR   :   **2016**
LEVEL   :   **PRIMARY 6**
SCHOOL   :   **ROSYTH**
SUBJECT   :   **MATHEMATICS**
TERM   :   **PRELIMINARY EXAMINATION**

Paper 1

Q1	3	Q4	2	Q7	2	Q10	3	Q13	4
Q2	3	Q5	1	Q8	2	Q11	3	Q14	1
Q3	2	Q6	3	Q9	4	Q12	2	Q15	2

Q16   42.52

Q17 $3 + \dfrac{4}{5} - \dfrac{1}{2} = 3 + \dfrac{8}{10} - \dfrac{5}{10} = 2\dfrac{10}{10} - \dfrac{8}{10} - \dfrac{5}{10} = 2\dfrac{18}{10} - \dfrac{5}{10} = 2\dfrac{13}{10} = 3\dfrac{3}{10}$

Q18 $55 - 23 - 6 \times 3 \rightarrow 55 - 23 - 18 \rightarrow 32 - 18 = \underline{14}$

Q19 $60 \times H = 1380 \rightarrow H = 1380 \div 60 = \underline{23}$

Q20 $3 \times B = 7.5 \rightarrow B = \underline{2.5\ m}$

Q21 $6A = \$12 \rightarrow 1A = \$2$
       $5P = \$7 \rightarrow 1P = \$1.40$
       $\$2 - \$1.40 = \underline{\$0.60}$

Q22 $\dfrac{5}{12} P4 = \dfrac{1}{6} P5 \rightarrow \dfrac{5}{12} P4 = \dfrac{5}{30} P5$
       $12u + 30u = 42u,\ 42u \rightarrow 84,\ 1u \rightarrow 2,\ 5u + 5u = 10u,\ 10u \rightarrow 2 \times 10 = \underline{20}$

Q23 $100\% \rightarrow \$20\ (OP),\ 1\% \rightarrow \$0.20,\ 7\% \rightarrow \$1.40\ (D) \Rightarrow$
       $\$20 + \$1.40 = \underline{\$21.40}\ (OP + D)$

Q24

Q25 $360° - 126° - 104° = 130° \rightarrow 180° + 180° = 360° \Rightarrow 360° - 130° = \underline{230°}$

Q26a $17 + 19 = \underline{36}$, $24 - 13 = \underline{11}$

	Singapore	Malaysia	Total
Ahmad	17	19	**36**
Sam	13	**11**	24

Q26b $17 + 13 = 30$, $36 + 24 = 60 \rightarrow \dfrac{30}{60} = \dfrac{1}{2}$

Q27 $216 \text{ cm}^2 \div 6 = 36 \text{ cm}^2$
$\sqrt{36} = 6$ (1 side)
$6 \times 6 \times 6 = \underline{216 \text{ cm}^3}$

Q28 $45 \times 4 = 180 \rightarrow 180 - 49 - 48 - 44 = 44 \Rightarrow 44 - 40 = \underline{4}$

Q29 $\sqrt{400} = 20$
$200 \div 20 = 10$ (1 side)
$(100y) \div 20 = 5y$ (1 side)
$10 \times (5y) = (50y)$

Q30 $\dfrac{7}{7} - \dfrac{3}{7} - \dfrac{3}{7} = \dfrac{1}{7}$
$\dfrac{1}{7} \rightarrow 40 + 180 = 220$
$\dfrac{3}{7} \rightarrow 220 \times 3 = \underline{660}$

Paper 2

Q1 $11 - 4 = 7$ (G) , $7G \rightarrow 16.73m$, $1G \rightarrow 16.73 \text{ m} \div 7 = 2.39m$
$16 - 1 = 15$ (G) , $15G \rightarrow 2.39m \times 15 = \underline{35.85m}$

Q2 Total: 20% (R) & 80% (B)
$\dfrac{1}{2} \times 20\% = 10\%$ (S) $\dfrac{1}{5} \times 80\% = 16\%$ (S)
$\dfrac{1}{2} \times 20\% = 10\%$ (L) $\dfrac{4}{5} \times 80\% = 64\%$ (S)
$10\% + 16\% = \underline{26\% \text{ sold}}$

Q3 $53 \times 5 = 265$, $49 \times 6 = 294 \Rightarrow 294 - 265 = \underline{29}$

Q4 $2 + 1 + 2 + 2 + 1 + 2 + 2 + 4 = \underline{16 \text{ not painted}}$

Q5 Total $\rightarrow 7u$, Unshaded $\rightarrow 6u$, thus $\dfrac{6}{7}$ unshaded

Q6 Father: 1h → 68km
60min → 68km
15min → 68km ÷ 4 = 17km
45min → 17km x 3 = 51km

Mabel: 30min → 3km + 51km = 54km
1h → 54km x 2 = <u>108km/h</u>
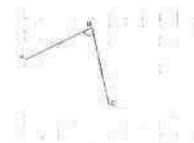
Q7   1P → 3u , 1H → 1u
3u x 7 = 21u (7P)
1u x 9 = 9u (9H)
21u + 9u = 30u (T)
60u ÷ 3u = 20
20 + 7 = <u>27</u>

Q8 $T + \frac{5}{7}W$ → 231kg
$T + \frac{1}{3}W$ → 183kg
$\frac{5}{7}W - \frac{1}{3}W$ → 231kg − 183kg
$\frac{8}{21}W$ → 48kg
$\frac{7}{21}W$ → (48kg ÷ 8) x 7 = 42kg
183kg − 42kg = <u>141kg</u>

Q9   4A + 4B + 4D + 4E → 32 + 28 + 11 + 6 = 77
Total no. of pupils = 96
96 − 77 = <u>19</u> pupils in class 4C

Q10   21u + 24u = 45u (total)
45u → 315
1u → 315 ÷ 45 = 7
(Butter) 21u − 2u = 19u
(Chocolate) 24u − 5u = 19u
19u + 19u = 38u (total sold)
38u ⟹ 7 x 38 = <u>266</u> cookies

Q11a 74°

Q11b

Q12 C → 3u , K → 1u
3u − 1u = 2u (diff)
2u → $174.50 - $124.50 = $50
1u → $50 ÷ 2 = $25
$124.50 - $25 = $99.50
4u + 1u = 5u (total)
5u → $99.50
1u → $99.50 ÷ 5 = $19.90
4u → $19.90 x 4 = <u>$79.60</u>

Q13a $\frac{4}{9}$ T → 41472cm³

$\frac{9}{9}$ T → (41472cm³) ÷ 4 x 9 = 93312cm³

BA x 54cm = 93312cm³ ÷ 54cm = <u>1728cm²</u>

Q13b 21.5cm x 1728cm² = 37152cm³ (RWT)
41472cm³ - 37152cm³ = 4320cm³ (RWC)
4320cm³ ÷ 270cm² = <u>16cm</u>

Q14 Assume his target score as 100u.
$\frac{10}{100}$ x 100u = 10u (increase)
100u + 10u = 110u
110u + 1 = (110u + 1) (actual score)
$\frac{15}{100}$ x 100u = 15u (increase)
100u + 15u = 115u
115u − 3 = (115u − 3) (actual score)
110u + 1 = 115u − 3
5u = 4
110u = 4 x 22 = 88 ⇒ 88 + 1 = <u>89</u> actual test score

Q15a $3.14 \times 6 = 18.84$, $3 \times 2 = 6$, $\frac{1}{2} \times 3.14 \times 12 = 18.84 \Rightarrow$

  $18.84 + 6 + 18.84 = \underline{43.68cm}$

Q15b $3.14 \times 3 \times 3 = 28.26$, $3 \times 6 = 18$, $\frac{1}{2} \times 3.14 \times 6 \times 6 = 56.52 \Rightarrow$

  $28.26 + 18 + 56.52 = \underline{102.78cm^2}$

Q16 Apples: $5 \rightarrow \$3.30$ Mangoes: $4 \rightarrow \$6.80$

        $20 \rightarrow \$3.30 \times 4 = \$13.20$ $20 \rightarrow \$6.80 \times 5 = \$34$

  1 set $\rightarrow$ 20A + 20B

  $\$34 - \$13.20 = \$20.80$ (diff 1 set)

  $\$62.40 \div \$20.80 = 3$ (no. of sets)

  $\$13.20 + \$34 = \$47.20$ (total 1 set)

  $3 \times \$47.20 = \underline{\$141.60}$

Q17a $(20 + 1) \times 3 = 21 \times 3 = 63$

  1u + 1 + 1u $\rightarrow$ 63

  2u + 1 $\rightarrow$ 63

  2u $\rightarrow$ 63 − 1 = 62

  1u $\rightarrow$ 62 ÷ 2 = 31

  31 + 1 = $\underline{32}$

Q17b $(37 + 1) \times 3 = 38 \times 3 = 114$

  1u + 1u $\rightarrow$ 114

  2u $\rightarrow$ 114

  1u $\rightarrow$ 114 ÷ 2 = $\underline{57}$

Q17c $150 \times 2 = 300$

  $(n + 1) \times 3 = 300$

  $(n + 1) = 300 \div 3 = 100$

  $n = 100 - 1 = \underline{99}$

Q18 Julie $\rightarrow$ 11u , Steven $\rightarrow$ 11u − $11.80

  Julie $\rightarrow$ 5u , Steven $\rightarrow$ 5u + $12.50 (spend)

  Julie $\rightarrow$ 6u [2p] , Steven $\rightarrow$ (11u − $11.80) − (5u + $12.50) $\rightarrow$

  6u − $24.30 [1p]

  1p $\rightarrow$ 6u − 6u + $24.30 = $24.30

  6u − $24.30 = $24.30

  6u = $24.30 + 24.30 = $48.60

  1u = $48.60 ÷ 6 = $8.10

  5u = $8.10 \times 5 = $40.50

  $40.50 + $12.50 = $53 $\Rightarrow$ $53 \times 7 = \underline{\$371}$

END

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6

2016 Preliminary Examination

Mathematics

Paper 1

Booklet A

23 August 2016

Total Time for Booklets A and B: 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is **NOT** allowed.

This booklet consists of 7 printed pages including the cover page.

1

Questions 1 to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3, or 4) on the Optical Answer Sheet.

(20 marks)
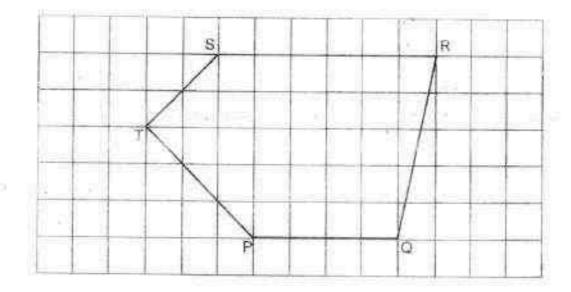
1. 6 hundred thousands, 9 thousands and 4 tens is _____

   (1) 694 000

   (2) 690 040

   (3) 609 040

   (4) 600 940

2. Which digit in 386.129 is in the hundredths place?

   (1) 1

   (2) 2

   (3) 3

   (4) 9

3. Mr Sim bought $\frac{5}{8}$ kg of charcoal. He used $\frac{2}{3}$ of it to barbecue some chicken wings. How much charcoal was left?

   (1) $\frac{1}{24}$ kg

   (2) $\frac{3}{5}$ kg

   (3) $\frac{5}{12}$ kg

   (4) $\frac{5}{24}$ kg

2

4. Which of the following is likely to be the height of the teacher's table in the classroom?

(1) 3 m

(2) 80 cm

(3) 100 m

(4) 150 cm

5. In the square grid below, which of the following pairs of lines are perpendicular to each other?

(1) PQ and QR

(2) PQ and SR

(3) ST and QR

(4) ST and TP

3
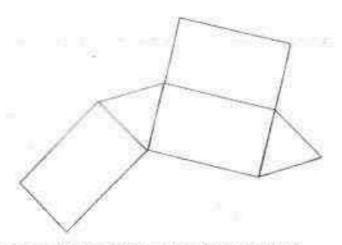
6. The table shows the number of stalks of carnations sold by a florist.

Day	Number of stalks of carnations sold
Monday to Friday	35 per day
Saturday	4 times the number of stalks sold on Friday

Find the total number of stalks of carnations sold from Monday to Saturday.

(1) 875

(2) 700

(3) 315

(4) 175

7. The figure below shows a net of a solid.

What is the name of the solid formed by the net above?

(1) cone

(2) prism

(3) cuboid

(4) pyramid

4
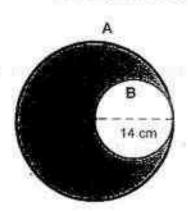
8. Lynn and Karen went shopping. On average, each girl spent $28. Karen spent $12 less than Lynn. How much did Karen spend?

    (1) $16

    (2) $22

    (3) $34

    (4) $44

9. Charlie and Daryl shared some stickers. Charlie had $\frac{2}{7}$ of the number of stickers Daryl had. What was the ratio of the total number of stickers the boys had to the number of stickers Charlie had to the number of stickers Daryl had?

    (1) 9 : 2 : 7

    (2) 9 : 7 : 2

    (3) 7 : 2 : 5

    (4) 7 : 5 : 2

10. Which one of the following fractions is closest to $\frac{1}{2}$?

    (1) $\frac{1}{3}$

    (2) $\frac{3}{8}$

    (3) $\frac{5}{6}$

    (4) $\frac{7}{10}$

5

11. Mdm Ong bought 225 g of chocolates. 40% of the chocolates were dark chocolates and the rest were milk chocolates. She gave away 45 g of the dark chocolates. What percentage of the chocolates are now dark chocolates?

(1) 20 %

(2) 25 %

(3) 50 %

(4) 80 %

12. Miss Tien had some lanterns in her classroom. She bought $5n$ new lanterns and added them to the lanterns she had. 2 new lanterns were torn and she was left with $18n$ lanterns. How many lanterns did she have in her classroom at first?

(1) $13n + 2$

(2) $13n - 2$

(3) $23n + 2$

(4) $23n - 2$

13. Jenny poured $20\ \ell$ of water into some pails. Each pail had a capacity of $\frac{6}{7}\ \ell$. She filled some pails completely except for 1 pail. How much water was in the pail that was not completely filled?

(1) $\frac{1}{3}$

(2) $\frac{2}{7}$

(3) $6\frac{2}{3}$

(4) $17\frac{1}{7}$

14. The digit 6 on a scientific calculator is spoilt. Charlotte wanted to use the calculator to find the value of 76 × 19. Which of the following should Charlotte key in to give her the answer?

(1) 74 × 19 + 19

(2) 75 × 19 + 1

(3) 77 × 19 - 19

(4) 80 × 19 - 4

15. The figure below is made up of 2 circles, A and B. X is the centre of circle A. The diameter of circle B is 14 cm. Find the perimeter of the shaded part.
(Take $\pi = \dfrac{22}{7}$)

(1) 462 cm

(2) 132 cm

(3) 88 cm

(4) 44 cm

** END OF BOOKLET A**

Name : _____ (   )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6

2016 Preliminary Examination

Mathematics

Paper 1

Booklet B

23 August 2016

Booklet A	20
Booklet B	20
Total (Paper 1)	40

Total Time for Booklets A and B : 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is **NOT** allowed.
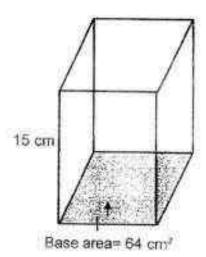
This booklet consists of 10 printed pages including the cover page.

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

16. Find the value of 10 000 - 706.

Ans : _____

17. Xi Ling was born on 1 June 1999. How old was she on 1 March 2006?

Ans : _____ years ____ months

18. Express 0.048 as a percentage.

Ans : _____

2
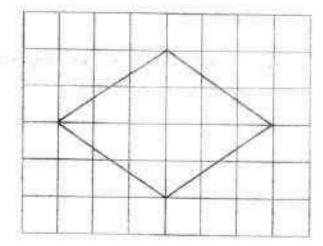
19. An open rectangular box is shown below. When the box is fully packed with 1-cm cubes, how many cubes are there?

15 cm

Base area= 64 cm²
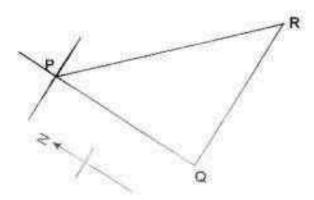
Ans _____

20. How many lines of symmetry are there in the figure below?

Ans : _____

3
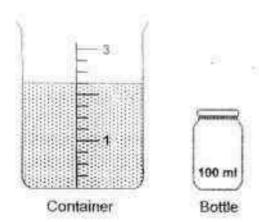
21. Point P is north of point Q. In which direction is Point R from Point P?

Ans : _____

22. The figure below shows a container filled with some water. Wali had some bottles with a capacity of 100 ml each. She poured out all the water in the container to fill the bottles completely. How many such bottles could she fill altogether?

Container   Bottle

Ans : _____

4
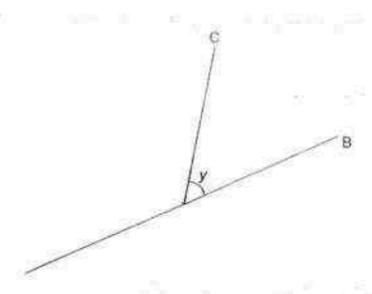
23. Alvin was walking at an average speed of 70 m/min. At this speed, how long did he take to walk a distance of 910 m?

Ans : _____ min

24. The figure shows 2 straight lines, AB and AC. Draw 2 straight lines at Point A to form an angle which is equal to ∠y. Mark and label the angle as ∠z.

5
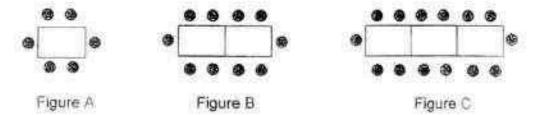
25. Adila mixed flour, sugar and butter in the ratio 5 : 2 : 3 to make some waffles. How much flour did she use for 3.5 kg of the mixture?

Ans : _____ _____ g

Questions 26 to 30 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.   (10 marks)

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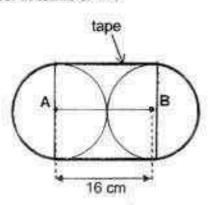
26.   A table can seat 6 people as shown in Figure A. Following the pattern shown below, how many such tables are needed to seat 42 people?

Figure A   Figure B   Figure C

Ans : _____
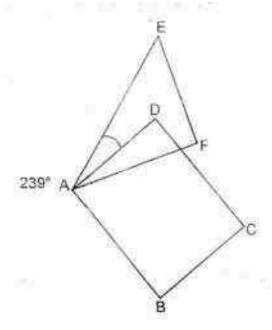
27. The figure below shows 2 identical circles enclosed by a tape. A and B are centres of the circles and the length AB is 16 cm. Find the length of the tape. Leave your answer in terms of π.

tape

A   B

16 cm

Ans : _____ cm
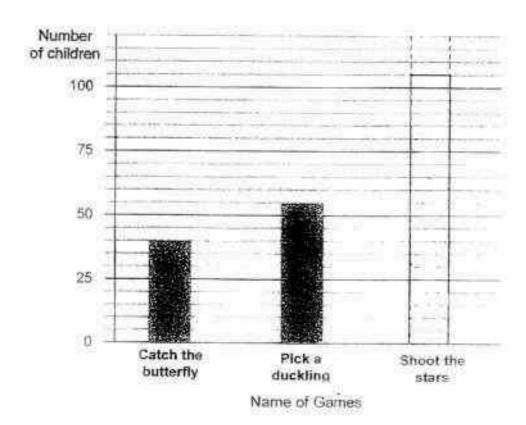
28. In the figure, ABCD is a rectangle and $\angle EAB = 239°$. Find $\angle EAD$.

E

D

F

239° A

C

B

Ans : _____

8

29. The graph below shows 3 different games played by children at a funfair.

Each child played only one game at the funfair. 80% of the total number of children played "Pick a duckling" and "Shoot the stars". Draw the bar that shows the number of children who played "Shoot the stars" in the graph.

9

30. Vincent and Willis spent some time completing a project. Vincent spent 30 minutes more than $\frac{2}{5}$ of the total time spent by both of them. Willis spent 1 hour. Find the total time spent by the boys in completing the project.

Ans : _____ h

END OF PAPER 1

Name : _____ (   )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6

2016 Preliminary Examination

Mathematics

Paper 2

23 August 2016

Paper 1		40
Paper 2		60
Total		100

_____
Parent's / Guardian's Signature

Time : 1 hour 40 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of an approved calculator is expected, where appropriate.

This booklet consists of _15_ printed pages Including the cover page.

1

Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.
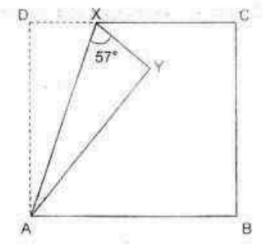
Do not write in this space

(10 marks)

1. Mrs Goh cut a ribbon into three smaller pieces. The first piece was $3w$ cm long and half as long as the second piece. The last piece was 8 cm shorter than the second piece. What is the length of the ribbon? Give your answer in terms of w.

Ans : _____ cm
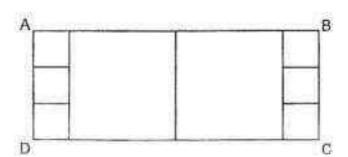
2. The figure below is not drawn to scale. ABCD is a rectangular piece of paper. A corner of the paper was folded to form triangle AXY. Find $\angle YAB$.

Ans : _____ °

3. Three different coloured bulbs light up at regular intervals. The red bulb lit up once every 4 minutes. The blue bulb lit up once every 6 minutes. The yellow bulb lit up once every 9 minutes. After the 3 coloured bulbs light up together at 16 45, when would all the bulbs light up together next?

Ans : _____

4. Zi Hao took $\frac{1}{4}$ h to cycle from his home to his grandparents' house at a speed of 12 km/h. On his return trip, he took 10 min to cycle along the same route. What was Zi Hao's average cycling speed?

Ans : _____ km/h

3

5. The figure below shows a rectangle ABCD. It is made up of 2 similar big squares and 6 similar small squares. The area of each small square is 36 cm². Find the perimeter of the rectangle ABCD.
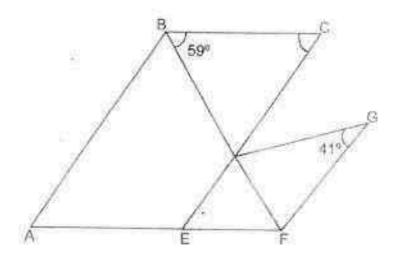
Ans : _____ cm

For questions 6 to 18, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(50 marks)

Do not write in this space

6. In the figure below, ABCE is a parallelogram and DEFG is a trapezium. BD = CD and EDC and BDF are straight lines. DE is parallel to GF

(a) Find ∠AEC

(b) Find ∠FDG

Ans : a) _____ [1]

b) _____ [2]

7. Jacitha had just enough money to buy 48 similar files. During a sale, the price of each file was reduced by 20¢. She was able to buy 12 more files and had 60¢ left. Find the price of one file during the sale.

Ans : _____ [3]

8. Kim has a savings of $20.40 in her coin box. All the coins in the box were fifty-cent and twenty-cent coins. There were 3 times as many fifty-cent coins as twenty-cent coins. Find the number of twenty-cent coins in her coin box.

Ans : _____ [3]

3

9. The capacity of 5 big identical bottles is the same as the capacity of 9 small identical bottles. Each big bottle contains 0.3ℓ more water than each small bottle. Find the capacity of one big bottle.

Ans : _____ [3]

10. There were 523 red and blue chairs in the Drama Studio. Mr Ching brought in another 40 red chairs and took away 4% of the blue chairs. As a result, there were 547 chairs. How many red chairs were in the Drama Studio at first?

Ans : _____ [3]

7

11. Rin had \$168 more than Sue. After Rin donated $\frac{1}{4}$ of her money and Sue spent $\frac{4}{5}$ of her money, they had \$734 left. How much money did Rin have at first?
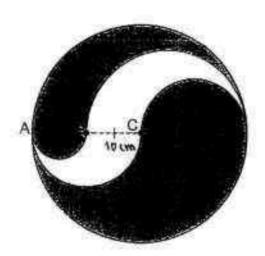
Ans : _____ [4]

8

12. The figure is made up of a circle and 4 semicircles. C is the centre of the circle and its radius is 20 cm. AB = BC.
Find the area of the shaded part. (πr^2)
(Take π = 3.14)

Ans : _____ [4]

9

13. Jafar left Town G at 10 00 and drove to Town H at an average speed of 60 km/h. Half an hour later, Ivan left Town G and drove to Town H travelling along the same route as Jafar. He met Jafar at a petrol station at 13 00 before reaching Town H at 14 00. The petrol station was 10 km from Town H.
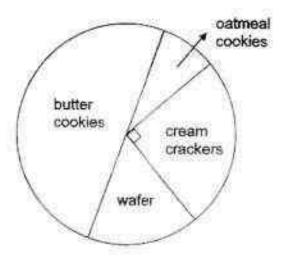
(a) Find the distance between Town G and Town H.

(b) Find the speed of Ivan. Give your answer correct to the nearest whole number.

Ans : (a) _____ [2]

(b) _____ [2]

14. The pie chart below shows the different types of biscuits sold at a supermarket.

Half of the biscuits sold at the supermarket were butter cookies. The number of packets of wafer biscuits sold was $\frac{1}{3}$ of the number of packets of butter cookies sold.
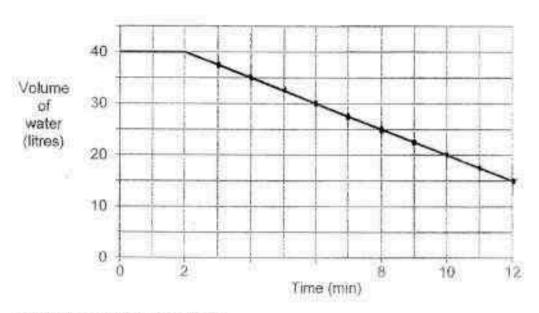
a) What fraction of the biscuits sold were oatmeal cookies?
b) 1470 packets of butter cookies were sold. Find the total number of packets of wafer biscuits and oatmeal cookies sold.

Ans : (a) _____ [2]

(b) _____ [2]

11

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15. Shona had 40% more green beads than white beads. She bought 60% more green beads to make some necklaces. She used up 25% of the green beads. In the end, she had 340 more green beads than white beads. How many beads did Shona have in the end?

Ans : _____ [5]

16. A tank was $\frac{2}{3}$ filled with water at first. After 2 minutes, a tap was turned on to drain water from the tank. The graph below shows the amount of water in the tank over 12 minutes.

a) Find the capacity of the tank.

b) How many litres of water flowed out of the tank in one minute?

c) How many minutes would it take to drain all the water from the tank completely?

Ans : (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

13

17. Mack had some goldfish and angelfish in 2 tanks. In Tank X, the number of goldfish was 3 times the number of angelfish. In Tank Y, the ratio of the number of goldfish to the number of angelfish was 2 : 5. Mack transferred 20% of the angelfish from Tank Y to Tank X. The number of fish in Tank Y became 168 and the ratio of the number of goldfish to the number of angelfish in Tank X became 5 : 4. How many fish were in Tank X in the end?

Do not write in this space

Ans: _____ [5]

18. Nigel and Osman have some game cards each. If Nigel gives Osman 49 game cards, he will have the same number of game cards as Osman. If Osman gives Nigel 23 game cards, Nigel will have 7 times as many game cards as Osman. How many games cards does Nigel have?

Ans : _____ [4]

END OF PAPER

EXAM PAPER 2016 (P6)

SCHOOL : CHIJ

SUBJECT : MATHEMATICS

TERM : SA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	4	2	4	3	2	2	1	1
Q11	Q12	Q13	Q14	Q15					
2	1	2	3	2					

16)9294   17)6 years 9 mth   18)4.8%   19)960   20)2

21)South – east   22)22   23)13 min   24)

25)$3500 \div 10 = 350$

$350 \times 5 = 1750$ g

26)$42 - 2 = 40$

$40 \div 4 = 10$ tables

27)$\Pi \times 16 = 16\Pi$

$16\Pi + 16 + 16$

$= (16\Pi + 32)$

28)$360° - 239° - 90° = 31°$

29) 1% → 40 ÷ 20 = 2

   80% → 80 x 2 = 160

   160 − 55 = 105

30) 3u → 1h + 30 min

   = 1h + ½ h

   = 1½ h

   1½ h ÷ 3 = 3/2 ÷ 3

   = 3/2 x 1/3 = ½

   5 units → ½ x 5 = 2 ½ h

Paper 2

1) second piece
   → 3w x 2 = 6w
   Last piece
   → 6w − 8 = (6w − 8)
   3w + 6w + (6w − 8)
   = (25w − 8)

2) 180° − 90° − 57° = 33°
   90° − 33° − 33° = 24°

3) 1721

4) ¼ h = 15 min

   15 + 10 = 25

   25/60 = 5/12

   6 ÷ 5/12 = 14 2/5 km/h

5) $36 = 6$

$6 \times 3 = 18$

$6 \times 10 = 60$

$18 \times 4 = 72$

$= 60 + 72 = 132cm$

6)a)$180 - 59 - 59 = 62$

$180 - 59 = 121°$

b)$180 - 62 - 41 = 77°$

7)$48 \times 0.20 = 9.60$

$9.60 - 0.60 = 9.00$

$9.00 \div 12 = \$0.75$

8)$3 \times 0.50 = 1.50$

$1 \times 0.20 = 0.20$

$1.50 + 0.20 = 1.70$

$20.40 \div 1.70 = 12$

$12 \times 1 = 12$

9)$5u + 1500ml = 9u$

$9 - 5 = 4$

$4u \rightarrow 1500$

$1u \rightarrow 1500 \div 4 = 375$

$375 + 300 = 675ml$

10)$547 - 40 = 507$

$523 - 507 = 16$

$4\% \rightarrow 16$

$1\% \rightarrow 16 \div 4 = 4$

$100\% \rightarrow 4 \times 100 = 400$

$523 - 400 = 123$

11)$\frac{1}{4} \times 5 = 5/20$

$4/5 \times 4 = 16/20$

$168 \times \frac{1}{4} = 42$

$20u - 5u = 15u$

$20u - 16u = 4u$

$15u + 4u = 19u$

$168 - 42 = 126$

$19 \rightarrow 734 - 126$

$19u \rightarrow 608$

$1u \rightarrow 32$

$20u \rightarrow 640$

$640 + 168 = \$808$

12) ½ x 3.14 x 10 x 10 = 157

½ x 3.14 x 5 x 5 = 39.25

½ x 3.14 x 15 x 15 = 353.25

3.14 x 20 x 20 = 1256

1256 – 353.25 + 39.25 = 942 cm$_2$

13)a)60 x 3 = 180

180 + 10 = 190km

b)190 ÷ 3½ ≈ 54 km/h

14)a)1 – 6/12 – 3/12 – 2/12 = 1/12

b)50% → 1470

25% → 1470 ÷ 2 = 735

15)G : W

7 : 5 x5

= 35 : 25

x21

= 56 : 25

-14

= 42 : 25

42 – 25 = 17

17u → 340

1u → 340 ÷ 17 = 20

67u → 20 x 67 = 1340 beads

16)a)2u→40

   1u →40 ÷ 2 = 20

   3u →20 x 3 = 60L

 b)40 − 15 = 25

   25 ÷ 10 = 2½L

 c)40 ÷ 2½ = 16 min

17)Tank X   Tank Y

   G : A   G : A

 = 3 : 1 x 5 = 15 :5   = 2 : 5 x 7 = 14 : 35
                    +1   =7u x 7   7
 =5 : 4 x 3 = 15 : 12   = 2 : 4 x7 = 14 : 28

   14 + 28 = 42

   42u →168

   1u →168 ÷ 42 = 4

   15 + 12 = 27

   27u →4 x 27 = 108 fishes

18)6u →(49x2) + (23 x 2) = 144

   1u →144 ÷ 6 = 24

   24 + 144 = 168

   168 − 23 = 145 game cards

METHODIST GIRLS' SCHOOL (PRIMARY)
Founded in 1887

MGS

PRELIMINARY EXAMINATION 2016
PRIMARY 6
MATHEMATICS

PAPER 1
(BOOKLET A)

Total Time for Booklets A and B: 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.
The use of calculators is **NOT** allowed.

Name: _____ (   )

Class: Primary 6. _____

Date: 23 August 2016

This booklet consists of 8 printed pages including this page.

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet. (20 marks)

---

1 A number when rounded off to the nearest thousand is 700 000.

What is the number?

    (1)   699 499

    (2)   699 999

    (3)   700 999

    (4)   704 999   (   )

2
$$\frac{24}{27} = \frac{32}{\square}$$
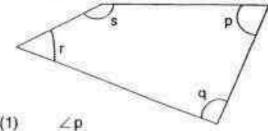
What is the missing number in the box?

    (1)   33

    (2)   35

    (3)   36

    (4)   38   (   )

3 In the figure below, which angle is ~~greater than~~ closest to a right angle?

    (1)   ∠p

    (2)   ∠q

    (3)   ∠r

    (4)   ∠s   (   )

2   (Go on to the next page)

4 Sophia faced South-West after turning 135° anti-clockwise.

Where was she facing at first?

(1) East

(2) West

(3) North

(4) South

(   )

5 Mariam has $20. What is the greatest number of pens that she can buy?

> First 6 pens at $1 each
>
> Additional pens at 80 cents each
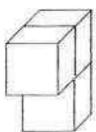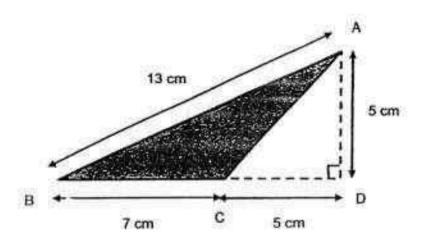
(1) 11

(2) 20

(3) 23

(4) 25

6 The solid below is made up of 3 similar cubes.

The area of the shaded surface is 48 cm². What is the volume of the solid?

(1) 64 cm³

(2) 96 cm³

(3) 128 cm³

(4) 192 cm³

7   What is the area of triangle ABC as shown in the figure?
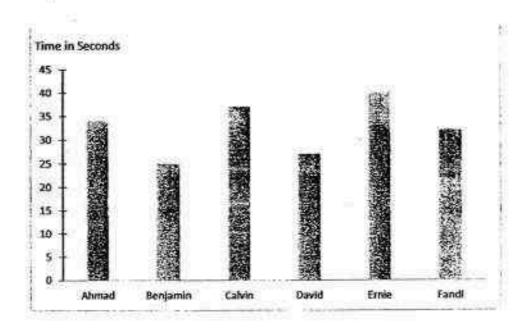
(1) 17.5 cm^2

(2) 30.0 cm^2

(3) 32.5 cm^2

(4) 45.5 cm^2 (   )

8   Mei Lin had $80. She gave $20p to her daughter and shared the remainder equally among her 3 sons. How much did each son receive?

(1) $\$(\dfrac{60p}{3})$

(2) $\$(\dfrac{80-20p}{3})$

(3) $\$(80-\dfrac{20p}{3})$

(4) $\$(80-60p)$ (   )

9   The graph below shows the timing of the six boys who competed in the 50 m freestyle.

Time in Seconds
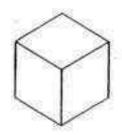
Which 2 boys were the fastest swimmers?

(1)   Calvin and Ernie
(2)   Ahmad and Ernie
(3)   Ahmad and Fandi
(4)   Benjamin and David   (   )

10 The figure below shows a cube.
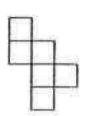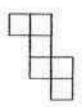
Which one of the following is not a net of a cube?
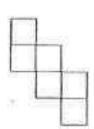
(1)
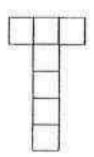
(2)

(3)

(4)

(   )
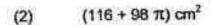
11 Find the sum of 33 ones, 30 tens, 300 hundreds and 3 thousands.
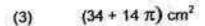
(1)   3363

(2)   3930

(3)   6333

(4)   33 333

(   )

6   (Go on to the next page)
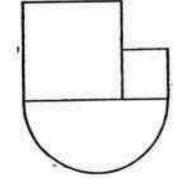
12 The figure below is made up of a semicircle and two squares of sides 10 cm and

4 cm. Find the area of the figure. Give your answer in terms of π.

    (1) $(116 + 24.5\,\pi)\ cm^2$

    (2) $(116 + 98\,\pi)\ cm^2$

    (3) $(34 + 14\,\pi)\ cm^2$
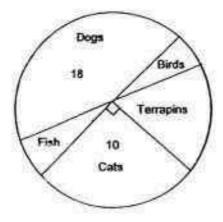
    (4) $(34 + 7\,\pi)\ cm^2$

13 Two classes participated at a carnival. Each class had the same number of
students. The ratio of the number of girls to the number of boys in class A is 2:3.
The ratio of the number of boys to the number of girls in class B is 3:7.
What is the ratio of the number of girls to the number of boys at the carnival?

    (1) $3:2$

    (2) $9:11$

    (3) $11:9$

    (4) $14:9$

14 The pie chart represents the favourite animal of the pupils in Primary 6A. There are as many fish as birds. How many pupils chose the terrapins as their favourite animal?

(1) 2
(2) 4
(3) 5
(4) 8

15 Uncle Tan took a walk from his home to the park and back home again. The distance between Uncle Tan's home and the park was 480 m. On the way to the park, he walked at a speed of 40 m/min. Uncle Tan took 20 minutes to walk home from the park. What was his average speed for the whole journey?

(1) 15 m/min
(2) 24 m/min
(3) 30 m/min
(4) 48 m/min

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

PRELIMINARY EXAMINATION 2016
PRIMARY 6
MATHEMATICS

PAPER 1
(BOOKLET B)

Total Time for Booklets A and B: 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.
The use of calculators is **NOT** allowed.

Name: _____ ( )

Class: Primary 6._____

Date: 23 August 2016

Paper 1 Booklet A	/ 20
Paper 1 Booklet B	/ 20
Paper 2	/ 60
TOTAL	/ 100

This booklet consists of 6 printed pages including this page.

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

Do not write in this space

16   Express 2.8 as a percentage.

Ans: _____ %

17   Melody spent 25% of her allowance and had $60 left.

How much did she spend?

Ans: $_____

18   In the number line below, FG = GH.

What is the fraction represented by G?

F   G   H

$3\frac{1}{10}$ $3\frac{1}{5}$

Ans: _____

19    $\frac{5}{12} \times 11 = \frac{5}{12} \times 6 + \frac{5}{12} + \frac{5}{12} + \frac{5}{12} +$ _____

Give your answer in its simplest form.

Ans: _____

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20   Ali and Muthu had some marbles. After Ali gave 15 marbles to Muthu, he had 20 marbles more than Muthu. How many more marbles did Ali have than Muthu at first?

Ans: _____

21   Part of a scale is shown below. What is the value of the reading at X ?

35.1   35.2   35.3

X

Ans: _____

22   The solid below is made up of 6 identical 3-cm cubes.
What is the total surface area of this solid including the base?

Ans: _____ cm^2

3   (Go on to the next page)

23   There are three shaded triangles on a grid made of 2-cm squares.

What is the total area of the three shaded triangles?

2cm

2cm

Ans: _____ cm²

---

24   In the figure below, STUV is a square and ∠TVW = 11°. Find ∠WVU.

Ans: _____

---

25   The figure below shows a line MN and a point X.

Draw a parallel line to MN passing through X.

X

M

N

4   (Go on to the next page)

Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

26   The perimeter of a rectangle is 48 cm. The length of the rectangle is 2 cm longer than its breadth. Find its breadth.

Ans: _____ cm

27   Mrs Lee had $13 in her wallet. She spent all her money on 10 apples and 4 pears. If she had bought 3 apples and 12 pears instead, she would need $7.10 more. What was the cost of one pear?

Ans: $ _____

28    $\frac{2}{5}$ of Aditya's current age is the same as $\frac{3}{7}$ of Hafiz's current age.

Hafiz's current age is 70 years old, what was their total age 3 years ago?

Ans: _____

5   (Go on to the next page)

29 Sam scored an average of 80 marks for 3 tests. He scored 20 marks more for his Science test than his English test. For the Math test, he scored 5 marks lower than his English test. How many marks did he score for his English test?

Ans: _____

30 A library classifies its books as fiction, non-fiction and reference books. $\frac{1}{3}$ of the books are fiction books. The ratio of non-fiction books to reference books is 4 : 1. What is the ratio of the number of fiction books to the number of reference books?

Ans: _____

End of Booklet B

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

PRELIMINARY EXAMINATION 2016
PRIMARY 6
MATHEMATICS

PAPER 2

Duration: 1hour 40 minutes

INSTRUCTIONS TO CANDIDATES
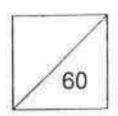
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.
The use of an approved calculator is expected, where appropriate.

Name: _____ (   )

Class: Primary 6. _____

Date: 23 August 2016

60

This booklet consists of 15 printed pages including this page.

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Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)
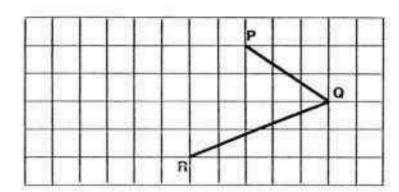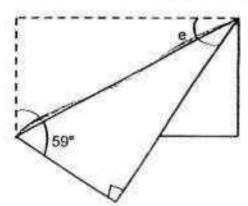
1   Tree A is y m tall. Tree B is twice as tall as Tree A.
     Tree C is 5 cm taller than Tree B.

   (a)   What is the total height of the three trees in terms of y?

   (b)   If Tree A is 1.5 m tall, what is the height of Tree C?

Ans: (a) _____ m

         (b) _____ m

2   Mr. Tey travelled at a constant speed of 80 km/h for 45 min, and covered
     $\frac{3}{5}$ of his journey from Town A to Town B.
     Find the distance for the whole journey.

Ans: _____ km

2   (Go on to the next page)

3   PQ and QR are two sides of a parallelogram.
     Complete the parallelogram PQRS by drawing the other two sides in the
     square grid below.

4   A rectangular piece of cardboard was folded as shown below.

     Find ∠e.
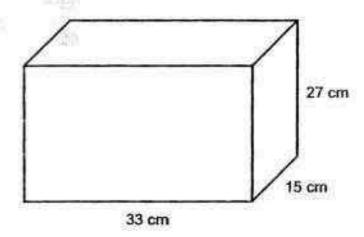
Ans: _____ °

5 The figure below is made up of two squares. Find the perimeter of the figure.

225 cm²

36 cm²

Ans: _____ cm

For Questions **6** to **18**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (50 marks)

6   A machine printed a total of 6 000 newsletters for the first 5 days.
     When the machine was upgraded, it printed 1 800 newsletters per day.
     How many days in all did the machine take to print 34 800 newsletters?

                                                    Ans: _____ [3]

7   A group of girls shared some sweets among themselves. If each girl took
     11 sweets, the last girl would have only 6 sweets. If each girl took 8 sweets,
     there were 25 sweets left over.

     (a)   How many girls were there?

     (b)   How many sweets were there?

                                                    Ans: (a) _____ [2]

                                                         (b) _____ [1]

                    5   (Go on to the next page)

8   Anne needs to pack 6-cm cubes into a box measuring 33 cm by 15 cm by 27 cm as shown below. What is the volume of the remaining space in the box after the <u>maximum</u> number of cubes have been packed in?

27 cm

15 cm

33 cm

Ans: _____ [3]

(Go on to the next page)

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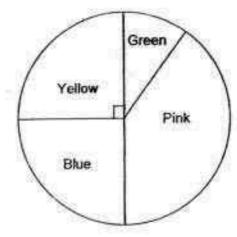
9 Mrs. Lim gave $\frac{7}{10}$ of her stickers to Dolly and the rest to Hong. After Dolly gave Hong $\frac{1}{5}$ of her stickers, Dolly had 24 stickers more than Hong. How many stickers did Dolly give to Hong?

Ans: _____ [3]

10 Melissa had some money. She used $\frac{1}{4}$ of it on a bag and $\frac{1}{6}$ of the remainder on a dress. The bag and the dress cost $133.50 altogether. How much money had she left?

Ans: _____ [3]

7   (Go on to the next page)

11 Lance left Town X and drove towards Town Y. Along the way, he met Ali who was driving at a speed of 80 km/h in the opposite direction.
45 minutes later, Lance reached Town Y but Ali was still 50 km from Town X.
Both did not change their speed throughout.
Lance took 2 hours to complete the whole journey.

(a) What was Lance's speed?

(b) What was the distance between Town X and Town Y?

Ans: (a) _____ [3]

(b) _____ [1]

(Go on to the next page)

12 Mr Lee bought four times as many ties as wallets. He spent $840 altogether. A wallet cost $50 more than a tie. The total cost of the ties was $184 more than the total cost of the wallets. How many wallets did he buy?

Ans: _____ [4]

9   (Go on to the next page)

13 The pie chart shows the number of coloured ribbons.
The ratio of the number of green ribbons to the number of pink ribbons is 1 : 4.

(a)   What percentage of the ribbons was green?

(b)   If there were 45 more yellow than green ribbons, how many blue and pink ribbons were there?

Ans: (a) _____ [1]

(b) _____ [3]

10   (Go on to the next page)
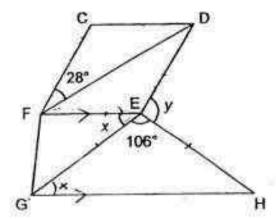
14 A box contained apples, oranges and pears. The ratio of the number of apples

to the number of oranges was 7 : 2. The number of pears was $\frac{5}{6}$ of the total

number of apples and oranges.

After some apples were eaten, the total number of apples and oranges was equal to the number of pears. There were 180 fruits left in the box in the end. How many apples were eaten?

Ans: _____ [4]

　　　　(Go on to the next page)

15   In the figure, CDEF is a rhombus and EFGH is a trapezium.
∠CFD = 28° and ∠GEH = 106°

(a)   Find ∠x.

(b)   Find ∠y.

Ans: (a) _____ [1]

(b) _____ [3]

        (Go on to the next page)

16 Christine and Audrey went shopping together with a total sum of $60.
    Christine spent twice as much as Audrey. The amount Audrey had left was
    $7 more than what she had spent. She had twice as much money left as
    Christine.

    (a) How much money did Audrey spend?

    (b) How much money did Christine have at first?

Ans: (a) _____ [3]

     (b) _____ [2]

13   (Go on to the next page)

17 Mdm Yani made some cushions to sell at a funfair. She made 25% of
the cushions in the first week. In the second week, she made another 28
cushions. The number of cushions made in the first and second week was
40% more than the number of cushions that had not yet been made.
She made the rest of the cushions in the third week.

(a) How many cushions did Mdm Yani make in the third week?

(b) How many cushions did Mdm Yani make altogether?

Ans: (a) _____ [3]

(b) _____ [2]

(Go on to the next page)
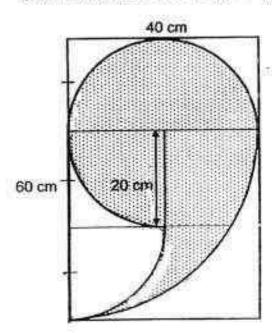
18   The shaded figure below is cut out from a rectangle measuring 60 cm by 40 cm.

(a)   Find the area of the shaded part.

(b)   Find the perimeter of the shaded part.

(Round off your answers to (a) and (b) to 2 decimal places)

Ans: (a) _____ [3]

(b) _____ [2]

END OF PAPER

15

YEAR   :   2016
LEVEL   :   PRIMARY 6
SCHOOL   :   METHODIST GIRLS' SCHOOL
SUBJECT   :   MATHEMATICS
TERM   :   PRELIMINARY EXAMINATION

Paper 1

Q1	2	Q4	3	Q7	1	Q10	4	Q13	3
Q2	3	Q5	3	Q8	2	Q11	4	Q14	4
Q3	2	Q6	4	Q9	4	Q12	1	Q15	3

Q16 280 %

Q17 $20

Q18 $3\frac{3}{20}$

Q19 $11 - 6 = 5$
$5 - 3 = 2$
$\frac{5}{12} + \frac{5}{12} = \frac{10}{12} \Rightarrow \frac{5}{6}$

Q20 $15 + 20 + 15 = \underline{50}$ marbles

Q21 35.27

Q22 Area of 1 surface → $3 \times 3 = 9$
$13 \times 2 = 26$
$26 \times 9 = \underline{234} \text{ cm}^2$

Q23 $8 + 4 + 6 = \underline{18} \text{ cm}^2$

Q24 $(180° - 90°) \div 2 = 45°$
$\angle WVU → 45° - 11° = \underline{34°}$

Q25

Q26 $4u + 4 → 48$
$4u → 48 - 4 = 44$
$1u \Rightarrow 44 \div 4 = \underline{11} \text{ cm}$

Q27
$10A + 4P \rightarrow 13$
$3A + 12P \rightarrow 13 + 7.10 = 20.10$
$30A + 12P \rightarrow 13 \times 3 = 39$
$30A + 12P \rightarrow 20.10 \times 10 = 201$
$108P \rightarrow 201 - 39 = 162$
$1P \Rightarrow 162 \div 108 = \underline{\$1.50}$

Q28
$14u \rightarrow 70$
$1u \rightarrow 70 \div 14 = 5$
$H \rightarrow 70 - 3 = 67$
$A \rightarrow 5 \times 15 = 75 \rightarrow 75 - 3 = 72 \Rightarrow 67 + 72 = \underline{139}$

Q29
$240 - 20 - 5 - 5 = 210 \rightarrow 210 \div 3 = 70 \Rightarrow$
$70 + 5 = \underline{75}$ marks

Q30
$5 : 2$

Paper 2
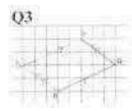
Q1a
$A \rightarrow y$
$B \rightarrow y \times 2 = 2y$
$C \rightarrow 2y + 0.05$
Total $\Rightarrow y + 2y + 2y + 0.05 = \underline{(5y + 0.05) \text{ m}}$

Q1b
$y \rightarrow 1.5$
$C \rightarrow 2y + 0.05 \rightarrow (1.5 \times 2) + 0.05 = \underline{3.05 \text{ m}}$

Q2
100 km

Q3

Q4
$\angle e \rightarrow 180° - 90° - 59° = 31°$

Q5
72 cm

Q6
$34800 - 6000 = 28800$
$28800 \div 1800 = 16$
$16 + 5 = \underline{21}$ days

Q7a
$11 - 8 = 3$
$11 - 6 = 5$
$25 + 5 = 30$
$30 \div 3 = \underline{10}$ girls

Q7b
$(10 \times 8) + 25 = \underline{105}$ sweets

2

Q8
$33 \div 6 = 5r3$
$15 \div 6 = 2r3$
$27 \div 6 = 4r3$
No. of cube $\rightarrow 5 \times 2 \times 4 = 40$
Vol. of 1 cube $\rightarrow 6 \times 6 \times 6 = 216$
Vol. of 40 cube $\rightarrow 40 \times 216 = 8640$
Capacity $\rightarrow 33 \times 15 \times 27 = 13365 \Rightarrow 13365 - 8640 = \underline{4725 \text{ cm}^3}$

Q9
$D \rightarrow \frac{7}{10}$
$H \rightarrow 1 - \frac{7}{10} = \frac{3}{10}$
$D \text{ (left)} \rightarrow \frac{8}{10} \times \frac{7}{10} = \frac{14}{25}$
$D \text{ (gave)} \rightarrow \frac{2}{10} \times \frac{7}{10} = \frac{7}{50}$
$H \text{ (end)} \rightarrow \frac{3}{10} \times \frac{7}{50} = \frac{11}{25}$
$\frac{14}{25} - \frac{11}{25} = \frac{3}{25}$
$\frac{3}{25} \rightarrow 24 \div 3 = 8$
$50 \div 25 = 2$
$7 \div 2 = 3.5$
$8 \times 3.5 = \underline{28} \text{ stickers}$

Q10
$B + D \rightarrow 2u + 1u = 3u$
$3u \rightarrow 133.5$
$1u \rightarrow 133.5 \div 3 = 44.5$
$5u \rightarrow 44.5 \times 5 = \underline{\$222.50} \text{ left}$

Q11a
$\frac{3}{4} \times 80 = 60$
$60 + 50 = 110$
$110 \div 1\frac{1}{4} = \underline{88 \text{ km/h}}$

Q11b $88 \times 2 = \underline{176 \text{ km}}$

Q12
$4T \rightarrow 512 \ \& \ 1W \rightarrow 328$
$1T \rightarrow 512 \div 4 = 128$
Diff $\rightarrow 3288 - 128 = 200$
$200 \div 50 = \underline{4 \text{ wallets}}$

Q13a
$\frac{1}{2} \rightarrow 1u + 4u = 5u$
$5u \times 2 = 10u$
$\frac{1}{10} \times 100\% = \underline{10\%}$

3

Q13b $Y \to \frac{1}{4} \times 100\% = 25\%$

$25\% - 10\% = 15\%$

$15\% \to 45$

$1\% \to 45 \div 15 = 3$

$B + P \to 100\% - 25\% - 10\% = 65\%$

$65\% \Rightarrow 3 \times 65 = \underline{195}$ ribbons

Q14   A: 14   O: 4   P: 15

$A + O : P$

$15 : 15$ (3ou)

$30u \to 180$

$1u \to 180 \div 30 = 6$

$30u - 15u - 4u = 11u$

$14u - 11u = 3u$

$3u \to 6 \times 3 = \underline{18 \text{ apples}}$

Q15a $\angle x \to (180° - 106°) \div 2 = \underline{37°}$

Q15b $\angle DEF \to 180° - 28° - 28° = 124°$

$\angle y \to 360° - 106° - 37° - 124° = \underline{93°}$

Q16a $9u \to 60 - 7 - 3.5 = 4.94$

$1u \to 49.5 \div 9 = 5.5$

$2u \to 5.5 \times 2 = \underline{\$11}$ spent

Q16b $5.5 \times 5 = 27.5$

$27.5 + 3.5 = \underline{\$31}$

Q17a $14 : 10 : 24$

$24 \div 4 = 6$

$14 - 6 = 8$

$8u \to 28$

$1u \to 28 \div 8 = 3.5$

$10u \to 3.5 \times 10 = \underline{35}$ cushions

Q17b $24u \to 3.5 \times 24 = \underline{84}$ cushions

Q18a $\frac{1}{4} \times \pi \times 40 \times 40 = 400\pi$, $40 \times 40 = 1600$ $(1600 - 400\pi)$

$20 \times 20 = 400$, $\frac{1}{2} \times 20 \times 20 \times \pi = 200$, $40 \times 20 = 800$ $(800 - 200\pi)$

$40 \times 60 = 2400 \to 2400 - (1600 - 400\pi) - 400 - (800 - 200\pi) = 1484.96 \text{ cm}^2$

Q18b $\frac{1}{2} \times \pi \times d = \frac{1}{2} \times \pi \times 40 = 20\pi$

$\pi \times d = \pi \times 40 = 40\pi$

$40\pi + 20\pi = 60\pi$

$60\pi = 188.495 \approx \underline{188.50 \text{ cm}}$

End

4

24

Anglo-Chinese School (Junior)

COMBINED PRELIMINARY EXAMINATIONS (2016)
PRIMARY 6
MATHEMATICS
PAPER 1
Booklet A

Tuesday   **23 August 2016**   **50 min**

Name _____ (   ) Class: 6.(   ) Parent's Signature: _____

INSTRUCTIONS TO PUPILS

1.   Do not turn over the pages until you are told to do so.
2.   Follow all instructions carefully.
3.   Answer ALL questions.
4.   You are **NOT** allowed to use a calculator for this paper.

This question **paper consists of 8 printed pages (inclusive of cover page).**
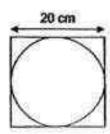
Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical
Answer Sheet (OAS). (20 marks)

1. In 356.174, what does the digit 7 stand for?

   1) 7 thousandths
   2) 7 hundredths
   3) 7 tenths
   4) 7 tens

2. Find the value of $7 \times 6 - 5 + 4 \times 2$.

   1) 9
   2) 29
   3) 45
   4) 51

3. Cole had 48 marbles. He gave $\frac{1}{6}$ of them to Jayden, who already had
   14 marbles. How many marbles had Jayden in the end?

   1) 6
   2) 8
   3) 20
   4) 22

4. The figure below is made up of a square and a circle. The square has sides of 20 cm. What is the area of the circle? (Take $\pi = 3.14$)

20 cm

1) 31.4 cm²
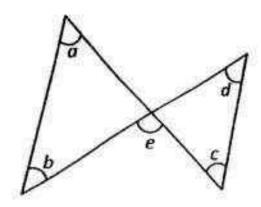
2) 62.8 cm²

3) 314 cm²

4) 1256 cm²

5. The table below shows the amount of money saved by 4 children. Which child saved the most money?

Name	Number of $1 coins	Number of $2 notes	Number of $5 notes
Andy	5	6	4
Bobby	3	4	5
Charles	6	5	4
Darwin	2	2	6
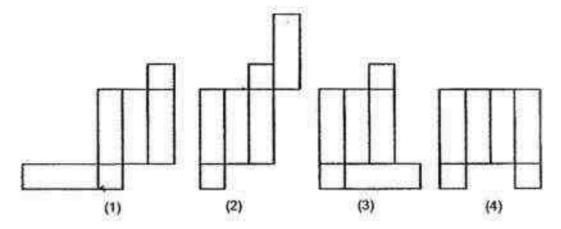
1) Andy

2) Bobby

3) Charles

4) Darwin

6. The figure below consists of 4 straight lines. All the 5 marked angles have different values. Which of the following is TRUE?

1) $\angle a + \angle b + \angle e = 180°$

2) $\angle a + \angle c + \angle d = 180°$

3) $\angle a + \angle b = \angle c + \angle d$

4) $\angle a + \angle d = \angle b + \angle c$
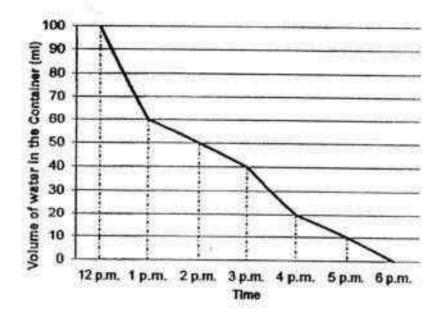
7. Simplify the algebraic expression. $8m + 7 + 3m - 6$.

1) $5m + 1$

2) $5m + 13$

3) $11m + 1$

4) $11m + 13$

8. $\frac{2}{5}$ of the pupils in a school took part in a cross country race. Given that 480 pupils did not take part in the race, what was the total number of pupils in the school?

    1) 800
    2) 900
    3) 1 200
    4) 1 400

9. Which of the following 4 figures below is the net of a cuboid?

    (1)   (2)   (3)   (4)

10. Mr Wong needs to be at Newton Building for a meeting at 11 a.m. He needs to take a 55-min train ride from East Station to Newton Station. He then needs to take a 20-min walk from Newton Station to Newton Building. What is the **latest time** he must catch the train from the East Station to be punctual for his meeting?

    1) 9.05 a.m.
    2) 9.30 a.m.
    3) 9.40 a.m.
    4) 9.50 a.m.
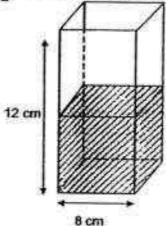
A container with full capacity of 100 ml of water started leaking at 12 p.m. The line graph below shows the volume of water in the container from 12 p.m. to 6 p.m. At what time was the container $\frac{1}{5}$ full of water?

1)   1 p.m.
2)   2 p.m.
3)   3 p.m.
4)   4 p.m.
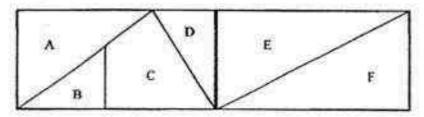
12. A container of height 12 cm has a square base of side 8 cm. The container is $\frac{1}{2}$ filled with water. Find the volume of water in the container.

12 cm

8 cm
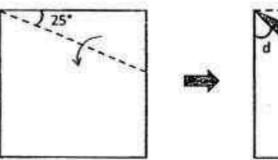
1) 96 cm³

2) 384 cm³

3) 576 cm³

4) 768 cm³

13. 50 boys in a class was given some marbles to share equally. When 15 of them gave away all their marbles to the rest of the boys, the rest of the boys had 12 extra marbles each. How many marbles did each of the remaining boys receive?

1) 40

2) 35

3) 28

4) 16

14. The figure below is made up of two identical rectangles. These two identical rectangles are divided into 6 parts A, B, C, D, E and F. The area of B is 10 % of the whole figure. What percentage of the whole figure is the total area of C and F?

1) 30 %
2) 35 %
3) 40 %
4) 45 %

15. The figure below shows a square piece of paper that has been folded along the dotted line. Which of the marked angle has a value of 50°?

1) a
2) b
3) c
4) d

Anglo-Chinese School (Junior)

Tuesday   23 August 2016   50 min

Name: _____ ( ) Class: 6.( ) Parent's Signature:_____

INSTRUCTIONS TO PUPILS

1. Do not turn over the pages until you are told to do so.
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3. Answer ALL questions.
4. You are **NOT** allowed to use a calculator for this paper.
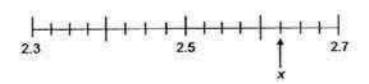
Paper	Booklet	Possible Marks	Marks Obtained
Paper 1	A	20	
	B	20	
Total		40	

This question paper consists of 8 printed pages (inclusive of cover page).

1

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. Give your answers in the units stated and to its simplest form whenever necessary.

(10 marks)

16. What is the decimal represented by x?

Answer : _____

17. Find the value of 109×60.

Answer : _____

18. Express $\frac{5}{7}$ as a decimal, rounded off to 2 decimal places.

Answer : _____
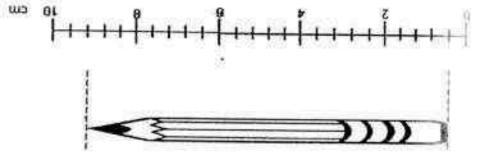
19   A movie started at 14 10 and ended at 17 05. What was the duration of the movie? Express your answer in minutes.

Answer : _____ min
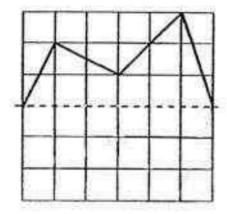
20   A pencil is placed next to the scale. What is the length of the pencil?

Answer : _____ cm

21. In the figure below, draw 4 more straight lines so that the final figure has 1 line of symmetry indicated by the dotted line.

22. Water from a tap leaks at a rate of 8 ml per minute. At this rate, how much water is leaked in 3 hours? Give your answer in litres

Answer : _____ ℓ

23. The figure below consists of a square and an equilateral triangle. What is the value of the marked angle x?

Answer : _____ °

24. The mass of a parcel is 7.4 kg when rounded off to 1 decimal place. What is the smallest possible mass of the parcel?

Answer : _____ kg

25. 2 years ago, Wendy was 6y years old. What is Wendy's age 5 years from now?

Answer : _____

Questions 26 to 30 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

26. I am a 3-digit number. The sum of my 3 digits is 9. I am a common multiple of 5 and 6. What is my smallest possible value?

Answer : _____

27. The figure below is formed using 2 identical squares of side 10 cm and 4 equilateral triangles. Find the perimeter of the figure.

Answer : _____ cm

Sub-Total : [   ]

28. Alan went to an electrical department store to buy television. In the end, he paid a total of $800 for two similar televisions. Find the original price of one television.

Buy First TV at 20% discount   Buy Second TV at 30% discount

Answer : $._____

29. A pencil costs n cents and a pen costs 90 cents more than a pencil. William wants to buy a pen and 2 pencils but is short of 70 cents. How much money does William have? Express your answer in terms of n cents.

Answer : _____

Sub-Total :

30. The pie chart shows the different mode of transport that the 1200 students take to go to school. How many students take MRT to school?

Answer : _____

Anglo-Chinese School (Junior)

COMBINED PRELIMINARY EXAMINATIONS (2016)

PRIMARY 6

MATHEMATICS

PAPER 2

Tuesday   **23 August 2016**   **1 hr 40 min**

Name: _____ (   )   Class: 6.(   )   Parent's Signature:_____

INSTRUCTIONS TO PUPILS

1. Do not turn over the pages until you are told to do so.
2. Follow all instructions carefully.
3. Answer ALL questions.
4. You are allowed to use a calculator for this paper.

Paper	Possible Marks	Marks Obtained
Paper 1	40	
Paper 2	60	
Total	100	

This question paper consists of 15 printed pages (inclusive of cover page).

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)
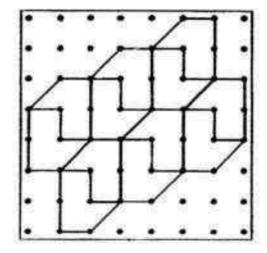
1. Bala had some money. He used $\frac{3}{4}$ of it on a watch and $\frac{1}{6}$ of it on a bag. The watch and bag cost $236.50. How much money had Bala at first?

Answer : $ _____

2. Mrs Lim has some flour and wants to make some croissants. The same mass of flour is used for each croissants. If she makes 10 croissants, she will have 280 g of flour left. If she makes 15 croissants, she will need another 20 g of flour. What is the mass of flour Mrs Lim have?

Answer : _____ g

3. A walkway of length 16 m was completely covered with identical rectangular tiles and identical square tiles, following the pattern shown below. The width of the walkway is 80 cm. How many square tiles were used to cover the entire walkway?

80 cm

Answer : _____

4. The average amount of money Albert and Bella has is $62 while the average amount of money Albert and Cedric has is $84. How much more does Cedric have than Bella?

Answer : $ _____

Sub-Total :

5. The pattern in the box shows part of a tessellation. Extend the tessellation by drawing two more unit shapes in the space provided within the box.

For questions 6 to 18, show your working clearly question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.   (50 marks)
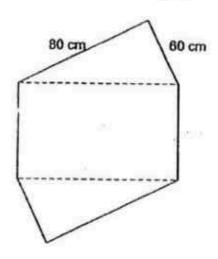
6. The total cost of 6 files and 3 story books is $86.10. One file is $4.55 cheaper than one story book. Find the cost of a story book.

Answer : _____ [3]

7. The figure below is made up of a rectangle and 2 identical right-angled triangles with sides measuring 60 cm, 80 cm and 100 cm. The perimeter of the figure is 420 cm. Find the area of the figure.

80 cm   60 cm

Answer : _____ [3]

Sub-Total : ☐
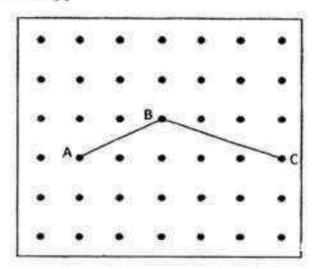
8. The figure below shows a grid made up of dots. Three of the dots are labelled A, B and C respectively. All lines drawn must start and end on dots.

(a) Draw a trapezium ABCD where AB is parallel to DC and DC is twice as long as AB. Label dot D. [2]

(b) Draw an isosceles triangle BCE where E is above the trapezium. Label dot E. [1]
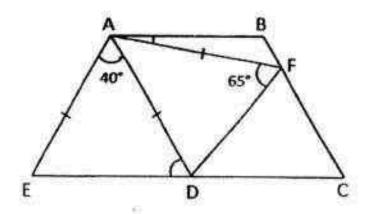
9. Susan saves 20% of her salary each month. She found that if her salary were to increase by 10%, her savings would increase by $20. Find Susan's salary.

Answer : _____ [3]

10. Nick and David went shopping together with a total sum of $90. Nick spent twice as much as David. The amount David had left was $9 more than what he had spent. He had twice as much money left as Nick.

(a) How much money did David spend?

(b) How much money did Nick have at first?

Answer : (a)_____ [2]

(b)_____ [2]

11. In the figure below, AE = AD = AF. ABCD is a parallelogram. EDC and BFC are straight lines. ∠AFD is 65° and ∠EAD is 40°

(a) Find ∠ADE

(b) Find ∠BAF

Answer : (a)_____ [2]

(b)_____ [2]
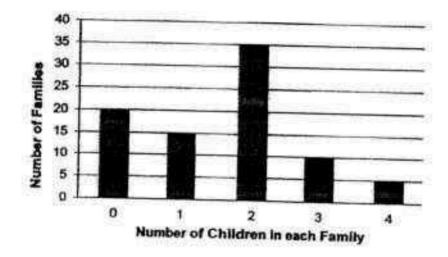
12. The bar graph below shows the results of a survey which was conducted
     to find out the number of children in each family in Sunshine Housing
     Estate.

(a) How many families have 3 or more children?

(b) What is the total number of children in the Sunshine Housing Estate?

Answer : (a)_____[1]

(b)_____[2]
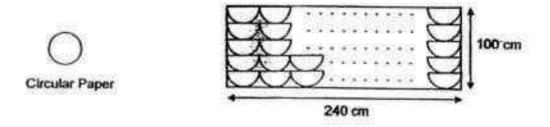
Sub-Total :

13. Aunty June has a rectangular noticeboard and some circular pieces of paper of diameter 40 cm. She cuts all the circular pieces of paper into semi circles and decorate the entire noticeboard using all the semi-circles, following the pattern shown below. Each piece of semi-circular paper is in contact with those next to it.

Circular Paper

100 cm

240 cm

a) How many pieces of circular paper does Aunty June have at first?

b) Find the area of the noticeboard covered by the semi-circular pieces of paper. Take π = 3.14.

Answer : (a)_____ [2]

(b)_____ [2]

Sub-Total : [   ]

14. Tom and Peter took part in a cycling competition. Tom cycled at a speed of 20 km/h. Both of them did not change their speed throughout the competition. When Peter covered $\frac{1}{2}$ the distance, Tom was 4.5 km in front of him. Tom reached the finishing line at 11.15 a.m. What time did Peter reach the finishing line?

Answer : _____

Sub-Total : ☐

15. A signboard was demonstrated with flashing bulbs of 3 colours. The red bulbs flashed every 6 seconds. The blue bulbs flashed every 12 seconds. The yellow bulbs flashed every 18 seconds. All the bulbs flashed together at 6 p.m. How many times would all the bulbs flashed together from 6.05 p.m. to 6.35 p.m.?

6.00 p.m to 6.30 p.m?

Answer : _____ [4]

Sub-Total :

10. Tina started saving by putting 2 coins in a piggy bank every day. Each coin was either a 10 cent coin or a 50 cent coin. In addition, her mother put in a $1 coin in the piggy bank for every 5 days. The total value of the coins after 165 days was $128.40.

(a) How many coins were there altogether?
(b) How many 10 cents coins did Tina save in 165 days?

Answer : (a)_____ [2]

(b)_____ [3]

Sub-Total :

17. At 8 a.m., Mr Jacobs turned on 2 taps to fill up an empty fish tank. Water flowed from each tap at 2.5 litres per minute. At 8.25 a.m., he turned off both taps at the same time after he had filled up $\frac{5}{6}$ of the fish tank.

(a) What was the capacity of the fish tank?

(b) The fish tank has a length of 100 cm. Its length is twice of its breadth. What is the height of the fish tank?

Answer : (a) _____ [2]

(b) _____ [3]

18. Box A and B contained some red and blue ribbons. In Box A, the number of red ribbons was $\frac{2}{3}$ of the number of blue ribbons. In box B, the ratio of the number of red ribbons to the number of the blue ribbons was 8 : 7. The number of ribbons in Box B was twice the number of ribbons in Box A.

(a) What was the ratio of the number of red ribbons in Box A to the number of red ribbons in Box B? Give your answer in the simplest form.

(b) The number of blue ribbons in Box B was 50 more than the number of blue ribbons in Box A. How many ribbons are there in Box B?

Answer : (a) _____ [2]

(b) _____ [3]

End of Paper 2

YEAR   :   2016
LEVEL   :   PRIMARY 6
SCHOOL :   :   ACS (JUNIOR)
SUBJECT :   :   MATHEMATICS
TERM   :   PRELIMINARY EXAMINATIONS

Paper 1

Q1	2	Q4	3	Q7	3	Q10	3	Q13	1
Q2	3	Q5	1	Q8	1	Q11	4	Q14	3
Q3	4	Q6	3	Q9	1	Q12	2	Q15	3
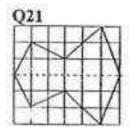
Q16 2.625

Q17 6540

Q18 0.71

Q19 175 min

Q20 8.8 cm

Q21

Q22 1.44 ℓ

Q23 $360° - 105° = \underline{255°}$

Q24 7.35kg

Q25 13 years old

Q26 180

Q27 $10 \times 10 = \underline{100 \text{ cm}}$

Q28 $400

Q29 $3n + 20¢$
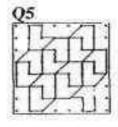
Q30 $100 - 25 - 40 - 20 = 15$
$1200 \div 100 = 12$
$12 \times 15 = \underline{180}$ students take MRT to school

Paper 2

Q1 $\frac{3}{4} = \frac{18}{24}, \frac{1}{6} = \frac{4}{24}, 236.50 \div 22 = 10.75 \rightarrow 10.75 \times 24 = \underline{\$258}$

Q2 $280 + 20 = 300 \rightarrow 300 \div 5 = 60 \rightarrow 60 \times 10 = 600 \Rightarrow 600 + 280 = \underline{880 \text{ g}}$

Q3 2 squares = 1 rectangle, 16m = 1600cm
$1600 \div 80 = 20 \Rightarrow 20 \times 2 = \underline{40 \text{ square tiles}}$

Q4 $62 \times 2 = 124, 84 \times 2 = 168 \Rightarrow 168 - 124 = \underline{\$44}$

Q5

Q6 $\$4.55 \times 6 = \$27.30 \rightarrow \$86.10 + \$27.30 = \$113.40 \Rightarrow$
$\$113.40 \div 9 = \underline{\$12.60}$ cost of a story book

Q7 $420 - 80 - 80 - 60 - 60 = 140 \rightarrow 140 \div 2 = 70$
$100 \times 70 = 7000, \frac{1}{2} \times 80 \times 60 = 2400 \rightarrow 2400 \times 2 = 4800 \Rightarrow$
$7000 + 4800 = \underline{11800 \text{ cm}^2}$

Q8

Q9 $20 \div 20 = 1 \rightarrow 1 \times 100 = 100 \rightarrow 100 \div 10 = 10 \Rightarrow 10 \times 100 = \underline{\$1000}$

Q10a $\$90 - \$9 - \$4.50 = \$76.50 \Rightarrow \$76.50 + \$4.50 = $ David spent $\underline{\$17}$

Q10b $17 \times 2 = \$34 \rightarrow 17 \times \frac{1}{2} = \$8.50 \Rightarrow$
$\$8.50 + \$34 + \$4.50 =$ Nick had $\underline{\$47}$ at first

Q11a $180° - 40° = 140° \Rightarrow 140° \div 2 = \angle ADE$ is $\underline{70°}$

Q11b $180° - 70° = 110° \rightarrow 360° - 110° - 110° = 140° \rightarrow 140° \div 2 = 70° \rightarrow$
$180° - 65° - 65° = 50° \Rightarrow 70° - 50° = \angle BAF$ is $\underline{20°}$

Q12a $10 + 5 = \underline{15}$ families have 3 or more children

Q12b $15 \times 1 = 15$, $35 \times 2 = 70$, $10 \times 3 = 30$, $4 \times 5 = 20 \Rightarrow$
$15 + 70 + 30 + 20 = \underline{135}$ children

Q13a $100 \div 20 = 5$, $240 \div 40 = 6$
$5 \times 6 = 30 \Rightarrow 30 \div 2 = \underline{15}$ pieces

Q13b $240 \times 100 = 24000$, $3.14 \times 20 \times 20 = 1256 \Rightarrow 1256 \times 15 = \underline{18840}$

Q14 $15 \div 20 = 0.225h = 13.5min \rightarrow 13.5 \times 2 = 27min \Rightarrow$
$11.15am + 27min = \underline{11.42am}$ reached

Q15 All flash together every 36 seconds
$30min = 1800sec \rightarrow 1800 \div 36 = 50 \Rightarrow 50 + 1 = \underline{51}$ times

Q16a $165 \div 5 = 33$, $165 \times 2 = 330 \Rightarrow 330 + 33 = \underline{363}$ coins

Q16b $128.40 - 33 = 95.40$
$(174 \text{ of } 10¢ = 17.40) + (156 \text{ of } 50¢ = 78)$ is 95.40
Tina saved $\underline{174}$ of $10¢$ coins in 165 days

Q17a $2.5 \times 2 = 5$, $25 \times 5 = 125$
$125 \div 5 = 25 \Rightarrow 25 \times 6 = \underline{150}$ ℓ

Q17b $100 \div 2 = 50$, $150 \ell = 150000cm^3$
$100 \times 50 = 5000 \Rightarrow 150000 \div 5000 = \underline{30}$ cm

Q18a $8 : 7 = 16 : 14$, $\frac{2}{3} = \frac{6}{9}$
Box A $\rightarrow$ R : B $= 6 : 9 \Rightarrow 6 : 16 = \underline{3 : 8}$

Q18b $14 - 9 = 5$, $50 \div 5 = 10 \Rightarrow 10 \times 30 = \underline{300}$ ribbons in Box

3

HENRY PARK PRIMARY SCHOOL
2016 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET A)

Name: _____ (   )   Parent's Signature

Class: Primary 6 _____   _____
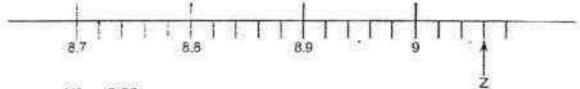
Marks:

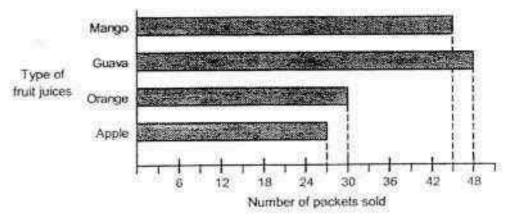| Paper 1	Booklet A	20
	Booklet B	20
Paper 2		60
Total		100

Total Time for Booklets A and B: 50 min

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.
You are **not** allowed to use a calculator.

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice and shade your answer (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

---
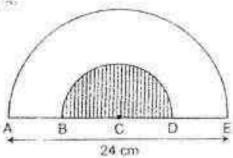
1 Which one of the following numbers is the largest?

(1) 0.8

(2) 0.84

(3) 0.819

(4) 0.838

2 In the number line below, what is the value of the reading at Z?
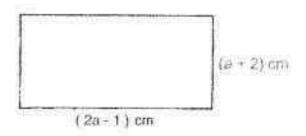
(1) 9.06

(2) 9.03

(3) 9.6

(4) 9.3

3 What is the value of $24 - 2 \times 3 + 27 \div 3$?

(1) 13

(2) 27

(3) 31

(4) 75

(Go on to the next page)

1

4 The figure is made up of 2 semi-circles. AB = BC = CD = DE
   Find the area of the shaded part in terms of π.

(1) 6π cm^2

(2) 12π cm^2

(3) 18π cm^2

(4) 36π cm^2

5 Find the perimeter of the rectangle below in terms of a

$(a + 2)$ cm

$(2a - 1)$ cm

(1) $(3a + 1)$ cm

(2) $(3a - 3)$ cm

(3) $(6a + 2)$ cm

(4) $(6a - 6)$ cm

2
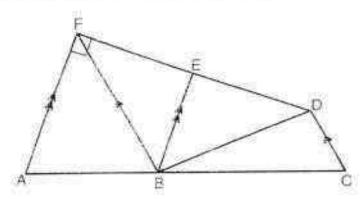
6   The table below shows the number of children per household in a housing estate.

Number of children per household	0	1	2	3
Number of households	5	32	28	12

What is the total number of children in the households that have at least 2 children?
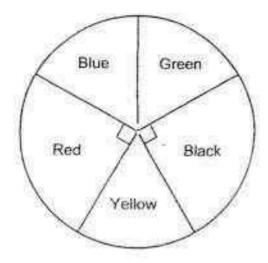
(1)   28

(2)   40

(3)   56

(4)   92

7   In the figure below, ABC and DEF are straight lines.

Which of the following is a trapezium?

(1)   ABDF

(2)   ACDF

(3)   BCDE

(4)   BCDF

8   A group of children was asked to name their favourite colours. Each child named one colour and the pie chart below shows their choices.
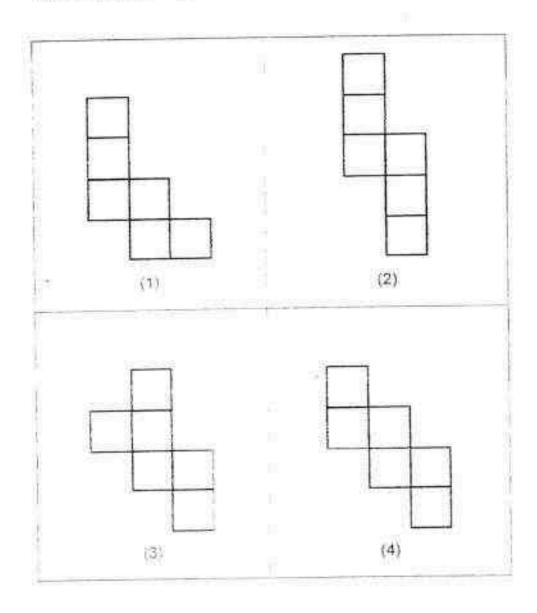
An equal number of children chose blue, green and yellow as their favourite colours. What fraction of the children named blue as their favourite colour?

(1) $\frac{1}{7}$

(2) $\frac{1}{6}$

(3) $\frac{1}{5}$

(4) $\frac{1}{3}$
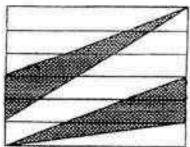
9   The figure below shows a cube.

Which of the following is **not** a net of the cube?

(1)

(2)

(3)

(4)
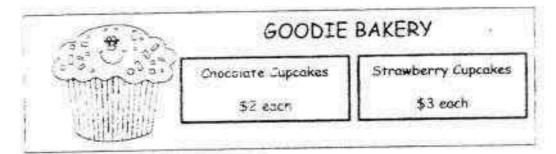
10. The figure below is made up of 6 rectangles of equal area. What fraction of the figure is shaded?

(1) $\frac{1}{3}$

(2) $\frac{2}{3}$

(3) $\frac{2}{5}$

(4) $\frac{5}{12}$

11. Rei baked some cookies. She gave $\frac{1}{4}$ of the cookies to her sister and $\frac{2}{5}$ of the remaining cookies to her brother. What fraction of the cookies did Rei have left?

(1) $\frac{3}{10}$

(2) $\frac{7}{20}$

(3) $\frac{9}{20}$

(4) $\frac{13}{20}$
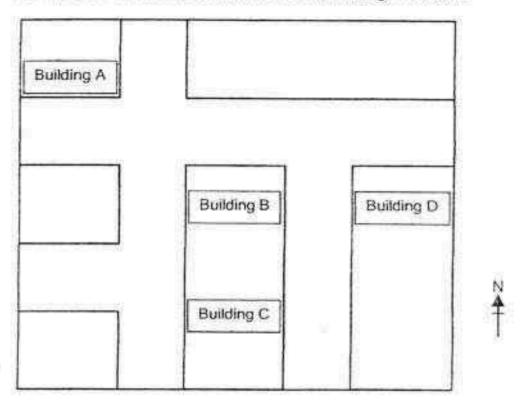
12 The total mass of Conrad and Timothy is 51 kg. The total mass of Timothy and Seth is 81 kg. Seth is three times as heavy as Conrad. What is the average mass of the three boys?

(1) 22 kg

(2) 32 kg

(3) 33 kg

(4) 44 kg

13 Cupcakes are sold at Goodie Bakery at the prices shown below.

GOODIE BAKERY

Chocolate Cupcakes
$2 each

Strawberry Cupcakes
$3 each

Sally spent a total of $50 on 16 chocolate cupcakes and some strawberry cupcakes. How many strawberry cupcakes did Sally buy?

(1 6

(2 9

(3 10

(4 18

14   The map below shows the location of different buildings in a town.
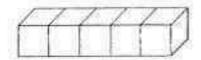
The post office is located to the north-east of the mall.
The library is located to the south-east of the school and to the west of the
post-office.
Which one of the following buildings is the school?

(1)   Building A

(2)   Building B

(3)   Building C

(4)   Building D

15   A number of identical cubes are joined as shown in the figure below. The
      total surface area is 550 cm². What is the volume of 1 cube?

(1)   25 cm³

(2)   110 cm³

(3)   125 cm³

(4)   625 cm³

HENRY PARK PRIMARY SCHOOL
2016 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET B)

Name: _____ ( )

Class: Primary 6 _____

20

Total Time for Booklets A and B: 50 min

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

You are **not** allowed to use a calculator.

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided.
For questions which require units, give your answers in the units stated.

(10 marks)

16 Write down all the common factors of 24 and 30.

Ans: _____

17 Find the value of $5 \div 8$
Express your answer as a decimal.

Ans: _____

18 A rectangular tank measuring 60 cm by 20 cm by 40 cm is $\dfrac{3}{5}$ filled with water. Find the volume of the water in the tank.

40 cm

20 cm

60 cm

Ans: _____ cm^3

(Go on to the next page)
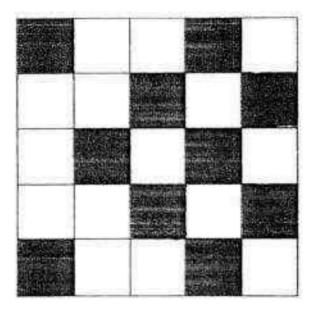
19. The volume of a wooden cube is 512 cm³. A small cube of side 3 cm was cut away from it. Find the volume of the remaining solid.

Ans: _____ cm³

20. The triangle below has an area of 144 cm². Find its height.

12 cm

Ans: _____ cm

21. The pie chart below shows the breakdown of the spectators at a football match.

Boys

Men
$\frac{2}{5}$

Girls
$\frac{3}{20}$

Women

What percentage of the spectators were women?

Ans: _____ %

(Go on to the next page)

2

22   Last year, there were 20 members in the art club. This year, there were 25 members. What was the percentage increase in the art club membership?

Ans: _____ %

---
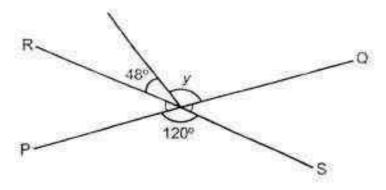
23   The figure below is made up of squares.
      Shade two more squares so that the figure has a line of symmetry.

3

24   In the figure, PQ and RS are straight lines. Find ∠ y.

Ans: _____ °

25   A camera cost $270 after a discount of 10%. What was the price of the camera before the discount?

Ans: $ _____

(Go on to the next page)

4

Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.
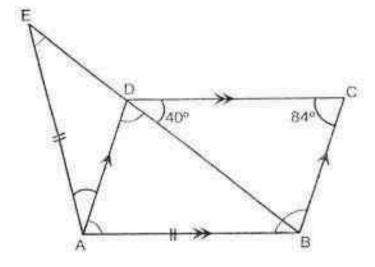
(10 marks)

---

26   The difference between two numbers is 159 and the sum of the numbers is 177. What is the value of the smaller number?

Ans: _____

---

27   The figure shows a parallelogram ABCD and an isosceles triangle ABE. BDE is a straight line. Find ∠ DAE.

Ans: _____

(Go on to the next page)

5
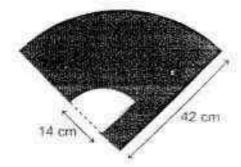
28   Alina had 20 more marbles than Brandon. After Brandon gave Alina 15
      marbles, Alina had twice as many marbles as Brandon. How many marbles
      did they have altogether?
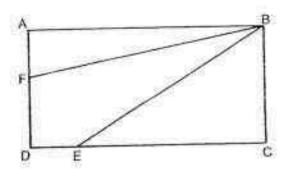
Ans: _____

29   Chin Hao had a piece of coloured paper in the shape of a quadrant. He cut
      out a small quadrant from the coloured paper as shown below. Find the
      perimeter of the remaining piece of coloured paper.

(Take $\pi = \dfrac{22}{7}$)

14 cm

42 cm

Ans: _____ cm

30 The figure below shows a rectangle ABCD.

The ratio of the length of AF to the length of FD is 2 : 3. The ratio of the length of CE to the length of DE is 8 : 2. Given that the area of triangle ABF is 20 cm², find the area of triangle BCE.

Ans: _____ cm²

End of Paper 1

7

HENRY PARK PRIMARY SCHOOL
2016 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 2

Name: _____ (   )

Class: Primary 6 _____

60

Time for Paper 2: 1 h 40 min

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Show your working clearly as marks are awarded for correct working.

Write your answers in this booklet.

You are allowed to use a calculator.

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

1   The graph below shows the number of packets of fruit juice sold at a shop in a day.

What percentage of the total number of packets of fruit juice sold were apple juice?

Ans: _____ %

2   The perimeter of a rectangle is 72 cm. The length of the rectangle is 3 times its breadth. What is the area of the rectangle?

Ans: _____ cm²

(Go on to the next page)

1
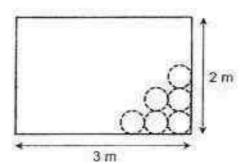
3 A stack of 35 identical workbooks was 33.25 cm high. Mrs Chua marked some of the workbooks and put aside the marked workbooks in a separate stack. The stack of the remaining unmarked workbooks was then 22.8 cm. How many such workbooks had Mrs Chua marked?

Ans: _____

4 Lisa had a container completely filled with rice. After she used 360 g of the rice, the container became half-filled. The container with the remaining rice weighed 1.81 kg. Find the mass of the empty container in kilograms.

Ans. _____ kg

5   Roger has a rectangular piece of cardboard measuring 3 m by 2 m.
He wants to cut out circular pieces each measuring 40 cm in diameter.
What is the maximum number of such circular pieces that he can cut from
the cardboard?
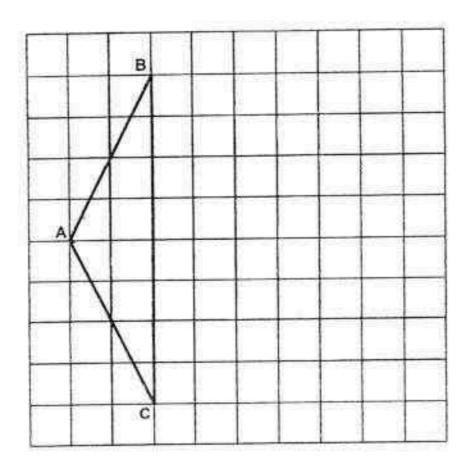
Ans: _____

3

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For questions **6** to **18**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(50 marks)

---

6   At an exhibition, $\frac{2}{5}$ of the people were women. There were thrice as many men as children. There were 190 more women than children. Find the total number of people at the exhibition.

Ans: _____ [3]

---

7   Kayla bought 4 books and 1 file for a total of $72.55. The cost of the file was $15.20 less than the average cost of each book. Find the cost of the file.

Ans: _____ [3]

(Go on to the next page)

4

8   In the square grid below, ABC is an isosceles triangle.

(a)   Measure and write down the size of ∠BAC.

(b)   AB is one of the sides of a square ABDE. D and E are two points inside the square grid. Draw three lines BD, DE and EA to complete the drawing of square ABDE.

[2]

Ans: (a) _____ [1]

(Go on to the next page)

5

9 A fruit stall sold large and small boxes of mangoes at the prices shown below.

Mangoes for Sale	
1 Large Box	1 Small Box for
$(2p − 6)$	$(\frac{p}{5} + 7)$
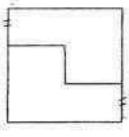
Sean had $150. He bought an equal number of large and small boxes of mangoes and had $12 left.
If $p = 10$, how many large and small boxes of mangoes did Sean buy altogether?

Ans: _____ [3]

(Go on to the next page)

6

10   A square paper of length 48 cm is cut into 2 identical pieces as shown in Figure 1. The pieces are arranged to form a rectangle as shown in Figure 2. Find the perimeter of the rectangle.

Figure 1   Figure 2

Ans: _____ [3]

7
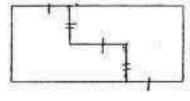
11   Rachel forms a repeated pattern using the numbers 1, 3, 5, 7 and 8.
      The first 14 numbers are shown below.

| 1, | 7, | 3, | 1, | 8, | 5, | 1, | 1, | 7, | 3, | 1, | 8, | 5, | 1, | ... |

14th

(a)   Which number is in the 26th position?

(b)   Find the sum of the first 500 numbers.

Ans: (a) _____ [1]

(b) _____ [3]

(Go on to the next page)

8
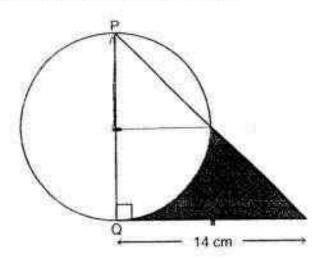
12 The figure is made up of a circle and a right-angle isosceles triangle. PQ is the diameter of the circle. Find the area of the shaded part.

$$\left(\text{Take } \pi = \frac{22}{7}\right)$$

Ans: _____ [4]

9
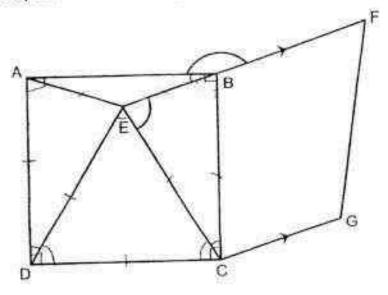
13   Julian left Town A for Town B at 11.30 a.m. He travelled at an average
      speed of 60 km/h. At 1 p.m., Shane left Town A for Town B. It took him
      3 hours to catch up with Julian.

      (a)   Find the average speed of Shane.

      (b)   When Shane caught up with Julian, they had completed 90% of the
             journey. Find the distance between Town A and Town B.

                                        Ans: (a) _____ [2]

                                             (b) _____ [2]

14 In the figure below, ABCD is a square, DEC is an equilateral triangle and CEFG is a trapezium. EBF is a straight line.

(a) Find ∠CEB.

(b) Find ∠ABF.

Ans: (a) _____ [2]

(b) _____ [2]

(Go on to the next page)

11

15 Ashley bought 8 identical files and her sister bought 8 identical keychains. The total cost of all the files and keychains was $96. Ashley then exchanged a file with her sister for a keychain. After the exchange, the total cost of the items Ashley had was $\frac{1}{3}$ of the total cost of the items that her sister had. Find the cost of one such keychain.

Ans: _____ [4]
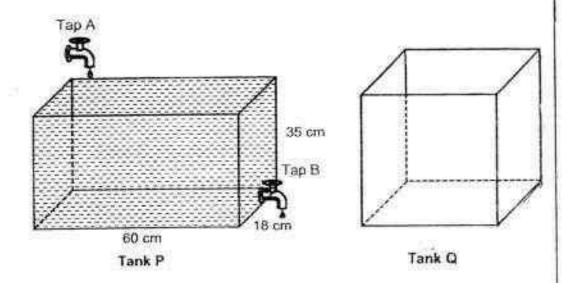
16 The figures below show a rectangular tank P and a cubical tank Q.
Tank P measures 60 cm by 18 cm by 35 cm. It is completely filled with water. Both tap A and tap B were turned on at the same time for 20 minutes. Water flowed from tap A into tank P at a rate of 500 cm^3 per minute. Water drained out from tap B at a rate of 800 cm^3 per minute and was collected in tank Q.

Tap A

35 cm

Tap B

18 cm

60 cm

Tank P

Tank Q

(a) How many litres of water was left in tank P at the end of 20 minutes?

(b) Given that tank Q had a capacity of 64 litres, what would be the height of the water level in tank Q at the end of 20 minutes?

Ans: (a) _____ [3]

(b) _____ [2]

17 Ann had 20% more money than Megan at first. After Ann gave some of her money to Megan, the ratio of Ann's money to Megan's money became 4 : 7 and Ann had $99 left.

(a) How much money did Megan receive from Ann?

(b) After Megan received the money from Ann, they bought a present for a friend. They both shared the cost of the present equally. In the end, the ratio of Ann's remaining money to Megan's remaining money was 1 : 6. What was the cost of the present?

Ans: (a) _____ [2]

(b) _____ [3]

(Go on to the next page)

14

18 Zachary had some money left after spending $158 on a jacket, a polo shirt and 2 T-shirts. He could not buy another similar jacket with his remaining money as he was short of $54. He decided to buy another similar T-shirt instead and had $27 left in the end.

(a) How much more did the jacket cost than the T-shirt?

(b) Given that the jacket cost three times as much as the polo shirt, how much money did Zachary have at first?

Ans: (a) _____ [1]

(b) _____ [4]

End of Paper

Do not write in this space

Paper 1

Q1	2	Q4	3	Q7	4	Q10	1	Q13	1
Q2	1	Q5	3	Q8	2	Q11	3	Q14	1
Q3	2	Q6	4	Q9	1	Q12	2	Q15	3

Q16   1 , 2 , 3 , 6

Q17   0.625

Q18 $60 \times 20 \times 24 = \underline{28800 \text{ cm}^3}$

Q19 $3 \times 3 \times 3 = 27$
$512 - 27 = \underline{485 \text{ cm}^3}$

Q20 $144 \div 6 = \underline{24 \text{ cm}}$

Q21 $\frac{4}{20} \times 100 = \underline{20\%}$

Q22 $\frac{5}{20} \times 100 = \underline{25\%}$

Q23

Q24 $\angle y = 120° - 48° = \underline{72°}$

Q25   90% = $270
10%   = $270 \div 9 = $30
100% = $30 \times 10 = \underline{\$300}$

Q26 $177 - 159 = 18$
$18 \div 2 = \underline{9}$

Q27 $180° - 40° - 40° - 84° = \underline{16°}$

1

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Q28 $15 + 20 + 15 = 50$
$50 \times 3 = \underline{150 \text{ marbles}}$

Q29 $42 - 14 = 28$
$7 \times \pi = 22$
$21 \times \pi = 60$
$14 + 42 + 28 + 22 + 66 = \underline{172 \text{ cm}}$

Q30 $\triangle ABF = 200 \text{ cm}^2$
$\triangle ABD = 50 \text{ cm}^2$
$\triangle BDC = 50 \text{ cm}^2 \rightarrow \frac{1}{2} \times 10u \times BC$
$\triangle BCE = \underline{40 \text{ cm}^2} \rightarrow \frac{1}{2} \times 8u \times BC$

Paper 2

Q1 $30 + 27 + 48 + 45 = 150$
$\frac{27}{150} \times 100 = \underline{18\%}$

Q2 $72 \div 8 = 9$
$9 \times 3 = 27$
$27 \times 9 = \underline{243 \text{ cm}^2}$

Q3 $33.25 - 22.8 = 10.45$
35 workbooks $\rightarrow$ 33.25
1 workbook $\rightarrow 33.25 \div 35 = 0.95$
$10.45 \div 0.95 = \underline{11 \text{ workbooks}}$

Q4 $1.81\text{kg} = 1810\text{g}$
$1810 - 360 = 1450$
$1450\text{g} = \underline{1.45\text{kg}}$

Q5 $3\text{m} = 300\text{cm}, 2\text{m} = 200\text{cm}$
$300 \div 40 = 7.5$
$200 \div 40 = 5$
$7 \times 5 = \underline{35 \text{ circular pieces}}$

Q6 $8 - 3 = 5$
5 units = 190
1 unit $= 190 \div 5 = 38$
$8 + 9 + 3 = 20$
20 units $= 38 \times 20 = \underline{760 \text{ people}}$

Q7 $15.20 \times 4 = 60.80$
$72.55 - 60.80 = 11.75$
$11.75 \div 5 = \underline{\$2.35}$

Q8a $127°$

Q8b

Q9   1 large box = $2 \times 10 - 6 = 20 - 6 = 14$
1 small box = $\frac{10}{5} + 7 = 2 + 7 = 9$
$150 + 2 = 138$
$14 + 9 = 23$
$138 \div 23 = 6 \Rightarrow 6 + 6 = \underline{12\ boxes}$

Q10 $48 \div 2 = 24$
$48 \times 4 = 192$
$192 \div 2 = 96$
$48 \div 3 = 16$
$16 + 16 = 32$
$48 + 24 = 72$
$32 + 32 + 72 + 72 = \underline{208\ cm}$

Q11a 8

Q11b $500 \div 7 = 71R3$
$71 \times 26 = 1846$
$1 + 7 + 3 = 11$
$1846 + 11 = \underline{1857}$

Q12 $7 \times 7 \times \frac{1}{4} \times \frac{22}{7} = 38.5$
$7 \times 7 \times \frac{1}{2} = 24.5$
$38.5 - 24.5 = 14$
$38.5 + 24.5 = 63$
$14 \times 14 \times \frac{1}{2} = 98$
$98 - 63 = \underline{35 cm^2}$

Q13a $60 \times 4\frac{1}{2} = 270$
Shane $\rightarrow 270 \div 3 = \underline{90\ km/h}$

Q13b $90\% \rightarrow 270km$
$10\% \rightarrow 30km$
$100\% \Rightarrow \underline{300km}$

3

Q14a $90° - 60° = 30°$

$\angle CEB = (180° - 30°) \div 2 = \underline{75°}$

Q14b $90° - 75° = 15°$

$\angle ABF = 180° - 15° = \underline{165°}$

Q15 $8F + 8K = 96$

$7F + 1K = 1u\ (\$24)$

$7K + 1k = 3u\ (\$72)$

$8F + 8K = 4u$

$\$96 = 4u$

$1u = \$24$

$3u = \$72$

$1F + 1K = 96 \div 8 = 12$

$72 - 12 = 60$

$6K \rightarrow \$60$

$1K = \underline{\$10}$

Q16a $800 - 500 = 300$

$300 \times 20 = 6000$

$60 \times 18 \times 35 = 37800$

$37800 - 6000 = 31800$

$31800 \div 1000 = \underline{31.80\ \ell}$

Q16b $\sqrt[3]{64000} = 40$

$40 \times 40 = 1600$

$800 \times 20 = 15000$

$16000 \div 40 \div 40 = \underline{10\ cm}$

Q17a $4\ units = 99$

$1\ unit = 99 \div 4 = 24.75$

$2\ units = 24.75 \times 2 = \underline{\$49.50}$

Q17b $17u \rightarrow 4.95 \times 17 = \$84.15$

$34u \rightarrow 84.15 \times 2 = \underline{\$168.30}$

Q18a $\$27 + \$54 = \underline{\$81}$

Q18b $81 \div 3 = 27$

$158 - 81 - 27 = 50$

$50 \div 10 = 5$

$5 \times 3 = 15$

$158 + 15 + 27 = \underline{\$200}$

End

4

Name:_____ (   )   23 August 2016

Class: P 6_____

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION 2

PRIMARY SIX

MATHEMATICS

PAPER 1

(BOOKLET A)

15 questions

20 marks

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Shade your answers in the Optical Answer Sheet (OAS) provided.

The use of calculators is **NOT** allowed.

This booklet consists of 7 printed pages.

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical
Answer Sheet. All diagrams are not drawn to scale.   (20 marks)
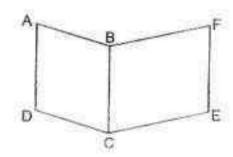
1.   Round off 60.384 to the nearest tenth.

      (1)   60
      (2)   60.3
      (3)   60.4
      (4)   60.38

2.   Which one of the following numbers is the smallest?

      (1)   0.503
      (2)   0.053
      (3)   0.305
      (4)   0.035

3.   Which one of the following is most likely to be the height measured
      vertically from the floor to a ceiling fan in a classroom?
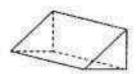
      (1)   25 cm
      (2)   25 m
      (3)   2.5 cm
      (4)   2.5 m

(Go on to the next page)

1

4. What is the value of $40 \div 4000$?

   (1)   100

   (2)   10

   (3)   0.01

   (4)   0.001

---

5. In the figure, ABCD and BCEF are parallelograms. Which one of the following pairs of lines is parallel to each other?
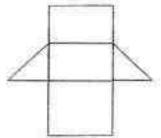
   (1)   AB and BC

   (2)   AB and EF

   (3)   AD and DC

   (4)   AD and EF

---

6. Express 1.6 as a percentage.

   (1)   160%

   (2)   16%

   (3)   0.16%

   (4)   0.016%

---

7. The figure below shows a solid.
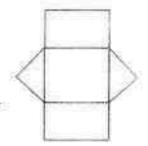
Which one of the following is a net of the solid?
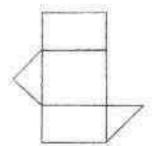
(1)
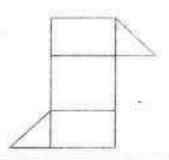
(2)

(3)

(4)
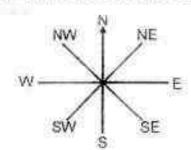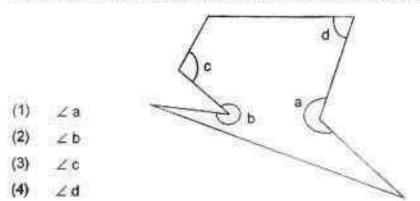
8. The figure below shows an 8-point compass.

Wendy was facing north-west (NW) at first. She then made a $\frac{3}{4}$-turn in an anti-clockwise direction. Which direction is she facing now?

(1) NE
(2) SW
(3) E
(4) S
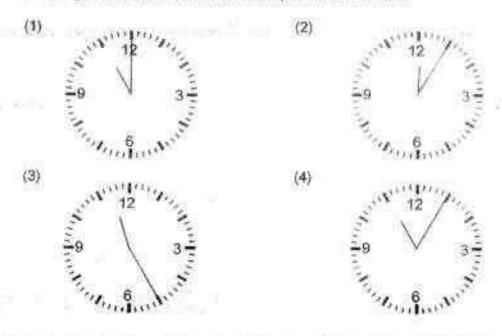
9. In the figure below, which angle is more than 180° and less than 270°?

(1) ∠a
(2) ∠b
(3) ∠c
(4) ∠d

10. The clock below showed the time Ralph began revising for his test.
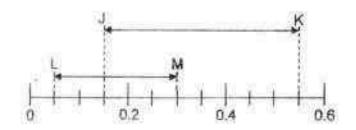
He took 130 minutes to complete his revision. Which one of the following shows the time when he completed his revision?

(1)

(2)

(3)

(4)

4

11. Which one of the following is nearest to 1?

   (1) $\frac{5}{6}$

   (2) $\frac{8}{7}$

   (3) $1\frac{1}{8}$

   (4) $1\frac{2}{5}$

---

12. In the number line below, how much longer is JK than LM?

   (1) 0.15
   (2) 0.20
   (3) 0.25
   (4) 0.35

5

13. Pauline had only the following coins in her wallet.
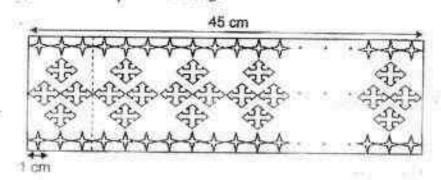
She took three coins from her wallet and dropped them into a donation box. Which one of the following could not be the amount donated?

(1)   35 ¢

(2)   80 ¢

(3) $1.15

(4) $1.65

14. A piece of ribbon 45 cm long has identical ✦ and ✤ printed on it. They are printed in a repeated pattern as shown below.

The width of each ✦ is 1 cm long.

45 cm

1 cm

How many ✤ are there in the piece of ribbon?

(1)   15

(2)   30

(3)   60

(4)   135

(Go on to the next page)

6

15. Mr Tan had some stamps. After giving away 48 of them on Monday and $\frac{2}{9}$ of the remainder on Tuesday, he was left with $\frac{1}{3}$ of his stamps. How many stamps did he give away?

    (1) 21

    (2) 36

    (3) 56

    (4) 72

END OF BOOKLET A

Name:_____ ( )   23 August 2016

Class: P 6_____

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION 2

PRIMARY SIX

MATHEMATICS

PAPER 1

(BOOKLET B)

15 questions

20 marks

Total Time for Booklets A and B: 50 min

Booklet A	
Booklet B	
Total	

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

The use of calculators is **NOT** allowed.

This booklet consists of 7 printed pages.

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

16. Find the value of $3 \div 7$
    Give your answer correct to 2 decimal places.

    Ans:_____

17. Write down the common factors of 12 and 28.

    Ans:_____

18. Find the value of 0.37×80.

    Ans:_____

(Go on to the next page)

8

19. There are 60 bananas. 24 of them are ripe while the rest are rotten. What is the ratio of the number of rotten bananas to the number of ripe bananas? Give your answer in the simplest form.

Ans:_____

20. Mrs Tan bought 6 kg of rice. She cooked 200g of rice each day. How many days did the rice last?

Ans:_____

21. In the figure below, AB and CD are straight lines. Find ∠p.

Ans:_____

(Go on to the next page)

9

22. Find the value of $\frac{5}{6} \div 10$.

Give your answer as a fraction in the simplest form.

Ans:_____

23. The total cost of a cupcake and a pie is $8.50. The cost of the cupcake is $\frac{2}{3}$ the cost of the pie. What is the cost of the cupcake?

Ans: $_____

(Go on to the next page)

10

24. At a supermarket, a customer is given 5 packets of tissue paper free for every $20 spent. Anne spent $66 at the supermarket. How many packets of tissue paper would she get?

Ans:_____

---

25. Last year, Ravi's mass was 50 kg. This year, his mass increases by 20%. What is his mass this year?

Ans:_____ kg

Total marks for questions 16 to 25

(Go on to the next page)

Questions **26** to **30** carry 2 marks each. Show your working and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

26. Find the value of $\frac{8m}{3} - 5 + m$ when $m = 6$.

Ans: _____
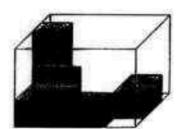
27. Andy had 28 more stamps than Bradley at first. Bradley gave 12 of his stamps to Andy. Andy now has 3 times as many stamps as Bradley. How many stamps did Bradley have at first?

Ans: _____

(Go on to the next page)

12

28. The figure shows a rectangular glass box partly filled with unit cubes. How many more unit cubes are needed to completely fill the box?
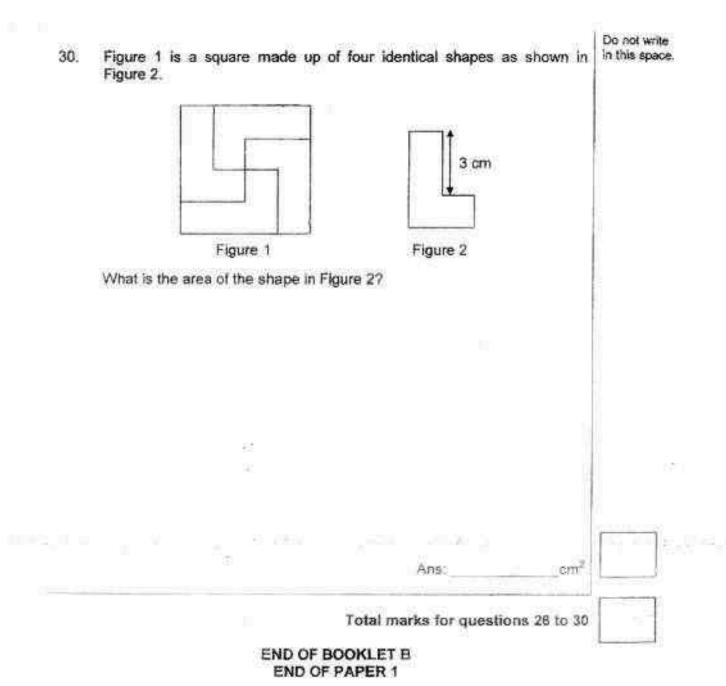
Ans: _____

29. A bag can contain 24 apples or 36 oranges at most. 27 oranges and some apples are put into one such bag. What is the greatest possible number of apples in the bag?

Ans: _____

(Go on to the next page)

13

30. Figure 1 is a square made up of four identical shapes as shown in Figure 2.

Figure 1   Figure 2

What is the area of the shape in Figure 2?

Ans: _____ cm²

Total marks for questions 28 to 30

END OF BOOKLET B
END OF PAPER 1

(Go on to the next page)

14

Name : _____ (   )   23 August 2016

Class : P 6 _____

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION 2

PRIMARY SIX

MATHEMATICS

PAPER 2

Paper 1 Booklet A		20
Paper 1 Booklet B		20
Paper 2		60
Total Marks		100

Total Time: 1 h 40 min

Parent's Signature: _____

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

The use of an approved calculator is expected, where appropriate.

This booklet consists of 16 printed pages.

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale. (10 marks)

1. In an archery competition, 3 players scored an average of 57 points. The total score of the first and second players was 96.
What was the score of the third player?

Ans: _____

2. Kelvin is 160 cm tall. Danny is y cm taller than Kelvin. Melvyn is 3 cm shorter than Danny. What is Melvyn's height?
Give your answer in terms of y in the simplest form.

Ans: _____ cm

1

Use the information below to answer questions 3 and 4

The pie chart represents the number of participants for each type of sport. Floorball had twice as many participants as volleyball.

3.   What percentage of all the participants took part in floorball?

Ans. _____ %

4.   There were 36 more participants for soccer than basketball.
     What was the total number of participants for all the 4 sports?

Ans: _____

2

5. The pattern in the box shows part of a tessellation.
Extend the tessellation by drawing two more unit shapes in the space provided in the box.
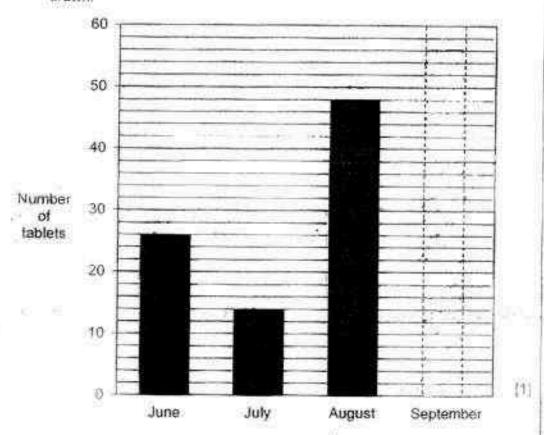
3

For questions 6 to 18, show your working and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

All diagrams are not drawn to scale. (50 marks)

6. The bar graph below shows the number of tablets sold in 4 months. The bar that shows the number of tablets sold in September has not been drawn.

The number of tablets sold in August was $\frac{1}{3}$ of the total number of tablets sold in the 4 months.

(a) What was the total number of tablets sold in the 4 months?

(b) Draw the bar that shows the number of tablets sold in the month of September in the graph.

Ans: (a) _____ [2]
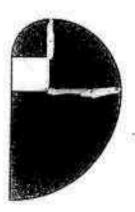
7. At a sandwich shop, the price of a chicken sandwich was $5.60 and the price of a fish sandwich was $6.40. Mrs Wong bought 85 chicken and fish sandwiches and paid $496.80 for them. How many fish sandwiches did Mrs Wong buy?

Ans _____ [3]

8. Jim and Ken shared the total cost of a lunch. Jim paid $12 more than $\frac{3}{7}$ of the cost of the lunch. Ken paid $24. How much did the lunch cost?

Ans: _____ [3]

6
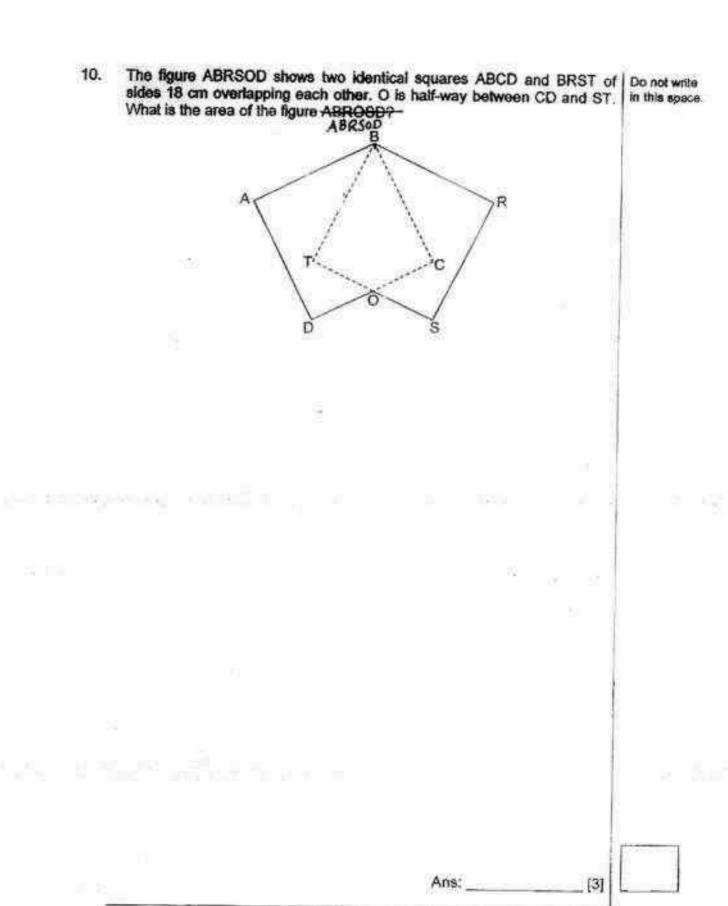
9. The figure shown below is made up of a square of sides 2 cm and 3 quarter circles of different radii. What is the perimeter of the shaded part of the figure?

Give your answer in terms of π.

Ans: _____ [3]

10. The figure ABRSOD shows two identical squares ABCD and BRST of Do not write in this space. sides 18 cm overlapping each other. O is half-way between CD and ST. What is the area of the figure ~~ABROOD?~~ ABRSoD

Ans: _____ [3]
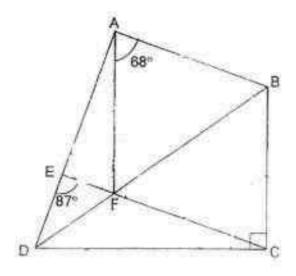
11. In the figure, ABCF is a rhombus and BCD is a right-angled triangle. EFC and AED are straight lines. ∠FAB = 68° and ∠DEF = 87°.

(a) Find ∠BDC.

(b) Find ∠EAF.

Ans: (a)_____ [2]

(b)_____ [2]

12. Peter bought a pair of sport shoes for $135 after a discount of 25%.

(a) What was the price of the pair of sport shoes before discount?

(b) He paid $44 for a basketball. The total discount for the pair of sport shoes and the basketball was $51. What was the percentage discount given for the basketball?

Ans: (a) _____ [2]

(b) _____ [2]
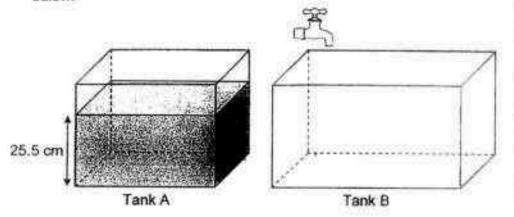
13. Eddie and Faizal started running from the same place in opposite directions along a straight path. Eddie ran at a speed of 145 m/min and Faizal ran at a speed that was 35 m/min slower than Eddie. Both ran for the same length of time and did not change their speeds throughout. At the end of the run, Eddie had ran a distance of 525 m more than Faizal. How far apart were Eddie and Faizal at the end of their run?

Ans:_____ [4]

11

14. Mr Lee baked the same number of egg tarts, cheese tarts and fruit tarts. After 61 fruit tarts and some egg tarts and cheese tarts were eaten, there were altogether 85 tarts left. There were three times as many egg tarts as cheese tarts left. The number of fruit tarts left was 5 fewer than the number of cheese tarts left. How many egg tarts were eaten?

Ans: _____ [4]

15. Tank A and Tank B were two rectangular tanks. The base area of Tank A was 1800 cm^2 while that of Tank B was 2400 cm^2. At first, Tank A contained water to a height of 25.5 cm and Tank B was empty as shown below.

25.5 cm

Tank A   Tank B

Then, water flowed from a tap into Tank B at a rate of 3 litres per minute for 12 minutes.

(a) What was the volume of the water in Tank B at the end of the 12 minutes?

(b) Some water was then transferred from Tank A to Tank B until the height of the water level was the same in both tanks. What was the new height of the water level in both tanks?

Ans: (a) _____ [1]

(b) _____ [4]

13

16. Alvin has some 10¢, 20¢ and 50 ¢ coins in a money box.
The ratio of the number of 10¢ coins to that of 20 ¢ coins is 1 : 2.
The ratio of the number of 50¢ coins to the total number of 10¢ and 20¢
coins is 3 : 4.
The total value of the 50¢ coins is $16.40 more than the total value of
the 10 ¢ coins.
How much money does Alvin have in his money box?

Ans: _____ [4]

14

17. A tin box filled with 50 identical glass marbles weighs 1.1 kg. The same tin box when filled with 20 identical steel marbles weighs 1.3 kg. The mass of each glass marble is 39.7 g less than that of a steel marble. What is the mass of an empty tin box?

Ans: _____ [5]

18. Thomas spent $\frac{2}{3}$ of his money on 3 books and 7 pens.

The cost of each book is 3 times the cost of each pen.

He bought some more pens with $\frac{1}{4}$ of his remaining money and had $45 left.

How much did Thomas spend on the pens altogether?

Ans: _____ [5]

END OF PAPER.
PLEASE CHECK YOUR WORK CAREFULLY.

16

SCHOOL   :   CATHOLIC HIGH SCHOOL
LEVEL   :   PRIMARY 6
SUBJECT   :   MATH
TERM   :   PRELIM 2

CONTACT :

PAPER 1 BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	4	4	3	4	1	2	1	1	2

Q 11	Q12	Q13	Q14	Q15
3	1	4	3	3

PAPER 1 BOOKLET B

Q16)	0.43
Q17)	1, 2, 4
Q18)	29.60
Q19)	3:2
Q20)	$6000 \div 200 = \underline{30}$
Q21)	$126°$
Q22)	1/12
Q23)	$8.50 \div 5 = 1.70$ $1.70 \times 2 = \underline{3.40}$
Q24)	$20 → 5 pkt $40 → 10 pkt $60 → \underline{15} pkt
Q25)	60

Q26)	8X6=48
	48÷3=16
	16-5=11
	11+6=<u>17</u>
Q27)	28 + 12 + 12 = 52
	52 ÷ 2 = 26
	26 x 3 = 78
	78 -12 = 66
	66 – 28 = <u>38</u>
Q28)	4 x 4 = 16
	16 x 3 = 48
	48 – 10 = <u>38</u>
Q29)	24 A = 36 Oranges
	6 A = 9 Oranges
	18 A = 27 Oranges
	Apples → 24 – 18 = <u>6</u>
Q30)	Length of square → 3 cm + 3 cm = 6 cm
	Area of square (4 L-shape) → 6 cm x 6 cm = 36 cm²
	Area of one L-shape → 36 cm² ÷ 4 = <u>9</u> cm²

PAPER 2

Q1)	Total points → 57 x 3 = 171
	Third player score → 171 - 96 = <u>75</u>
Q2)	D → (160 + y) cm
	M → (160 + y – 3) cm = <u>(157 + y) cm</u>

Q3)	26 + 35 = 61
	100 − 61 = 39
	39 ÷ 3 = 13
	13 × 2 = 26
	Ans : <u>26%</u>
Q4)	35 − 26 = 9
	36 ÷ 9 = 4
	4 × 100 = <u>400</u>
Q5)	
Q6)	(a) 48 × 3 = <u>144</u>
	(b) 48 + 14 + 26 = 88
	144 − 88 = <u>56</u>
Q7)	$5.60 × 85 = $476
	$496.80 − $476 = $20.80
	$6.40 − $5.60 = $0.80
	$20.80 ÷ $0.80 = <u>26</u>
Q8)	$24 + $12 = $36
	$36 ÷ 4 = $9
	$9 × 7 = <u>$63</u>
Q9)	$\frac{1}{4} \times \pi \times 4 \times = \pi$
	$\frac{1}{4} \times \pi \times 8 = 2\pi$
	$\frac{1}{4} \times \pi \times 12 = 3\pi$
	$2 + 2 + 2 + 6 + \pi + 2\pi + 3\pi = 6\pi + 12$
	Ans: <u>(6 π + 12) cm</u>

Q10) Area of square → 18cm x 18cm = 324 cm^2

Area of 2 squares → 324cm^2 x 2 = 648 cm^2

Length of OT → 18/2 cm = 9cm

Area of BOT → ½ x 9 cm x 18 cm = 81 cm^2

Area of BOT and BOC → 81cm^2 x 2 = 162 cm^2

Area of ABRSOD → (648 – 162) cm^2 = <u>486 cm^2</u>

Q11) (a) 180 – 68 = 112

112 ÷ 2 = 56

56 + 90 = 146

180 – 146 = 34

Ans : <u>34°</u>

(b) 90 – 68 = 22

22 + 34 = 56

180 – 56 = 124

180 – 87 = 93

56 x 2 = 112

180 – 112 = 68

68 + 93 = 161

180 – 161 = 19

Ans : <u>19°</u>

Q12) (a) 100% – 25% = 75%

$135 / 75 = $1.80

$1.80 x 100 = <u>$180</u>
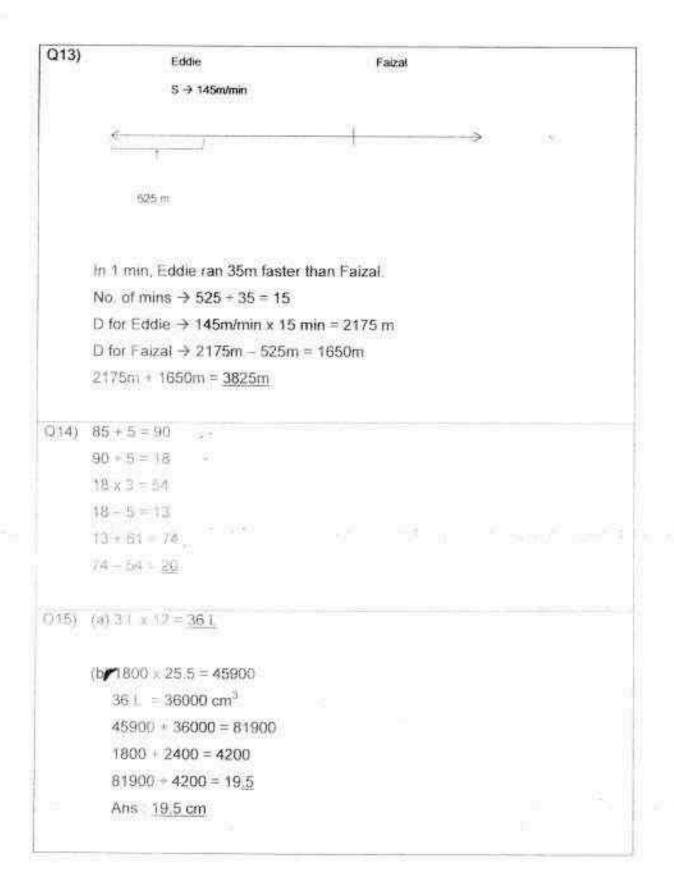
(b) $1.80 x 25 = $45

$51 – $45 = $6

$44 + $6 = $50

6/50 x 100% = <u>12%</u>

Q13)

Eddie   Faizal

S → 145m/min

525 m

In 1 min, Eddie ran 35m faster than Faizal.

No. of mins → 525 ÷ 35 = 15

D for Eddie → 145m/min x 15 min = 2175 m

D for Faizal → 2175m – 525m = 1650m

2175m + 1650m = <u>3825m</u>

Q14) 85 + 5 = 90

90 ÷ 5 = 18

18 x 3 = 54

18 – 5 = 13

13 + 61 = 74

74 – 54 = <u>20</u>

Q15) (a) 3 l x 12 = <u>36 l</u>

(b) 1800 x 25.5 = 45900

36 l = 36000 cm³

45900 + 36000 = 81900

1800 + 2400 = 4200

81900 ÷ 4200 = 19.5

Ans <u>19.5 cm</u>

Q16)

10¢	:	20¢	:	Total 10¢ & 20 ¢	:	50¢
1	:	2	:	3		
				4	:	3
4	:	8	:	12		
				12	:	9
4	:	8	:	12	:	9

×4 (on left), ×3 (on right)

$9 \times \$0.50 = \$4.50$

$4 \times \$0.10 = \$0.40$

$\$4.50 - \$0.40 = \$4.10$

$\$16.40 \div \$4.10 = 4$

$(4 \times \$0.10) + (8 \times \$0.20) + (9 \times \$0.50)$

$= \$0.40 + \$1.60 + \$4.50$

$= \$6.50$

$\$6.50 \times 4 = \underline{\$26}$

Q17) Difference in total weight → 1.3 kg – 1.1 kg = 0.2 kg

0.2 kg = 200 g

$20 \times 39.7g = 794 g$

$794g - 200g = 574g$

574g all contributed by 30 glass balls

$574g \div 30 = 19.8g$

Total glass ball = $19.8g \times 50 = 990g$

Weight of tin → 1100g – 990g = $\underline{110g}$

Q18)

Money

3 Books

7 Pens

$3 \times 3 = 9$

$9 + 7 = 16$

$16 \div 2 = 8$

Money → $8 \times 3 = 24U$

More Pen → $\frac{1}{4} \times 8 = 2$

Total Pens → $7 + 2 = 9$

$8U - 2U = 6U$

$6U → \$45$

$1U → \$45 \div 6 = \$7.50$

Total Pens cost → $\$7.50 \times 9 = \underline{\$67.50}$

RED SWASTIKA SCHOOL

2016 PRELIMARY EXAMINATION

MATHEMATICS
PAPER 1

Name _____ (   )

Class   Primary 6 _____

Date   25 August 2016

BOOKLET A

15 Questions
20 Marks
Duration of Paper 1 (Booklets A & B): 50 minutes

Note:

1. Do not open this Booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the Booklet.
3. Do not waste time. If a question is difficult for you, go on to the next one.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this booklet, you should have the following:
   (a) Page 1 to Page 6
   (b) Questions 1 to 15
6. You are not allowed to use a calculator.
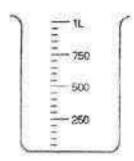
Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet. (20 marks)

1   In 6 859 703, which digit is in the ten thousands place?

   (1)   5
   (2)   6
   (3)   8
   (4)   9

2   What is the missing number in the box?

   $0.37 \div 10 = 37 \div \boxed{}$

   (1)   0.001
   (2)   0.01
   (3)   100
   (4)   1 000

3   A meat seller bought meat at $2.50 per kg. He sold it at $1.60 per 500 g. How much did he earn for selling 1 kg of meat?

   (1) $0.35
   (2) $0.45
   (3) $0.70
   (4) $0.90

4   Mindy, Nancy and Osman shared 350 stickers in the ratio 3 : 2 : 5. Find the number of stickers Osman had more than Mindy.

   (1)   35
   (2)   70
   (3)   105
   (4)   175

1

5   What is the volume of water in the beaker?
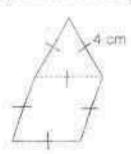
(1)   270 m*l*
(2)   275 m*l*
(3)   300 m*l*
(4)   350 m*l*

6   Ganesh took 215 minutes to complete his work. What time did he start doing his work given that he completed it at 1.05 p.m.?

(1)   9.30 a.m.
(2)   10.50 a.m.
(3)   3.20 p.m.
(4)   4.40 p.m.
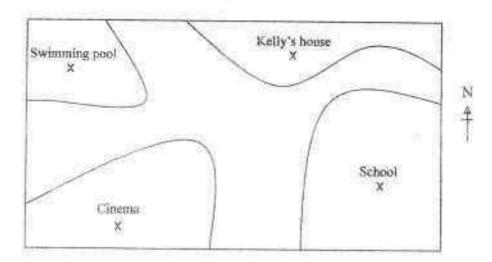
7   The figure below is made of an equilateral triangle with sides 4 cm and a rhombus. Find the perimeter of the figure.
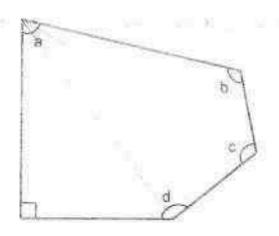
(1)   16 cm
(2)   20 cm
(3)   24 cm
(4)   28 cm

2

8   The picture below shows a map of ABC Neighbourhood. In which
     direction is the cinema from Kelly's house?

(1)   North-East
(2)   North-West
(3)   South-East
(4)   South-West

9   What is the sum of ∠a, ∠b, ∠c and ∠d?

(1)   360°
(2)   450°
(3)   540°
(4)   630°

10 A group of 15 students was asked to choose their favourite number from 1 to 5. The table below shows the results.

Favourite Number	Number of students
1	3
2	5
3	2
4	2
5	3

How many students had chosen an odd number as their favourite number?

(1) 6
(2) 7
(3) 8
(4) 9

11 For every $\frac{1}{4}$ of the pizza that Rosaline eats, Yin Le will eat $\frac{1}{6}$ of it.
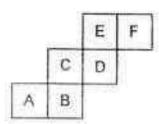
What fraction of the pizza will Yin Le eat if Rosaline eats $\frac{1}{3}$ of it?

(1) $\frac{1}{8}$

(2) $\frac{2}{9}$

(3) $\frac{1}{2}$

(4) $\frac{2}{3}$
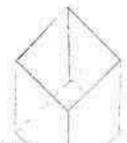
12 A cardboard 9 m by 3 m was cut into 3 identical pieces. What could be the maximum perimeter of one of the cut pieces?

(1) 8 m
(2) 12 m
(3) 20 m
(4) 24 m
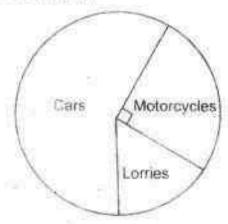
13   The net below is folded into a cube.

Which letter is directly opposite to the face of 'B'?

(1)   A
(2)   C
(3)   E
(4)   F

14   The pie chart below shows the number of cars, motorcycles and lorries parked in a car park.

There are 10 motorcycles parked in the car park. Each motorcycle has 2 wheels while the car and lorry has 4 wheels each. Find the total number of wheels for the vehicles parked in the car park.

(1)   40
(2)   80
(3)   100
(4)   140

15 Mr Lim drove his car for 30 minutes at an average speed of 90 km/h.
    Find the distance travelled by Mr Lim.

    (1) 3 km
    (2) 45 km
    (3) 180 km
    (4) 2700 km

RED SWASTIKA SCHOOL

2016 PRELIMINARY EXAMINATION

MATHEMATICS
PAPER 1

Name : _____ (   )

Class : Primary 6 / _____

Date : 25 August 2016

BOOKLET B

15 Questions
20 Marks

In this booklet, you should have the following:
(a) Page 7 to Page 13
(b) Questions 16 to 30

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		20
BOOKLET B		20
TOTAL		40

Parent's Signature : _____

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.
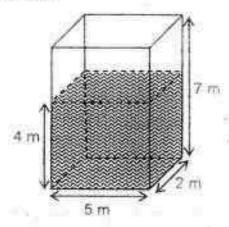
(10 marks)

16 What is 2.65 when rounded off to the nearest tenth?

Ans. _____
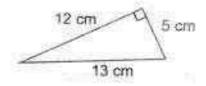
17 The tank below contains water to a height of 4 m. Find the volume of the water in the tank.

Ans. _____ m^3
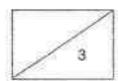
18 Find the area of the triangle below.

Ans: _____ cm^2
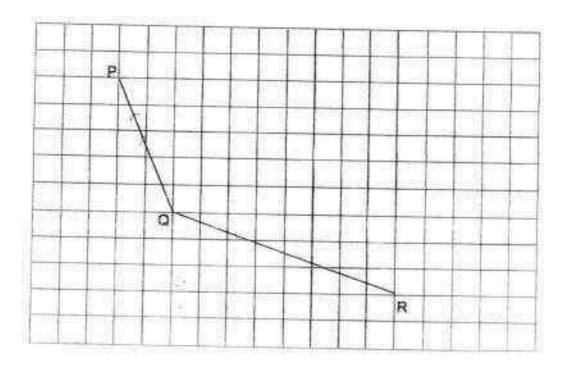
PQ and QR are two sides of a parallelogram PQRS. Use the diagram below to answer Questions 19 and 20.

19   Complete the parallelogram by drawing the other two sides in the square grid below.
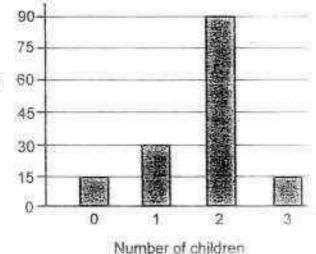
20   Measure and write down the size of ∠PQR.

Ans: _____

The bar graph below shows the number of families with and without children in an estate. Use the information to answer Questions 21, 22 and 23.

Number of families

Number of children

21   How many families are there in the estate?

Ans: _____

22   Find the number of children in the estate

Ans: _____

23   Will the average number of children per family increase, decrease or remain the same when another family without children shift into the estate?

Ans: _____

9
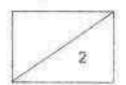
24 Town X and Town Y were 48 km apart. A car left Town X while a lorry left Town Y at the same time and the ratio of their average speed was 7 : 5 respectively. Find the distance travelled by the car when the two vehicles met.

Ans: _____ km

---
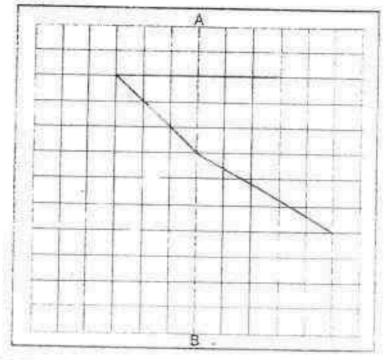
25 Kester and Yu Rei start cycling at the same time from the same place. If they cycle in the opposite direction, they will be 57 km apart after 2 hours. If they cycle in the same direction, Kester will be 3 km ahead of Yu Rei after 2 hours. Find Kester's average speed.

Ans: _____ km/h

Questions 26 to 30 carry 2 marks each. Show your workings clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)
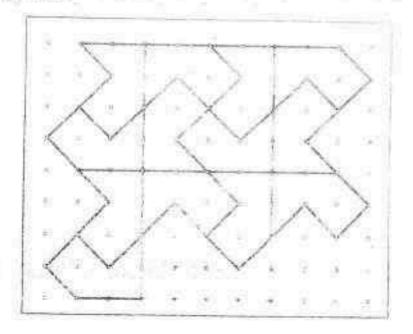
26   How many sixths are there in $12\frac{1}{2}$?

Ans: _____

27   Mrs Lim packed $\frac{2}{5}$ kg of flour equally into 6 packets. How many kilograms of flour was there in 1 packet?

Ans: _____ kg

28 Draw two straight lines to form a symmetric figure with AB as the line of symmetry.

29 The pattern in the box below shows part of a tessellation. Extend the tessellation by drawing two more unit shapes in the space provided within the box.

30 In the figure, what fraction of the square is covered by the circle? Give
    your answer in terms of π.

Ans _____

13

RED SWASTIKA SCHOOL

2016 PRELIMINARY EXAMINATION

MATHEMATICS
PAPER 2

Name : _____ ( )

Class : Primary 6 / _____

Date : 25 August 2016

18 Questions
60 Marks
Duration of Paper 2: 1 hour 40 minutes

Note:

1. Do not open this Booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the Booklet.
3. Do not waste time. If a question is difficult for you, go on to the next one.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this paper, you should have the following:
   (a) Page 1 to Page 15
   (b) Questions 1 to 18
5. You are allowed to use a calculator.

MARKS

	OBTAINED	POSSIBLE
PAPER 1		40
PAPER 2		60
TOTAL		100

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

1   Zhi Kai had a total of 345 local and foreign stamps. He gave half of his local stamps away and bought 15 more foreign stamps. In the end, the number of the foreign stamps he had was thrice as many as the number of local stamps. How many local stamps did he have at first?
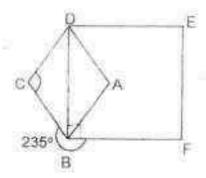
Ans _____

2.   Joyce wanted to buy 7 identical blouses but found that she was short of $14.50. In the end, she bought 5 of the blouses and had $8.50 left. Find the cost of each blouse.

Ans:$ _____

4

3 When Tina increases her number of marbles by half and Sam decreases his number of marbles by half, both of them will have y marbles each. Find their total number of marbles at first in terms of y.

Ans: _____

---
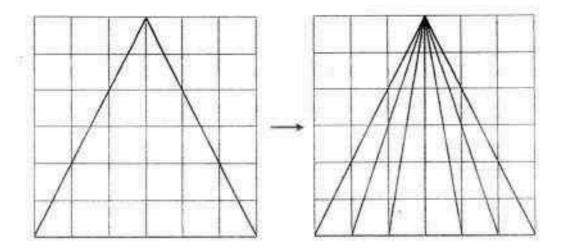
4 In the figure below, ABCD is a rhombus and DEFB is a square. BD is the diagonal of the rhombus and $\angle CBF = 235°$. Find $\angle DCB$.
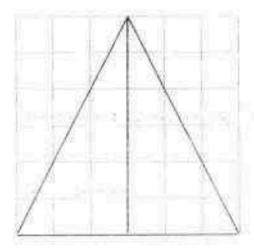
Ans: _____ =

---

5   Samantha divided the triangle below into 6 smaller triangles with equal area as shown.

Complete the drawing below to show how Samantha can divide the triangle below into 6 smaller triangles with equal area in another way.

For Questions 6 to 18, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(50 marks)

---

6 Mrs Koh wants to pack 28 erasers and 70 pencils into some bags. Each bag must contain a mixture of erasers and pencils.

(a) What is the maximum number of bags in which she can pack these items equally without any leftover?

(b) Find the total number of items in each bag given that she packs all the items into the maximum number of bags.

Ans (a) _____ [2]

(b) _____ [1]

---
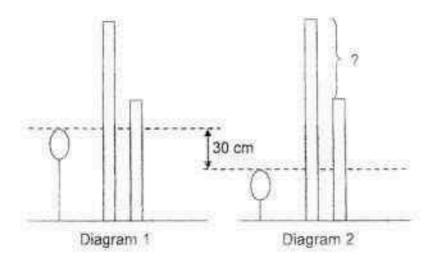
7 Elise, Fahim and Greg shared a box of sweets. Elise took $\frac{2}{3}$ of the sweets from the box. Fahim took half of the remaining sweets and another 14 sweets from the box. Greg took the last 9 sweets. How many sweets were there in the box at first?

Ans: _____ [3]

5

8   Mrs Tan has a bag containing some ten-cent and fifty-cent coins. If she adds in 4 ten-cent coins, 70% of the coins in the bag are fifty-cent coins. If she continues to add in another 20 fifty-cent coins, 80% of the coins in the bag are fifty-cent coins. Find the value of her ten-cent coins at first.

Ans: _____ [3]
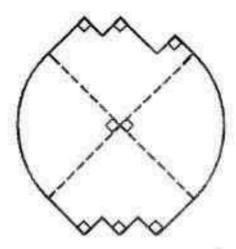
9   The diagrams below show a balloon placed beside two vertical poles. At first, the ratio of the height of each pole above the balloon is 4 : 1, as shown in Diagram 1. When the balloon is lowered by 30 cm as shown in Diagram 2, the ratio of the height of each pole above the balloon became 11 : 5. Find the difference in the height of both poles.

Diagram 1   Diagram 2

Ans: _____ [3]
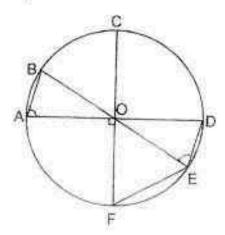
10 In the figure below, the diameter of the two identical quadrants is 40 cm.
Find the perimeter of the figure. Take π = 3.14.

Ans: _____ [3]
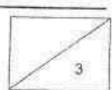
11 In the figure below, AD, BE and CF are the diameters of the circle. Given that OA = FE,
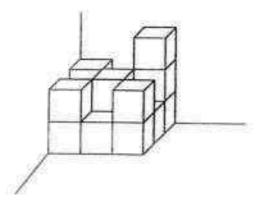
(a) name an isosceles triangle in the figure,
(b) find ∠OAB.

Ans. (a) _____ [1]

(b) _____ [2]

8
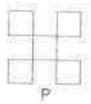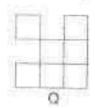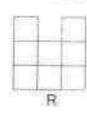
12   Bala stacked some cubes into a solid as shown below. The base area
      of each cube is 16 cm². The volume of the solid is 896 cm³.

(a)   Find the volume of one cube.

(b)   How many cubes did Bala use?

(c)   Bala observed his solid from the top. Which one of the following
       (P, Q, R or S) shows the top view of his solid?

P   Q   R   S

Ans: (a) _____ [2]

     (b) _____ [1]

     (c) _____ [1]
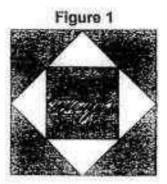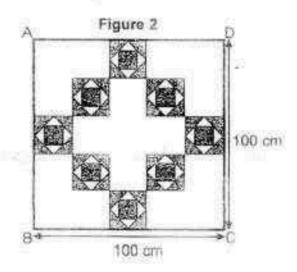
13 Figure 1 shows a square tile. Each inner square is formed by joining the mid-points of the sides of the outer square.

Figure 1

(a) What fraction of the square tile in Figure 1 is shaded?

(b) Figure 2 shows a bigger square ABCD, 100 cm by 100 cm, laid with the square tiles. Find the total shaded area in the bigger square ABCD.

Figure 2

100 cm

100 cm

Ans: (a) _____ [1]

(b) _____ [3]

4

14 Sean, Ken and Don sat for a Mathematics test. All their marks scored were in whole numbers. The sum of Sean's and Ken's marks was 156. The average marks of the three boys were 75.

(a) Find Don's mark.

(b) Given that Don scored the lowest mark and Sean scored the highest mark among the three boys, what could be the highest possible marks Sean had scored?

Ans: (a) _____ [2]

(b) _____ [2]
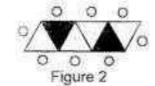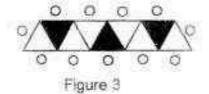
15 A trapezium-shaped table can seat 5 people.

Mr Png uses the trapezium-shaped tables to form figures that follow a pattern to plan the number of people sitting around the tables for a gathering. The first three figures are shown below.

Figure 1   Figure 2   Figure 3

(a) The table below shows the number of people Mr Png could plan for each figure. Complete the table for Figure 4.

Figure Number	Total number of people	Number of people who are seated at the unshaded triangles
1	5	4
2	8	6
3	11	8
4		10

[1]
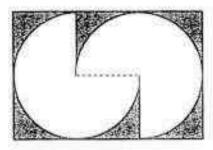
(b) Find the least number of trapezium-shaped tables Mr Png need if he is planning to seat 21 people around the tables.

(c) Find the maximum number of people who could sit around the trapezium-shaped tables if Mr Png plans 24 people to sit at the unshaded triangles of his tables.

Ans:(b) _____ [2]

(c) _____ [2]

12

5
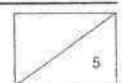
16 Pauline places 2 identical three-quarter circles onto a black rectangular mat without overlapping as shown in the diagram below. The diameter of each of the three-quarter circle is 28 cm.

(a) Find the length of the rectangular mat.

(b) Find the area of the rectangular mat not covered by the 2 identical three-quarter circles.

Take $\pi = \dfrac{22}{7}$

Ans: (a) _____ [1]

(b) _____ [4]

13

17 4 children, Abby, Ben, Chris and Denise, shared some story books. Abby received 20% less story books than Ben while the remaining story books were shared between Chris and Denise in the ratio of 7 : 5. Given that Denise received 25% of the number of story books Abby received,

(a) what fraction of the total story books did Chris received?

(b) what percentage of Abby's story books must be given to Denise so that they both have the same number of story books?

Ans: (a) _____ [3]

(b) _____ [2]

14

5

18. Mr Wang sold 4 times as many ipads as laptops and collected a total of $8 400. Each laptop costs $325 more than an ipad. The amount collected for all the ipads sold was $3 480 more than the amount collected for all the laptops sold. How many laptops did Mr Wang sell?

Ans. _____ [5]

END OF PAPER 2

5

15

SCHOOL : RED SWASTIKA PRIMARY SCHOOL
SUBJECT : MATHEMATICS
TERM : PRELIMINARY EXAMINATION 2016

PAPER 1
BOOKLET A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	4	3	2	4	1	2	4	2	3

Q11	Q12	Q13	Q14	Q15
2	3	3	4	2

BOOKLET B
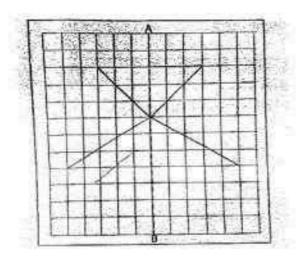
16) 2.7   17) 40m³   18) 30cm²
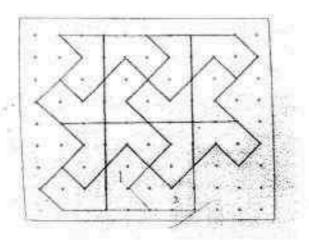
19)

20) 133°   21) 150   22) 255   23) Decrease   24) 28km   25) 15km/h

26) 75   27) $\frac{1}{15}$ kg

28)

29) _____

30) $\frac{\pi}{4}$

PRELIMINARY EXAM PAPER 2016

SCHOOL : RED SWASTIKA PRIMARY SCHOOL
SUBJECT : MATHEMATICS PRIMARY 6
TERM : PRELIMINARY EXAMINATION 2016

PAPER 2

Q1 WORKING

L : F = 1:3
5 — 345 + 15 = 360
1u = 72
2u = 144
Answer: 144

Q2 WORKING

2 blouses ---- $14.50 + $8.50 = 23
1 blouse --- $11.50
Answer: $11.50

Q3 WORKING

$3u — y$

$1u - \dfrac{y}{3}$

$8u - \dfrac{8y}{3}$

Answer: $\dfrac{8y}{3}$

Q4 WORKING

360 − 325 − 92 = 35
180 − 35 − 35 = 110
Answer: 110°

Q6 WORKING

a) Factor of 28: 1,2,4,7,14,28
Factor of 70: 1,2,5,7,10,14

b) $28 \div 14 = 2$
$70 \div 14 = 5$
$2 + 5 = 7$
Answer: a) 14,   b) 7

Q7 WORKING

1u — 9 +14 = 23
6u — 138
Answer: 138

Q8 WORKING

10¢ : 50¢ = 3   7 x 2 = 6   14 (+20)
2 : 8 x 3 = 6 : 24
24 − 14 = 10
10u — 20
1u — 2
6u — 12
12 − 4 = 8
8 x $0.10 = $0.80
Answer: $0.80

Q9 WORKING

T : S : O = 4 : 1 : 3 (x2)

$\qquad$ 8 : 2 : 6

30 : -30

11 : 5 : 6

3u —— 30cm

6u —— 60cm

Answer : 60cm

Q10 WORKING

$\frac{1}{2} \times \pi \times 40 = 62.80$

20 x 4 = 80

62.80 + 80 = 142.80

Answer : 142.8cm

Q11 WORKING

S/ 180 − 30 = 150

150 ÷ 2 = 75

Answer: a) DOE   b) 75°

Q12 WORKING

(a) $\sqrt{16} = 4$

4 x 4 x 4 = 64

(b)) $\sqrt{16} = 4$

4 x 4 x 4 = 64

896 ÷ 65 = 4

Answer: (a) $64cm^2$ (b) 14   (c) (R)

Q13 WORKING

(a) $2u \times 2u = 4u$

$1u \times 1u = 1u$

$\frac{1}{2}u \times 1u \times 1u = \frac{1}{2}u$

$\frac{1}{2}u \times 4 = 2u$

$2u + 1u = 3u$

(b) $100 \div 5 = 20$

$20 \times 20 = 400$

$\frac{3}{4} \times 400 = 300$

$300 \times 8 = 2400$

Answer: (a) $\frac{3}{4}$, (b) $2400 \ cm^2$

Q14 WORKING

(a) $75 \times 3 = 225$

$225 - 156 = 69$

(b) $156 \div 2 = 78$

$78 - 69 = 9$

$9 - 1 = 8$

$78 + 8 = 86$

Answer: (a) 69 (b) 86

Q15 WORKING

(b) Fig 5 — 17

Fig 6 — 20

Fig 7 — 21

$21 - 2 = 19$

$19 \div 3 = 6R1 = 7$

(c) $24 - 2 + 22$

$22 \div 2 = 11$

$11 \times 3 = 33$

$33 + 2 = 35$

Answer: (a) 14, (b) 7, (c) 35

Q16 WORKING
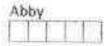
(a) $28 + 14 = 42$

(b) $\frac{3}{4} \times \frac{22}{7} \times 14 \times 14 = 462$

$462 \times 2 = 1176$

$1176 - 924 = 252$

Answer: (a) 42cm, (b) 252 cm^2

Q17 WORKING

(a)

Abby

Ben

Denise

Abby : Ben = 20 : 25

Chris : Denise = 7 : 5

$20 + 25 + 7 + 5 = 57$

Chris: $\frac{7}{57}$

(b) Denise & Abby in the end = $\frac{20u + 5}{2} = 12.5u$

$20u - 12.5u = 7.5u$

$\frac{7.5}{20} \times 100\% = 37.5\%$

Answer: (a) $\frac{7}{57}$ (b) 37.5%

Q18 WORKING

8400 − 3480 = 4920
4920 ÷ 2 = 2460 (laptop money collected)
2460 + 3480 (ipad money collected)
495 × 12 = 5940
12 ÷ 4 = 3
Answer: 3

End of paper 2

Index number: ☐☐☐☐☐ – ☐

SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2016

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET A

Name : _____ ( )

Class : Primary 6

		Marks attained	Max Mark	Parent's Signature
Paper 1	Booklet A		20	
	Booklet B		20	
Paper 2			60	
Total Marks			100	

15 Questions
20 Marks

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANDIDATES
Do not open this booklet until you are told to do so.
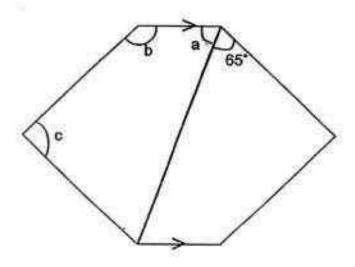Follow all instructions carefully.
Answer all questions.
You are **not allowed** to use a calculator
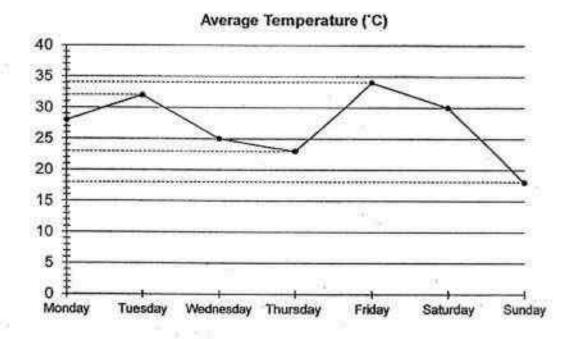
6. A rectangle of length 6 cm has an area of 78 cm². What is its breadth?

   (1)   6.5 cm
   (2)   13 cm
   (3)   19.5 cm
   (4)   33 cm

7. The graph below shows the average temperature from Monday to Sunday. From which day to which day was there the greatest drop in temperature?

Average Temperature (°C)
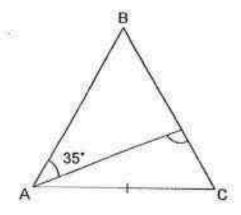
   (1)   Tuesday to Wednesday
   (2)   Thursday to Friday
   (3)   Friday to Saturday
   (4)   Saturday to Sunday

8. Andy, Billy and Charlie shared a sum of money in the ratio of 3 : 5 : 4. What is the difference in the amount Andy and Billy had when Charlie had $50?

   (1) $12.50
   (2) $25
   (3) $50
   (4) $75

2

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet. **(20 marks)**
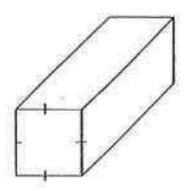
1. What is the value of the digit '1' in 3 406 125?

    (1) 100
    (2) 1000
    (3) 10 000
    (4) 100 000

2. Find the value of $20 - (15 - 5) \div 5 \times 2$.

    (1) 1
    (2) 16
    (3) 3
    (4) 19

3. Express 700 g in kilograms.

    (1) 0.007 kg
    (2) 0.07 kg
    (3) 0.7 kg
    (4) 7 kg

4. What is 2.404×3 rounded off to the nearest 2 decimal places?

    (1) 7.20
    (2) 7.21
    (3) 7.22
    (4) 7.24

5. What is the lowest common multiple of 6 and 8?

    (1) 1
    (2) 2
    (3) 24
    (4) 48

1
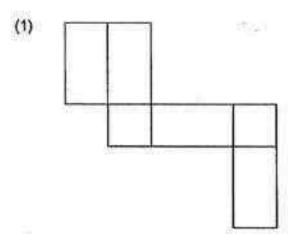
9. Mrs. Poon baked 7y cookies and gave 15 cookies to each of her children. How many children does she have if she has 3y cookies left?

    (1) $\dfrac{4y}{15}$

    (2) $\dfrac{15}{4y}$

    (3) $\dfrac{3y}{7y-15}$

    (4) $\dfrac{7y-15}{3y}$

10. Triangle ABC below is an equilateral triangle. Find the value of $\angle x$.
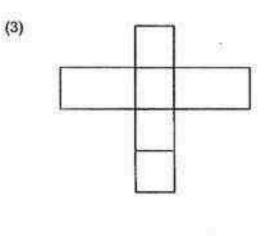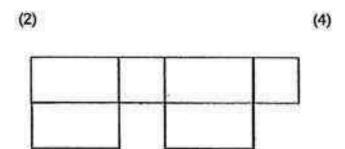
    (1) 25°
    (2) 75°
    (3) 85°
    (4) 95°

11. A piece of string is cut into two pieces, which are used to form two squares. The sum of the areas of the two squares is 45 cm². The length of the smaller square is 3 cm. What is the length of the bigger square?

    (1) 4.5 cm
    (2) 6 cm
    (3) 3 cm
    (4) 9 cm

3
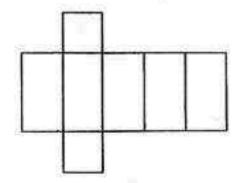
12. Which of the following shows the net of the solid below?

(1)

(3)

(2)

(4)
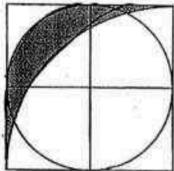
13. The ratio of the length to the breadth of a rectangular cardboard is 5 : 2 . Given that the sum of all sides of the cardboard is 70 cm, find its breadth.

   (1)   5 cm
   (2)   10 cm
   (3)   20 cm
   (4)   50 cm

14. Sally left Singapore for Philippines and arrived at 3.05 a.m. What time did she depart from Singapore if the journey was $3\frac{1}{2}$ hours long?

   (1)   11.25 p.m.
   (2)   11.35 p.m.
   (3)   12.25 p.m.
   (4)   12.35 p.m.

15. The figure below is made up of a square, a quadrant and a circle. The length of the square is 14 cm. Find the perimeter of the shaded portion of the figure. (Take $\pi = \frac{22}{7}$)

   (1) $16\frac{1}{2}$ cm

   (2) $30\frac{1}{2}$ cm

   (3)   33 cm

   (4)   47 cm

Index number: ☐☐☐☐☐ – ☐

SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2016

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET B

Name : _____( )

Class : Primary 6 SY/C/G/SE/P

Paper 1	Mark attained	Max Mark
Booklet B		**20**

15 Questions
20 Marks

Total Time for Booklets A and B: 50 min

<u>INSTRUCTIONS TO CANDIDATES</u>
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You are **not allowed** to use a calculator

Name:_____(   )   Class: P6 SY/C/G/SE/P
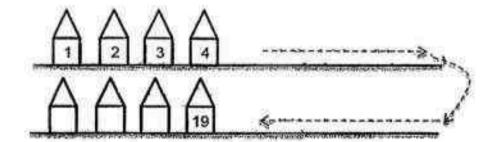
Questions **16** to **25** carry **1** mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. **(10marks)**

16. What is the ratio of 80 m to 2 km in the simplest form?

Ans:_____

17. What is $\dfrac{3}{4} \times \dfrac{2}{9}$ expressed in the simplest form?

Ans:_____

18. Find 80% of $50.

Ans: $_____

19. Natasha is 12 years old. Tanya is 2p years younger than her. What is Tanya's age in 3 years' time? (Give your answer in terms of p)

Ans:_____years

4

1

20. Uncle Leong sold 4 fishes and 2 kg of flour for $23. How much does 1 kg of flour cost if each fish costs $4?
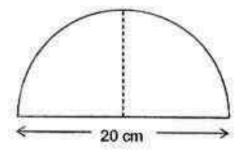
Ans: $_____

21. There are two rows of houses along a street. The houses are numbered 1, 2, 3 and so forth, up one side and then back down the other side. Unit number 4 is opposite unit number 19. What unit number is opposite unit 9?

Ans: _____

22. Find the area of a semi-circle with a diameter of 20 cm. (Take π as 3.14)

20 cm

Ans: _____ cm²

3

2
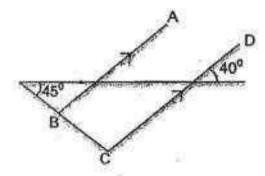
23. The length of a piece of string is 1.2 m. Mary uses 24 cm of the string to tie a parcel. She then cuts the remainder into 3 equal pieces. What is the length of the each of the remainder shorter piece of string?

Ans: _____ cm

24. Lines AB and CD are parallel. Find the value of ∠ABC.

Ans: _____

25. Drake jogged 2 km in 15 minutes. What is his speed in km/h?

Ans: _____ km/h

3

3

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space for each question and write your answers in the spaces provided.
For questions that require units, give your answers in the units stated. **(10 marks)**

Do not write in this column

26. Jamie has 4 kg of rice. She gave $\frac{1}{6}$ kg to her aunt and $\frac{3}{4}$ of it to her cousin. How much rice does she have left?

Ans: _____ kg

27. A rectangular tank measuring 30 cm long, 12 cm wide and 20 cm high is filled with 2.3 ℓ of water. How many more millilitres of water must be added to the tank such that it will be $\frac{2}{3}$ full?

Ans: _____ mℓ

4

28. Sally recorded her scores for her exams as shown below. How much did she score for Science?

	English	Math	Science	Average
Score	86	6	7	76

Ans: _____

29. Mrs Lim baked some muffins, cookies and shortbread. The number of muffins is $\frac{1}{3}$ of the number of shortbread. There are 5 less cookies than shortbread. If there is a total of 135 muffins, cookies and shortbread, how many muffins did Mrs Lim bake?

Ans: _____

4

30. The figure below shows a square overlapping a rectangle. The ratio of the shaded area to the area of the rectangle is 2 : 5. Given that the area of the square is $\frac{2}{3}$ the area of the rectangle, find the ratio of the shaded area to the area of the square.

Ans: _____

Index number: ☐☐☐☐☐ — ☐

SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2016

PRIMARY 6

MATHEMATICS

PAPER 2

Name : _____ (   )

Class : Primary 6 SY/C/G/SE/P

	Mark	Max Mark	Parent's Signature
Paper 2		60	

18 Questions
60 Marks

Total Time For Paper 2: 1 h 40 min

INSTRUCTIONS TO CANDIDATES
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You <u>are allowed</u> to use the calculator

Questions **1** to **5** carry 2 marks each. Show your working clearly in the space below each question and write your answers in the space provided. For questions which require units, give your answers in the units stated. **(10 marks)**

Do not write in this column

1. Joelle and Katelyn shared some stickers in the ratio of 5 : 7. After Joelle gave Katelyn 12 stickers, the ratio became 1 : 5. How many stickers did they have altogether?

Ans: _____

2. Express 384 g as a percentage of 1.5 kg.

Ans: _____ %

4

1

3. The figure below is made up of 2 similar 4-sided figures. Find the sum of $\angle a + \angle b + \angle c$.
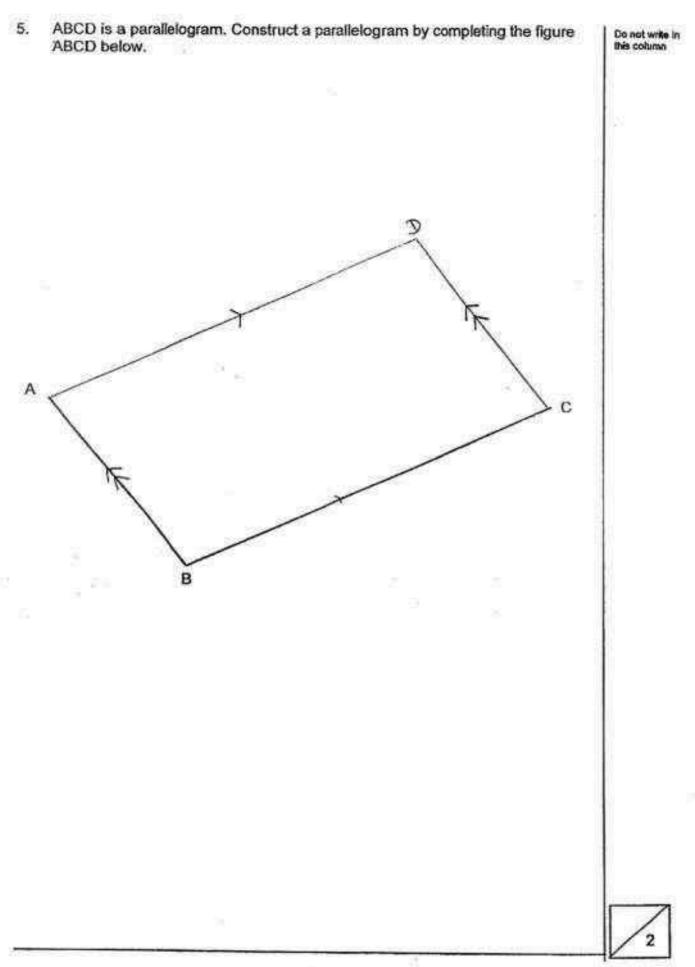
Ans: _____

4. Jeremy can cycle 210 metres in 15 seconds while Mingde can cycle 150 metres within the same time. Given that they started at the same time in the same direction, how far apart were they after 30 seconds?

Ans: _____ - _____ m

2

5. ABCD is a parallelogram. Construct a parallelogram by completing the figure ABCD below.

2

For questions 6 to 18, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks awarded is shown in brackets [ ] at the end of each question or part-question.

(50 marks)

6. Uncle Sam earns $4500 per month. He gives his children $1500, his wife 20% of his remaining salary and saves the rest. How much will his wife get if Uncle Sam gets a 10% pay raise?
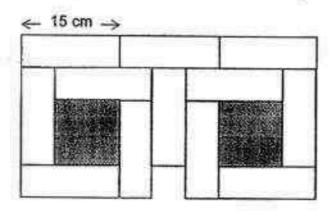
Ans: _____ [3]

7. The selling price of each cup of orange juice is $\frac{3}{2}$ times as much as the selling price of a cup of apple juice. For every 2 cups of orange juice sold, Mr Lee sells 5 cups of apple juice. He earns $12 more from apple juice than from orange juice. How much does Mr Lee earn altogether?

Ans: _____ [3]

6

4

8. Some identical rectangular tiles are arranged to form a pattern as shown below. The length of each tile is 15 cm. Find the perimeter of the shaded parts.

← 15 cm →
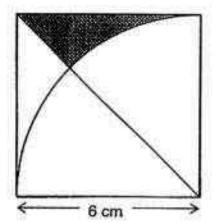
Ans: _____ [3]

9. Mrs Lim baked some cookies. She gave $\frac{1}{4}$ of the cookies to her daughter, $\frac{1}{3}$ of the cookies to her son, and $\frac{1}{2}$ of the remaining cookies to her husband. Her husband received 3 cookies lesser than her son. How many cookies did she bake altogether?

Ans: _____ [3]

6

10. The figure below is made up of a square and a quadrant. Find the shaded area in terms of π.

6 cm
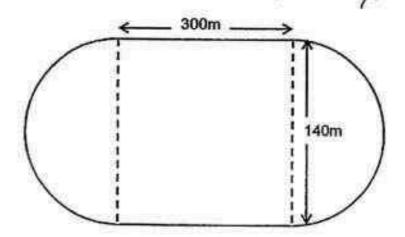
Ans: _____ [3]

11. The running track below is made up of a rectangle of 300 m by 140 m and 2 semi-circles as shown below. Wayne took 80 minutes to jog 3 rounds around this track. What was Wayne's speed in km/h? (Take π as $\dfrac{22}{7}$)

Ans: _____ [4]

4
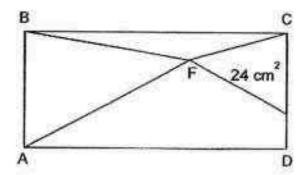
12. The figure below shows a rectangle ABCD. The length CE is $\frac{3}{4}$ of the length of

DC, the area of triangle CEF is 24cm² and the area of triangle CEF is $\frac{1}{2}$ of triangle ABF.

a) Find the area of triangle CDF.
b) Find the area of rectangle ABCD.

Ans: a) _____[2]

b) _____[2]

8
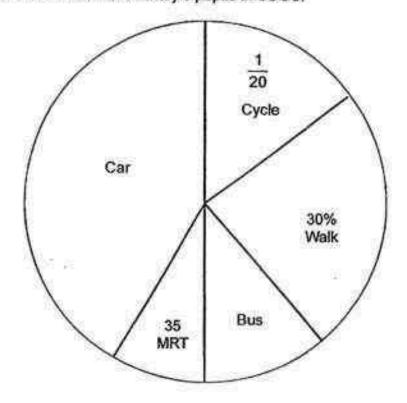
13. For a science quiz, 2 marks are awarded for every correct answer and 1 mark is deducted for every wrong answer. Peter got $\frac{1}{6}$ of the quiz wrong. How many questions are there in the quiz if Peter scored 90 marks?

Ans: _____ [4]

14. The pie chart below, not drawn to scale, shows how SCGS Primary 6 pupils travel to school every day. There are $\frac{3}{8}$ as many pupils taking the bus as pupils taking the car to school. Half of the pupils cycle, walk or take the bus to school. Find the total number of Primary 6 pupils in SCGS.

$\frac{1}{20}$
Cycle

Car

30%
Walk

35
MRT

Bus

Ans: _____ [4]

15. Shop A sells pencils at $0.80 each and $2 for a bundle of 4.
    a) What is the percentage discount if you the buy the pencils in bundle?
    b) Mr Poh bought 11 pencils. What is the minimum amount Mr Poh has to pay for the pencils?

Ans: a) _____ [2]

b) _____ [2]

4
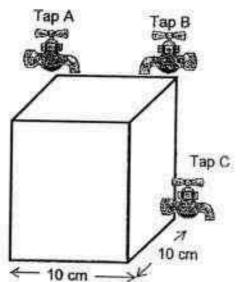
16. Mrs Cheng sells stickers. She sold 40% more stickers in April than in May. She sold 20% fewer stickers in May than in June. Mrs Cheng sold 150 fewer stickers in May than in June. Find the total number of stickers that Mrs Cheng sold for the 3 months.

Ans: _____ [5]

12

17. Tap A was turned on to fill an empty tank at 300 cm³ per min. After 5 minutes, Tap B was turned on to fill the tank at a rate of 120 cm³ per min while Tap C emptied the tank at 455 cm³ per min. Given that the tank has a square base of 10 cm, what is the height of the water in the tank after Tap B and Tap C have been turned on for 15 minutes?

Tap A

Tap B

Tap C

10 cm

10 cm

Ans:_____ [5]

5

18. Pauline sells a packet of popcorn at $2.50 each and a packet of candy floss at $1.80 each. After selling for a day, she earned $2.10 more from the sale of candy floss than the sale of popcorns. She sold 14 more packets of candy floss than popcorns.

a) How many packets of popcorn did she sell?
b) How much did she earn from selling candy floss?

Ans: a) _____ [3]

b) _____ [2]

5

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EXAM PAPER 2016

SCHOOL : SCGS

SUBJECT : MATHEMATICS

TERM : SA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	2	3	2	3	2	4	2	1	4
Q11	Q12	Q13	Q14	Q15					
2	1	2	2	4					

16) 1 : 25   17) 1/6   18) $40   19) (15 − 2p)   20) $35

21) 14   22) 157 cm₂   23) 32 cm   24) 85°   25) 8 km/h

26) 4 x ¾ = 3kg   28) 76 x 3 = 228

   4kg − 3kg = 1kg   228 − 86 = 142

   1 − 1/6 = 5/6   Ans : 77

27) 2.3L = 2300ml   29) 7u = 135 + 5 = 140

   30 x 12 x 20 = 7200   1u = 140 ÷ 7 = 20

   7200 ÷ 3 = 2400   30) SH : R : S   SH : S

   2400 x 2 = 4800   2 : 5   6 : 10

   4800 − 2300 = 2500 ml   = 6 : 15 : 10   = 3 : 5

PRELIMINARY EXAM PAPER 2016

SCHOOL   : SINGAPORE CHINESE GIRLS'S SCHOOL
SUBJECT   : MATHEMATICS
TERM   : PRELIMINARY EXAMINATION 2016

PAPER 2

Q1 WORKING

J: K
5U: 7U
-12 +12
2U: 10U   12 U
3U ——12

Total: —— $\dfrac{12}{3}$ x 12 = 48

Answer: 48 stickers

Q2 WORKING

1.5kg = 1500g

Percentage —— $\dfrac{384g}{1500g}$ X 100% = 25.6%

Answer: 25.6%

Q3 WORKING

a + b+ c —— 360 − 65 = 295°
Answer: 295°

Q4 WORKING

J, speed ——210m ÷ 15s= 14m/s
M, speed ——150m ÷ 15s = 10m/s
Diff in speed —— 14m/s − 10m/s = 4m/s
Distance apart ——4m/s x 30s = 120m
Answer: 120m
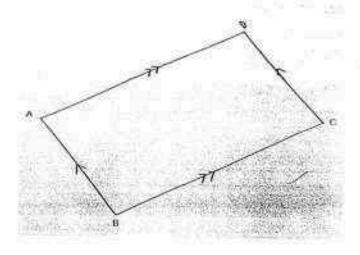
Q5 WORKING

Q6 WORKING

New salary —— $\frac{\$4500}{100} \times 110 = \$4950$

Wife + save —— $4950 - $1500 = $3450

Wife —— $\frac{\$3450}{100} \times 20 = \$690$

Answer: $690

Q7 WORKING

Juice no. X value = Total value

Orange 2 X value = 6u

Apple 5 X value = 10u

10u − 6u = 4u

4u —— $12

Total —— $\frac{\$12}{4} \times (10 + 6) = \$48$

Answer: $48

Q8 WORKING

$1L = 3B$

$1B \longrightarrow \dfrac{15cm}{3} = 5cm$

1 shaded = $(1L - 1B) \times 4$

$\qquad\qquad = (15cm - 5cm) \times 4$

2 shaded —— 40cm x 2 = 80cm

Answer: 80cm

Q9 WORKING

$D \longrightarrow \dfrac{1}{4} = \dfrac{3}{12}$

$S \longrightarrow \dfrac{1}{3} = \dfrac{4}{12} = \dfrac{8}{24}$

Left —— $1 - \dfrac{4}{12} - \dfrac{3}{12} = \dfrac{5}{12}$

$H \longrightarrow \dfrac{1}{2} \times \dfrac{5}{12} = \dfrac{5}{24}$

$\dfrac{8}{24} - \dfrac{5}{24} = \dfrac{3}{24}$

$\dfrac{3}{24}$ of total —— 3

Total —— $\dfrac{3}{3} \times 24 = 24$

Answer : 24 cookies

Q10 WORKING

Square —— 6cm x 6cm = $36cm^2$

Quadrant —— $\dfrac{1}{4} \times 6cm \times 6cm \times \pi = 9\,\pi cm^2$

Shaded x 2 —— $\dfrac{36cm^2 - 9\,\pi cm^2}{2} = \dfrac{(36 - 9\,\pi)\,cm^2}{2}$

Answer : $\dfrac{(36 - 9\,\pi)\,cm^2}{2}$

Q11 WORKING

1 round —— $300m \times 2 + 140m \times \frac{22}{7} = 1040m$

3 rounds —— $1040m \times 3 = 3120m = 3.12km$

$80min = 1h\ 20min = 1\frac{1}{3}h$

Speed —— $3.12km \div 1\frac{1}{3}h = 2.34km/h$

Answer 2.34km/h

Q12 WORKING

(a) height of CEF - $\frac{24 \times 2}{3} = 16$

CDF —— $\frac{16 \times 4}{2} = 32$

(b) ABF —— $24 \times 2 = 48$

$\frac{1}{2}$ of rectangle —— $48 + 32 = 80$

ABCD —— $80 \times 2 = 160$

Answer: (a) $32cm^2$ (b) $160cm^2$

Q13 WORKING

1 set —— $(5 \times 2) - 1 = 9$

No. of sets —— $90 \div 9 = 10$

Correct —— $10 \times 5 = 50$

Total questions —— $\frac{50}{5} \times 6 = 60$

Answer: 60

Q14 WORKING

$\frac{6}{20} + \frac{1}{20} = \frac{7}{20}$

$10p = 7p + 3u$

$3u = 3p$

$10u - 8u = 2u$

$2u \text{ --- } 35$

$20u \text{ --- } \frac{35}{2} \times 20 = 350$

Answer: 350

Q15 WORKING

a) $4p \text{ --- } \$0.80 \times 4 = \$3.20$

percentage discount --- $\frac{\$3.20 - \$2}{\$3.20} \times 100\% = 37.5\%$

b) $11 \div 4 = 2R3$

Total --- $2 \times \$2 + 3 \times \$0.80 = \$6.40$

Answer: (a) 37.5%, (b) $6.40

Q16 WORKING

A	:	M	:	J
14	:	10	:	-
-	:	8	:	10
112	:	80	:	100

$100U - 80u = 20u$

$20u \text{ --- } 150$

$1u \text{ --- } \frac{150}{20} = 7.5$

Total --- $7.5 \times (112 + 80 + 100) = 2190$

Answer: 2190

Q17 WORKING

Headstart — $300cm^3/\text{min} \times 5\text{min} = 1500cm^3$

Netflow — $455cm^3/\text{min} - (300cm^3/\text{min} + 120cm^3/\text{min}) = 35cm^3/min$

15min — $35cm^3/\text{min} \times 15\text{min} = 525cm^3$
Left — $1500cm^3 - 525cm^3 = 975cm^3$
Height — $975cm^3 \div 10\text{cm} \div 10\text{cm} = 9.75\text{cm}$
Answer: 9.75cm

Q18 WORKING

Food	No.	X	Value	= Total value
CF	(1u+14)	X	$1.80	= (1.8u + $25.20)
PC	1U	X	$2.50	= 2.5u

2.5u + $2.10 = 1.8u + $25.20
2.5u = 1.8u + $23.0
2.5u − 1.8u = 0.7u
0.7u — $23.10
1u — $23.10 ÷ 0.7 = $33
a) popcorn no. — ($33 x 2.5) ÷ $2.50 = 33
b) CF, earn — $33 x 1.8 + $25.20 = $84.60
Answer: a) 33,   b) $84.60

End of paper 2

PEI HWA PRESBYTERIAN PRIMARY SCHOOL
PRELIMINARY EXAMINATION

PRIMARY 6
MATHEMATICS PAPER 1
(BOOKLET A)

23 AUGUST 2016

Name : _____

Form Class / Register No.   : 6R_____ / _____

Banded Class / Register No. : 6M_____ / _____

Total time for Booklets A and B: 50min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.

2. DO NOT turn over this page until you are told to do so.

3. Follow all instructions carefully.

4. Answer all questions.

5. Shade your answers on the Optical Answer Sheet (OAS) provided.

6. The use of calculator is **NOT ALLOWED**.

This booklet consists of 6 printed pages, excluding the cover page.

Questions **1** to **10** carry 1 mark each. Questions **11** to **15** carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet. You are **not** allowed to use a calculator.   (20 marks)

---

1   Round off 687 935 to the nearest ten thousands.

   (1) 680 000

   (2) 688 000

   (3) 690 000

   (4) 700 000

2    $5\dfrac{2}{3} = 4\dfrac{\square}{3}$

   What is the missing number in the box above?

   (1) 5

   (2) 2

   (3) 3

   (4) 4

3   Which of the following decimal has the **greatest** value?

   (1) 5.01

   (2) 5.11

   (3) 5.011

   (4) 5.101

4   The figure below shows part of a weighing scale. Which of the following is closest to the reading indicated by the arrow?

(1)   43 kg

(2)   44 kg

(3)   46 kg

(4)   47 kg
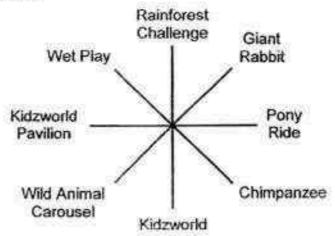
5   Which of the following is the same as 6.05 km?

(1)   65 m

(2)   605 m

(3)   6050 m

(4)   60 500 m

6   The mass of a papaya is $\frac{4}{7}$ of the mass of a watermelon. What is the ratio of the mass of the watermelon to the total mass of the 2 fruits?

(1) 4 : 7

(2) 4 : 11

(3) 7 : 4

(4) 7 : 11

7   The figure below shows the positions of 8 different places in a zoo. Shanice was facing Wet Play at first. She then turned 225° anticlockwise. Where is Shanice facing now?

(1)   Kidzworld

(2)   Pony Ride

(3)   Chimpanzee

(4)   Wild Animal Carousel

8   Read the riddle below.

"I am a 4-sided figure.
The sum of angles in me adds up to 360°.
I have parallel lines but I may not have any equal angles."

What am I?

Which one of the following is the correct shape?
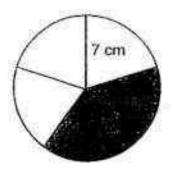
(1)   Parallelogram

(2)   Rectangle

(3)   Rhombus

(4)   Trapezium

9   Express 0.507 as a percentage.

    (1)   5.07%

    (2)   50.7%

    (3)   57%

    (4)   507%

10   Mr Tan travelled 50 km in 30 minutes. What was Mr Tan's average speed?

    (1) $1\frac{2}{3}$ km/h

    (2)   25 km/h

    (3)   100 km/h

    (4)   1500 km/h
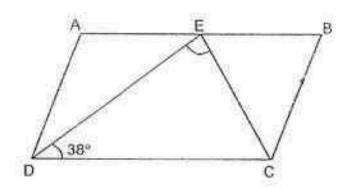
11   Which one of the following numbers has the same number of factors as 30?

    (1)   17

    (2)   21

    (3)   24

    (4)   48

12   The circle below is divided into 5 equal parts. It has a radius of 7 cm. Find the area of the shaded part. (Take $\pi = \frac{22}{7}$)

7 cm

(1) $31\frac{3}{5}$ cm²

(2)   44 cm²

(3) $61\frac{3}{5}$ cm²

(4)   154 cm²

13   In the figure below, ABCD is a parallelogram. EBC is an equilateral triangle. Find ∠DEC.

A   E   B

38°

D   C

(1)   60°

(2)   82°

(3)   104°

(4)   142°
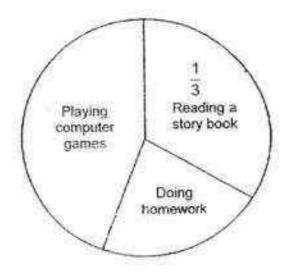
14 Bailey had a total of 270 pens and rulers.

After selling $\frac{1}{3}$ of the pens and $\frac{2}{3}$ of the rulers, the number of rulers left was

twice the number pens left.

How many pens did Bailey sell?

(1) 18

(2) 54

(3) 144

(4) 216

15 The pie chart below shows how Kumar spent 6 hours on Children's Day holiday. He spent twice as much time playing computer games as doing his homework. How much time did he spend playing computer games?

(1) 1 h 20 min

(2) 2 h

(3) 2 h 40 min

(4) 4 h

-- End of Booklet A --

PEI HWA PRESBYTERIAN PRIMARY SCHOOL
PRELIMINARY EXAMINATION

**PRIMARY 6
MATHEMATICS PAPER 1**
(BOOKLET B)

23 AUGUST 2016

Name :_____

Form Class / Register No.   : 6R_____ /_____

Banded Class / Register No. : 6M_____ /_____

Parent's signature

Total time for Booklets A and B: 50min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.

2. DO NOT turn over this page until you are told to do so.

3. Follow all instructions carefully.

4. Answer all questions.

5. Write all your answers in this booklet.

6. The use of calculator is **NOT ALLOWED**.

Marks (Booklet A) :		20
Marks (Booklet B) :		20
Total Marks (Booklets A and B) :		40

This booklet consists of <u>7</u> printed pages, excluding the cover page.

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

16   Find the value of $4.03 - 0.68$.

Ans: _____

17   Find the value of $\dfrac{3}{4} + 6$.

Ans: _____

18   Express 2.44 as a mixed number in its simplest form.

Ans: _____

19   The volume of a cube is 512 cm³. Find the length of one edge of the cube.

Ans: _____ cm

20   The figure below is a three-quarter circle with diameter 14 cm.

Find the perimeter of the figure. (Take $\pi = \frac{22}{7}$)

Ans: _____ cm

21   Name the solid that corresponds to the net below.

Ans: _____

22   In the figure below, ABCD is a rhombus. Find ∠BDC.

Ans: _____ °

23   Express $\frac{9}{20}$ as a percentage.

Ans: _____ %

24. The table below shows the results of the Boys 400-m Freestyle final in the recent Asian Youth Games.

Lane	1	2	3	4
Name	Ahmad	Boh Hua	Chin Chai	Da Li
Time taken	4 min 1 sec	3 min 58 sec	3 min 46 sec	4 min 7 sec

Who is the fastest swimmer?

Ans: _____

25. Simplify $10n - 6 + 3n - 8n + 10$.

Ans: _____

Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

Do not write in this space.
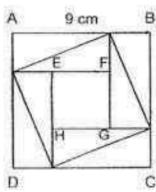
26   Find the value of $30 - (7 + 11) \div 3 \times 4$.

Ans: _____

27   The 2 right-angled triangles that form XYZ are identical to the 8 triangles in ABCD. EFGH is a square of area 25 cm² and AB is 9 cm. Find the area of XYZ.

Ans: _____ cm²
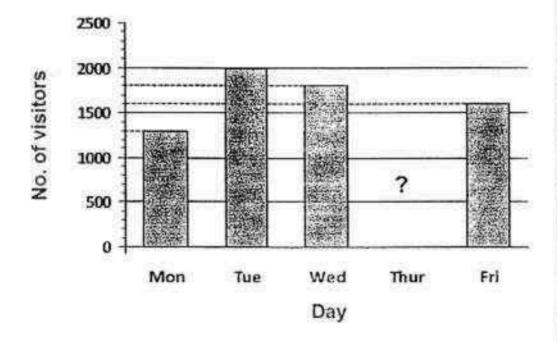
28   In the figure below, ABC is a right-angled triangle. EF is parallel to GH. Find ∠BCH.

Ans: _____°

29   Mickey and Minnie had some cookies in the ratio 5 : 2.

Mickey ate 38 cookies and Minnie made another 43 cookies.

Then Mickey and Minnie had the same number of cookies.

How many cookies did Mickey have at first?

Ans: _____

30 The graph below shows the number of visitors at Kidszania from Monday to Friday. The bar that shows the number of visitors on Thursday has not been drawn. If the percentage of visitors decreased by 36% from Thursday to Friday, what is the number of visitors on Thursday?

Ans: _____

-- End Of Paper 1 --

PEI HWA PRESBYTERIAN PRIMARY SCHOOL
PRELIMINARY EXAMINATION
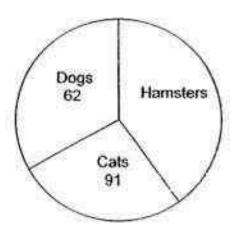
PRIMARY 6
MATHEMATICS
PAPER 2

23 AUGUST 2016

Name : _____

Form Class / Register No. : 6R_____ / _____

Banded Class / Register No. : 6M_____ / _____

Parent's signature

Total time: 1h 40min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.

2. DO NOT turn over this page until you are told to do so.

3. Follow all instructions carefully.

4. Answer all questions.

5. Write all your answers in this booklet.

6. The use of an approved calculator is expected, where appropriate.

Paper 1 :	40
Paper 2 :	60
Total Marks :	100

This booklet consists of 14 printed pages, excluding the cover page.

Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answer in the units stated. **(10 marks)**

---

1. Twice of a number is greater than $\dfrac{1}{3}$ of the number by 60.

   What is the number?

   Ans: _____

---

2. A square-based container has a capacity of 2.873ℓ. It has a base area of $169\ \text{cm}^2$. What is the height of the container?

   Ans: _____ cm

---

3. Li Hai's Mathematics score for the mid-year examination was 85. His Mathematics score for the year-end examination was 68. Find the percentage decrease in his Mathematics score.

   Ans: _____ %

1

(Go on to the next page)

4   A survey was conducted to find out the types of pets owned by a group of children and the result is represented by the pie chart below.

$\frac{7}{24}$ of the number of children owned hamsters.
How many children took part in the survey?
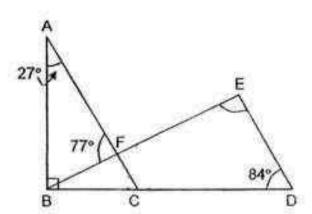
Ans:_____

5   Mrs Rosie was paid $k an hour for working on weekdays and Saturdays, and $12 an hour on Sundays. How much would she be paid for working 6 hours each day for a week?

Ans: $_____

9   In the figure below, ABC is a right-angled triangle. BCD and BFE are straight lines. ∠BAF is 27°. ∠AFB is 77° and ∠EDB is 84°.

Find ∠BED.

Ans:_____ [3]
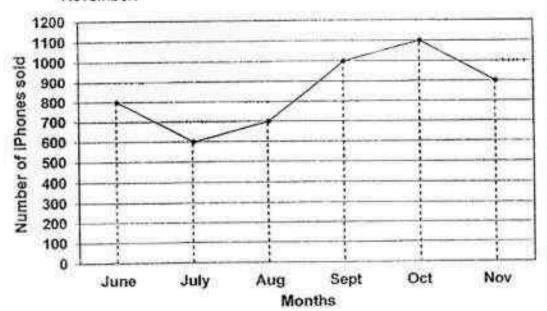
(Go on to the next page)

10 The line graph below shows the number of iPhones sold from June to
November.

(a) What was the average number of iPhones sold in the six
months?

(b) The number of iPhones sold in August by 3 salesmen, Ben,
Carl and Diego, was in the ratio 5 : 6 : 3. How many iPhones
did Carl sell in August?

Ans: (a) _____ [1]

(b) _____ [2]
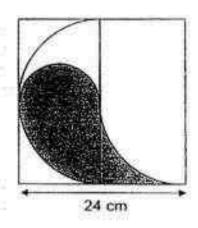
7   The figure below is made up of a square, 1 large semicircle, 1 small semicircle and 2 quadrants. The square has a side 24 cm. Find the area of the shaded part. Give your answer correct to 2 decimal places.

24 cm

Ans:_____ [3]

8   Doughnuts are sold in a box of 4 for $6.90 or one for $1.80. What is the maximum number of doughnuts that can be bought with $52.00?

Ans:_____ [3]

Questions **6** to **18** show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.   (50 marks)

6   Ali, Bala and Clive each gave the same amount of money to Don who had no money.

Ali gave Don $\frac{1}{2}$ of his money.

Bala gave Don $\frac{1}{5}$ of his money.

Clive gave Don $\frac{2}{7}$ of his money.

In the end, what fraction of the total sum of money the 3 boys had did Don receive? Express your answer in the simplest form.

Ans:_____ [3]

11   At first, the ratio of the number of pencils Abby had to the number of pencils Jack had was 4 : 3. Each child then gave away 40 pencils. In the end, the number of pencils Abby had was 3 times the number of pencils Jack had.

(a)   How many pencils did Abby have in the end?
(b)   How many pencils did Abby and Jack have altogether at first?

Ans: (a) _____ [2]

     (b) _____ [2]

7

12   Mary and Joseph went shopping together with a total sum of $99. Mary spent twice as much as Joseph. The amount of money Joseph had left was $12 more than what he had spent. He had twice as much money left as Mary. How much did Joseph have at first?

Ans _____ [4]
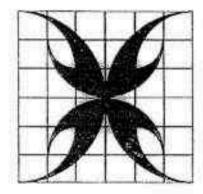
13　The figure below is made up of 4 quarter circles drawn on square grids.

↕ 9 cm

Find the area of the shaded part as shown below. (Take $\pi = 3.14$)

Ans:＿＿＿＿＿＿＿＿＿ [4]

14   In the figure below, ABCO is a parallelogram, RSTO is a square and DAB is an isosceles triangle. ∠AOR is equal to ∠QOT. ∠ROQ is 42° and ∠ADB is 124°. Find ∠y.

Ans:_____ [4]
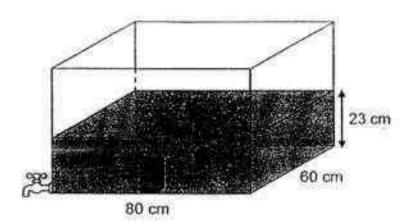
15   John took 5 h to drive from Town A to Town B. At the same time, David started driving from Town A at a speed 18 km/h slower than that of John's. When John reached Town B, David still had $\frac{2}{7}$ of the distance to cover. Find the time taken by David to cover the remaining distance.

Ans:_____ [4]

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16   Bob the builder had twice as many screws as nails.

The total mass of the screws and nails was 1054 g.

The mass of the screws was 646 g more than the mass of the nails.

The mass of each screw was 13 g more than the mass of each nail.

(a)   What was the mass of the nails in grams?

(b)   How many nails were there?

Ans: (a) _____ [2]

(b) _____ [3]

17 A solid with a square base of side 11 cm and volume of 1573 cm^3 was placed in a tank with its base touching the base of the tank as shown below.

The water level in the tank was 23 cm. The tap attached to the tank was turned on and water flowed out at a rate of 3ℓ/min.

(a) How long does it take for the water level to just reach the top of the solid?

(b) The tap was then turned off. What will the height of the water level be when the solid was then removed from the tank? (Give your answer correct to 2 decimal places.)

Ans: (a) _____ [3]

(b) _____ [2]

PHPPS/Math/P5/Prelim/P2/2015   (Go on to the next page)

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18   Finn, Glen and Hugo had some marbles in the ratio $2 : 3 : 5$. Hugo gave 40% of his marbles to Finn and Glenn. As a result, Finn had the same number of marbles as Glen and Hugo had 36 fewer marbles than Finn.

(a)   What was the percentage increase of Finn's marbles after receiving marbles from Hugo?

(b)   How many marbles did Hugo have at first?

Ans: (a) _____ [3]

(b) _____ [2]

-- End of Paper 2 --

SCHOOL   : PEI HWA PREBYTERIAN PRIMARY SCHOOL
LEVEL   : PRIMARY 6
SUBJECT   : Maths
TERM   : Preliminary Examination

CONTACT :

PAPER 1 BOOKLET A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	1	2	3	3	4	2	4	2	3

Q11	Q12	Q13	Q14	Q15
3	3	2	1	2

PAPER 1 BOOKLET B

Q16) $4.03 - 0.68 = 3.35$

Ans : 3.35

Q17) $\frac{3}{4} \div 6 = \frac{3}{4} \times \frac{1}{6} = \frac{1}{8}$

Ans $\frac{1}{8}$

Q18) $2.44 = 2\frac{44}{100} = 2\frac{11}{25}$

Ans: $2\frac{11}{25}$

Q19) $\sqrt{512} = 8$

Ans : 8cm

Q20) Length of the arc $= \frac{3}{4} \times 14 \times \frac{22}{7} = 33$

Length of 2 radii = 14

Perimeter of the figure = 33 + 14 = 47

Ans : 47cm

PR 1

Q21)	Prism
	Ans: Prism

Q22) Rhombus is divided into 2 isosceles triangles

$\angle BDC = \frac{1}{2}(180° - 130°) = 25°$

Ans: 25°

Q23) $\frac{9}{20} = \frac{45}{100} = 45\%$

Ans: 45%

Q24) Chin Chai

Ans: Chin Chai

Q25)
$10n - 6 + 3n - 8n + 10$
$= 10n + 3n - 8n - 6 + 10$
$= 5n + 4$

Ans: 5n + 4

Q26)
$30 - (7 + 11) \div 3 \times 4$
$= 30 - 18 \div 3 \times 4$
$= 30 - 6 \times 4$
$= 30 - 24$
$= 6$

Ans: 6

Q27)
Length of EF = $\sqrt{25}$ = 5
Base of right-angled triangle = 2
Height of right-angled triangle = 7
Area of XYZ = $2 \times (\frac{1}{2} \times 2 \times 7) = 14$

Ans: 14cm²

Q28)
$\angle ACB = 180° - 90° - 50° = 40°$
$\angle ACH = 77°$
$\angle BCH = 77° - 40° = 37°$

Ans: 37°

Q29)
Mickey : Minnie
5U : 2U
-38 ↓   ↓ +43
1p : 1p

$5U - 38 = 2U + 43$
$5U - 2U = 43 + 38$
$3U = 81$
$U = 27$

$5U = 27 \times 5$
$= 135$

Ans: 135 cookies

Pg 2

| Q30) | Number of visitors on Friday = 1500
64% → 1500
Number of visitors on Thursday: 100% → $\frac{1500}{64}$ x 100 = 2500
<div align="right">Ans: 2500</div> |

PAPER 2

Q1)	$2 - \frac{1}{3} = \frac{5}{3}$ $\frac{5}{3}$ → 60 $\frac{1}{3}$ → 12 $\frac{3}{3}$ → 36 Ans: 36
Q2)	2.873 ℓ = 2873 cm³ 2873 ÷ 169 = 17 Ans: 17 cm³
Q3)	$\frac{85-68}{85}$ x 100% = 20% Ans: 20%
Q4)	Children who own dogs and cats → 24 − 7 = 17 17U → 62 + 91 17U → 153 1U → 9 24U → 216 Ans : 216 children
Q5)	Weekdays + Saturday → $K x 6 x 6 = $36K Sunday → $12 x 6 = $72 Total pay → $(36K + 72) Ans: $(36K + 72)
Q6)	A gave D $\frac{1}{2}$ → $\frac{1}{2} = \frac{2}{4}$ B gave D $\frac{1}{5}$ → $\frac{1}{5} = \frac{2}{10}$ C gave D $\frac{2}{7}$ → $\frac{2}{7}$ Total sum of money = 4 + 10 + 7 = 21 Fraction of money Don received over total sum of money $= \frac{6}{21} = \frac{2}{7}$ Ans: $\frac{2}{7}$

Pg 3

Q7)	1 small square → 12 x 12 = 144 cm² 1 small semi-circle = $\frac{1}{2}$ x π x 6 x 6 = 18π cm² Shaded area → 144 + 18π = 200.55 cm² **Ans** 200.55 cm²
Q8)	52 ÷ 6.90 = 7 R 3.7 3.7 ÷ 1.8 = 2 Doughnuts bought → (7 x 4) + 2 = 30 **Ans** 30
Q9)	$\angle ABF = 180° - 77° - 27° = 76°$ $\angle EBD = 90° - 76° = 14°$ $\angle BED = 180° - 14° - 84° = 82°$ **Ans** 82°
Q10)	a) (800 + 600 + 700 + 1000 + 1100 + 900) ÷ 6 = 850 b) B : C : D : Total 5 : 6 : 4 : 14 14U → 700 1U → 50 6U → 50 x 6 = 300 **Ans** (a) 850 (b) 300
Q11)	a) Before A : J : Diff 4 : 3 : 1 8 : 6 : 2 After A : J : Diff 3 : 1 : 2 8U – 3U = 40 5U = 40 1U = 8 3U = 24 b) 8U + 6U = 14U 14U → 14 x 8 = 112 **Ans:** (a) 24 (b) 112
Q12)	Spent M [2U	2U] J [2U]

Left

M | U+6 |

J | 2U | 12 |

Total → Spent + Left
6U + (U + 6) + (2U + 12) = 99
$$9U + 18 = 99$$
$$9U = 81$$
$$U = 9$$

J → 2U + 2U + 12
= 4U + 12
= 4 x 9 + 12
= 48

<div align="right">Ans: $48</div>

Q13)

Move the bottom A, B and C to the upper half to form a half leaf. In the end, only D is not shaded in the half leave.

Shaded area in this quarter → half leaf – section D
Area of half leaf → quadrant of a circle – triangle
$$= (\frac{1}{4} \times \pi \times 27 \times 27) - (\frac{1}{2} \times 27 \times 27)$$
$$= 572.265 - 364.5$$
$$= 207.765$$

Section D (half leaf) $= (\frac{1}{4} \times \pi \times 9 \times 9) - (\frac{1}{2} \times 9 \times 9)$
$$= 63.585 - 40.5$$
$$= 23.085$$
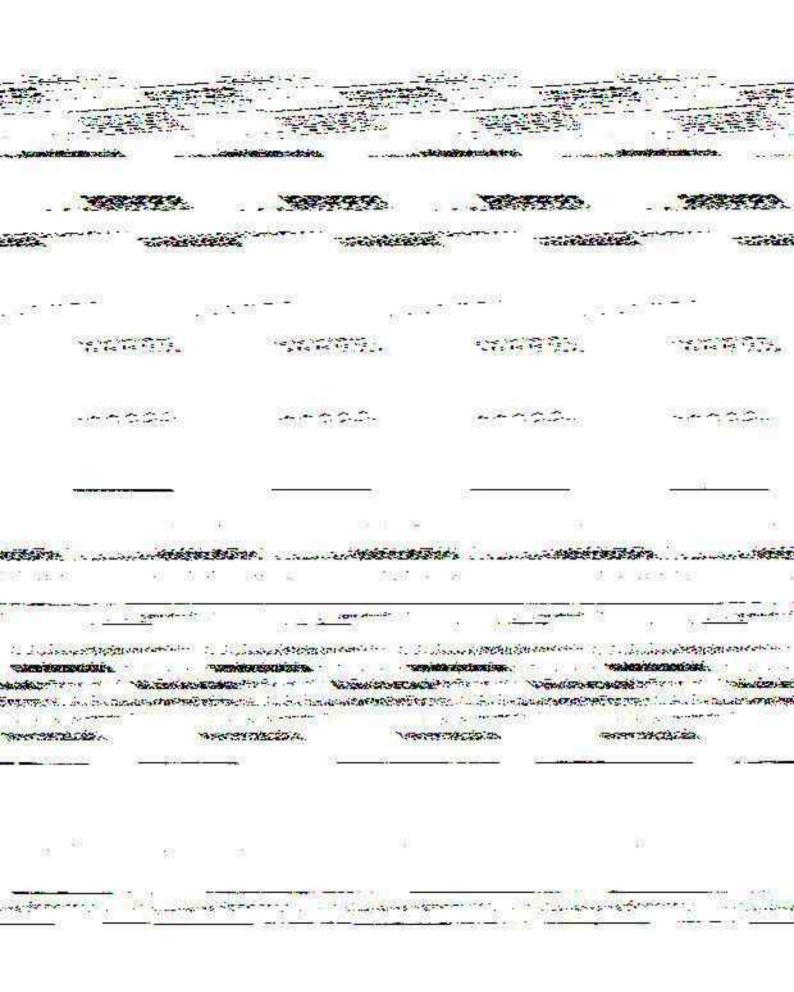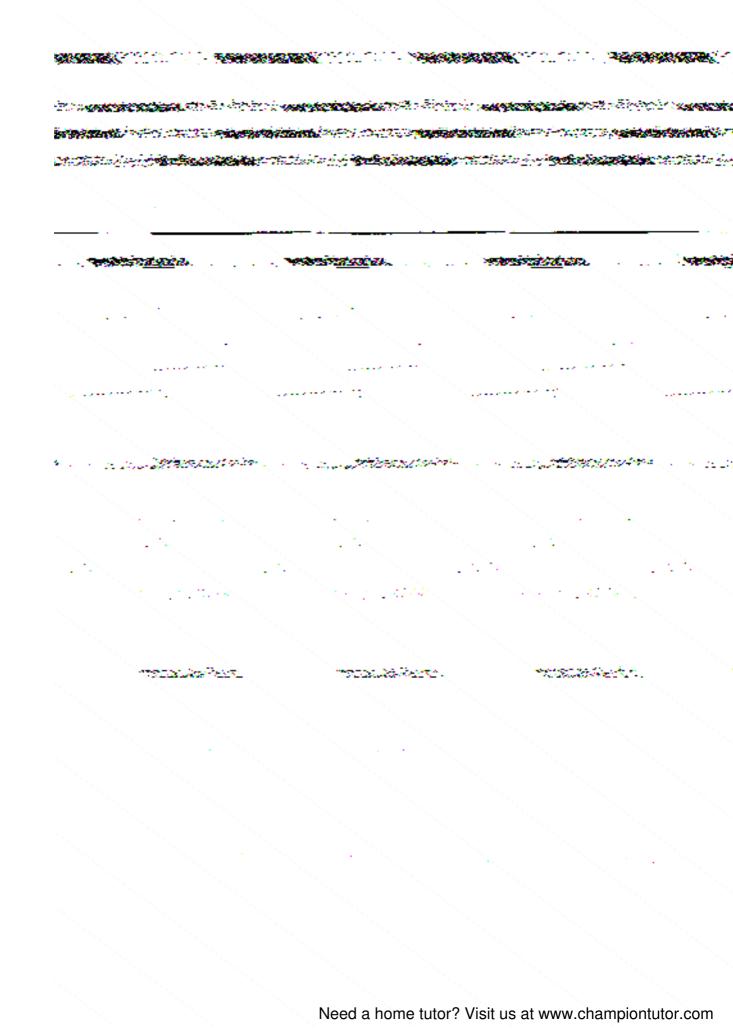
Shared area in one quarter = 207.765 – 23.085 = 184.68
Total shared area = 4 x 184.68 = 738.72

<div align="right">Ans 738.72 cm²</div>

Q14) $\angle DBA = (180° - 124°) \div 2 = 28°$

$\angle QOT = \angle AOR = 90° - 42° = 48°$

$\angle RAO = 180° - 90° - 48° = 42°$

$\angle BCT = \angle RAO = 42°$

$\angle ABC = 180° - 42° = 138°$

$\angle Y = 360° - 28° - 138° = 194°$

Ans: 194°

Q15)

	John	David
Distance	$5(S + 18) =$ $5S + 90$	$5S$
Speed	$S + 18$	S
Time	5	5

Distance travelled by David $\frac{5}{7} U \rightarrow 5S$

$\frac{1}{7} U \rightarrow 1S$

Remaining distance: $\frac{2}{7} U \rightarrow 2S$

Time Taken to travel $2S \rightarrow 2S \div S = 2$

Ans: 2 h

Q16) a)

$2U + 646 = 1054$

$2U = 408$

$1U = 204$

b)

Mass of screws = $1054 - 204 = 850$

As number of screws is twice as many as nails:

$442 \div 13 = 34$

Number of nails = $34 \div 2 = 17$

Ans: a) 204g
b) 17

Q17) a)

Height of solid = 1573 ÷ 11 ÷ 11 = 13

Difference between the height of water to the height of solid = 23 − 13 = 10

Volume of water above the height of the solid = 80 x 60 x 10 = 48000

Time taken to drain the water = 48000 ÷ 3000 = 16

b)

Volume of water with a height of 13cm = 80 x 60 x 13 = 624000

Volume of water left after removing the solid = 62400 − 1573 = 60827

Height of water = 60827 ÷ 80 ÷ 60 ≈ 12.67cm

Ans: a) 16 mins

b) 12.67cm

Q18) a)

F : G : H

x 20 (2 : 3 : 5)

(40 : 60 : 100)

+40   −40

70 : 70 : 60

Diff between F & H → 70U − 60U = 36

10U = 36

In the beginning, F → 40U = 36 x 4 = 144

In the end, F → 70U = 36 x 7 = 252

% increase → $\frac{252-144}{144}$ x 100% = 75%

b)

Hugo has 10U → 10 x 36 = 360

Ans a) 75%

b) 360

Pg 7