Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT 1 (2017)

PRIMARY 6

MATHEMATICS

PAPER 1

Booklet A

Monday 15 May 2017 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 <u>not</u> allowed to use a calculator for this paper.

his 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. In 98 403, what does the digit 8 stand for?

   (1) 8000 tens

   (2) 800 tens

   (3) 80 tens

   (4) 8 tens

2. 325.048 = 300 + 20 + $\boxed{}$ + 0.008

   The missing value in the box is _____.

   (1) 0.4

   (2) 0.04

   (3) 5.04

   (4) 5.048

3. Express 24 days as a fraction of 6 weeks.

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

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

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

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

4. A bag containing 8 apples weighs 936 g. The mass of the empty bag is 16 g. What is the average mass of 1 apple?

(1) 115 g

(2) 116 g

(3) 117 g

(4) 119 g

5. Fandi is 120 cm tall. Ahmad is 132 cm tall. What is the ratio of Fandi's height to Ahmad's height?

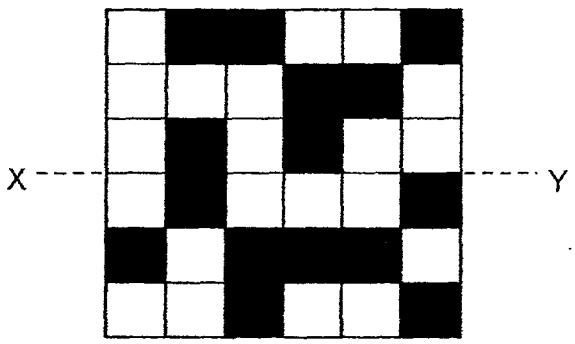
(1) 5 : 6

(2) 5 : 11

(3) 10 : 11

(4) 10 : 21

6. The figure below shows 15 shaded squares. How many more squares must be shaded so that the line XY becomes a line of symmetry?



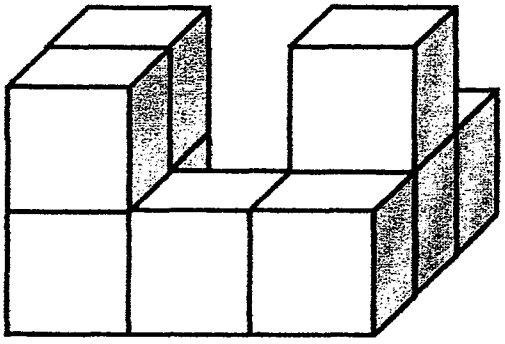
(1) 5

(2) 6

(3) 3

(4) 4

7. The solid below is made up of units of . How many of such units make up the solid below?



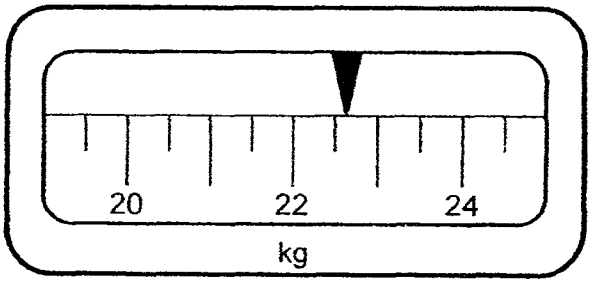
(1) 7

(2) 8

(3) 9

(4) 10

8. Which one of the following is closest to the reading shown on the weighing scale below?



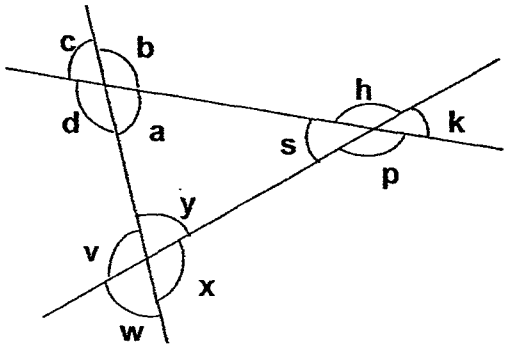
(1) 22.1 kg

(2) 22.4 kg

(3) 22.6 kg

(4) 23.1 kg

9. Study the figure below carefully.



Which of the following is true?

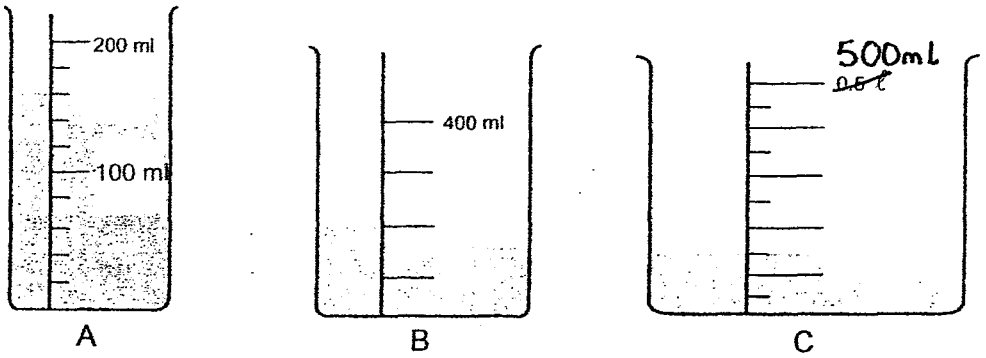
(1) $\angle a + \angle p + \angle x = 180^\circ$

(2) $\angle a + \angle s + \angle v = 180^\circ$

(3) $\angle c + \angle h + \angle y = 180^\circ$

(4) $\angle c + \angle k + \angle w = 180^\circ$

10. Three containers, A, ~~Band~~ B and C with some water are shown below. Which container has the least amount of water and which container has the most?



	Least	Most
(1)	A	C
(2)	B	C
(3)	B	A
(4)	C	B

11. The table below shows the number of books read by each pupil in a class.

Number of pupils	Number of books read by each pupil
3	0
10	2
?	3
7	6

Given that the pupils read 116 books in total, how many pupils read only 3 books?

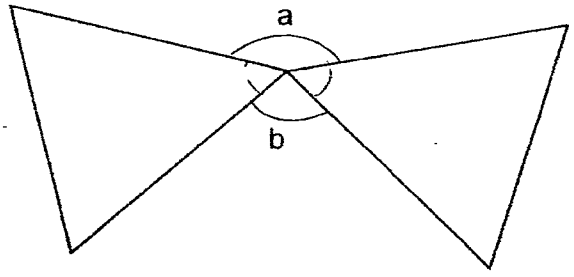
(1) 15

(2) 16

(3) 17

(4) 18

12. The two triangles in the figure are equilateral triangles.
Find the sum of ∠a and ∠b.



(1) 120°

(2) 180°

(3) 240°

(4) 300°

13. A box of candy has a mass of q kg. When empty, the box has a mass of 250 g. What is the mass of the candies in 4 such boxes?

(1) (q - 1) kg

(2) (4q - 250) kg

(3) (1000 q - 1000) kg

(4) (4 q - 1) kg

14. John is $\frac{3}{5}$ as heavy as Fred and Fred is $\frac{3}{4}$ as heavy as Ken. What is the ratio of John's mass to ~~Ford's~~ Fred's mass to Ken's mass?

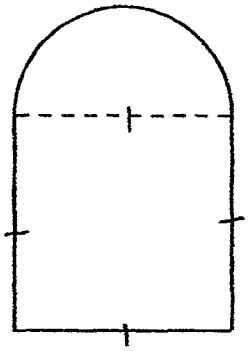
(1) 3 : 5 : 4

(2) 3 : 5 : 20

(3) 9 : 5 : 4

(4) 9 : 15 : 20

15. The figure is made up of a square of perimeter 28 cm and a semicircle. Find the perimeter of the figure. (Take $\pi = \frac{22}{7}$)



(1) 32 cm

(2) 39 cm

(3) 43 cm

(4) 50 cm

(Go on to Booklet B)

SEMESTRAL ASSESSMENT 1 (2017)

PRIMARY 6

MATHEMATICS

PAPER 1

Booklet B

Monday **15 May 2017** **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 $98 \div (32 - 18) + 8 \times 6 - 9$?

Ans: _____

17. Find the difference between 35 tens and 26 tenths.

Ans: _____

18. Find the value of $\frac{12m - 11}{5}$ when m = 3.

Ans: _____

Sub-Total: [ ]

19. Find the value of $\frac{9}{10} \div \frac{2}{5}$.
Give your answer as a mixed number.

Ans: _____

20. Express $1\frac{3}{4}$ as a percentage.

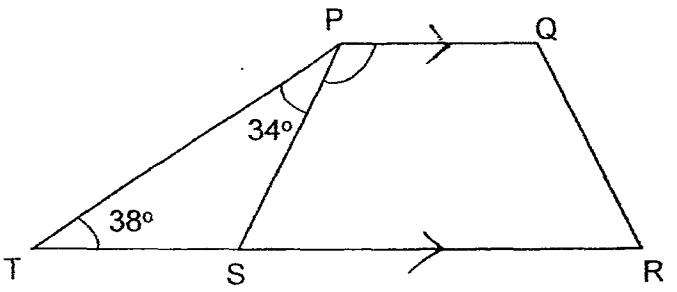
Ans: _____ %

21. The average of five numbers, **6**, **9**, **18**, **25** and **32**, is 18. Which number should be removed so that the average of the remaining numbers is increased by 3?

Ans: _____

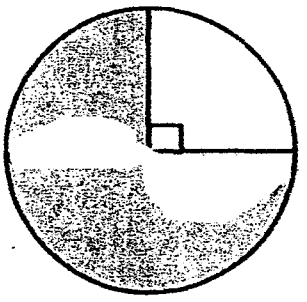
Sub-Total:

22. In the figure below, TR is a straight line and PQ is parallel to TR. Find $\angle SPQ$.



Ans: _____ °

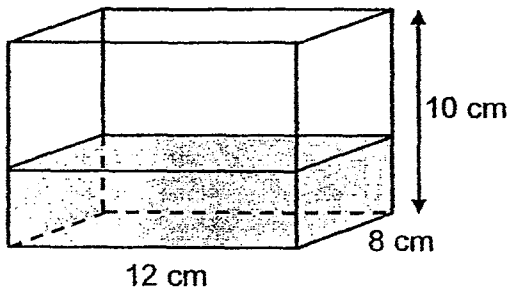
23. The figure shows a circle with a diameter of 20 cm. Find the area of the shaded part. Leave your answer in terms of π.



Ans: _____ cm^2

Sub-Total:

24. A rectangular tank measures 12 cm by 8 cm by 10 cm. It is $\frac{2}{5}$ filled with water. Find the volume of water in the tank in millilitres.



Ans: _____ ml

25. Mr Tan drove from Town A at 8.35 p.m. and reached Town B at 6.20 a.m. the next day. How long did the journey take? Give your answer in hours and minutes.

Ans: _____h _____ min

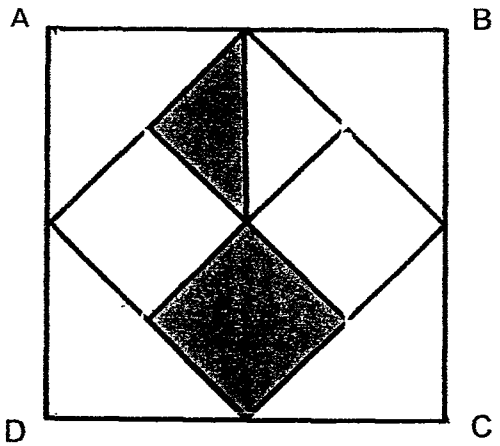
Sub-Total:

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. James bought some marbles. He gave away 23 of them. His father gave him the same number of marbles as the number of marbles he had left. He packed all the marbles equally into 9 bags. Each bag contained 16 marbles. How many marbles did he buy?

Ans: _____

27. A square ABCD is made up of 3 small squares, 2 small triangles and 4 large triangles. What is the ratio of the shaded part of the square to the unshaded part of the square?



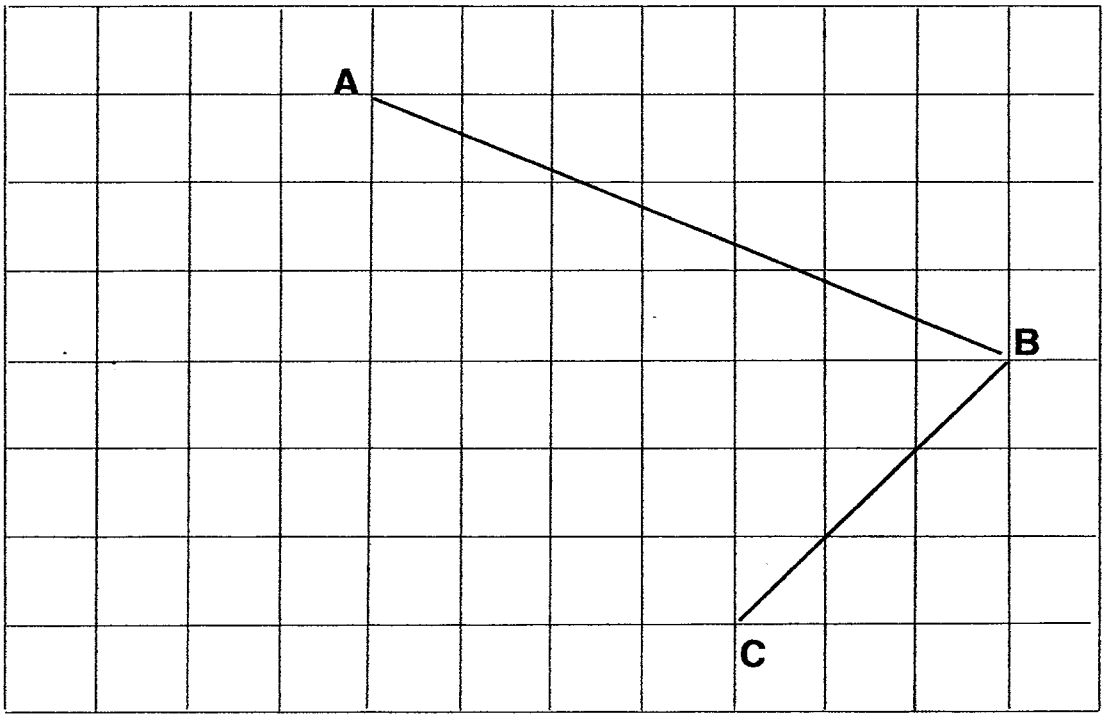
Ans: _____

Sub-Total: [ ]

28. In the square grid below, AB and BC are straight lines.

(a) Measure and write down the size of $\angle \overline{ABC}$.

(b) AB and BC are two sides of a parallelogram. Complete the parallelogram by drawing the other two sides in the square grid below.



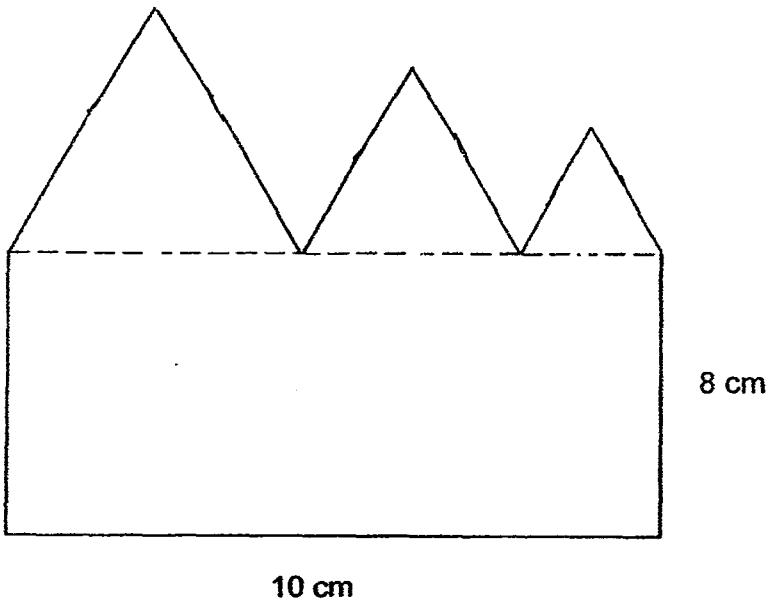
Ans: (a) _____°

Sub-Total:

29. At a pet shop, 70% of the fishes in a tank were guppies and the rest were angelfish. 20 guppies were sold. 60% of the fishes left in the tank are guppies. How many guppies were there at first?

Ans: _____

30. The figure shown below is made up of a rectangle 10 cm by 8 cm and 3 equilateral triangles. Find the perimeter of the figure.



Ans: _____ cm

~ End of Paper ~

Sub-Total: [ ]

SEMESTRAL ASSESSMENT 1 (2017)

PRIMARY 6

MATHEMATICS

PAPER 2

Monday **15 May 2017** **1 h 40 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 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. Brian had 72 stamps more than Eric. Alex had half of what Brian and Eric had altogether. Given that the three boys had 630 stamps, how many stamps did Alex have?

Ans: _____

2. At SuperSub Sandwich, $\frac{2}{5}$ of the sandwiches were Tuna, $\frac{1}{4}$ of the sandwiches were Egg and the rest were Chicken. What is the ratio of chicken sandwiches to tuna sandwiches?

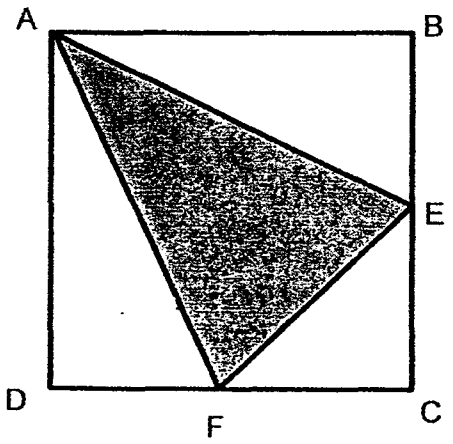
Ans: _____

Sub-Total: [ ]

3. Mr Fu brought his two children to an amusement theme park. He paid $140 for the admission tickets altogether. Given that the price of a child ticket is $\frac{3}{4}$ of the price of an adult ticket, what is the cost of an adult ticket?

Ans: $ _____

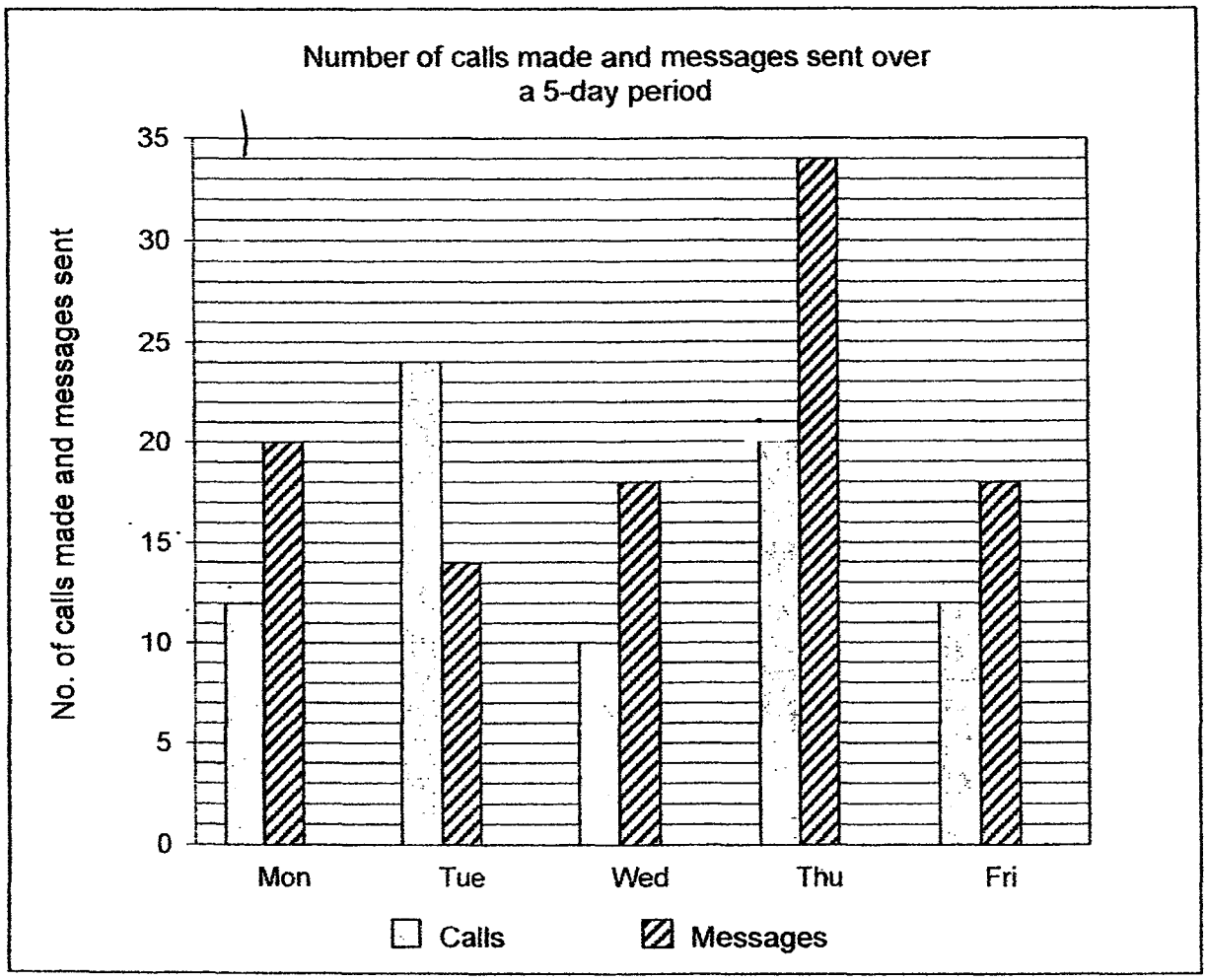
4. ABCD is a square of area 72cm^2. E is the midpoint of BC and F is the midpoint of DC. Find the area of the shaded triangle.



Ans: _____ cm^2

Sub-Total:

5. The graph below shows the number of messages sent and calls made by Daniel through his mobile phone over a 5-day period. Study the graph carefully and answer the questions.



(a) On which 2 days did Daniel send the same number of messages?

Ans: _____ and _____

(b) Find the total number of calls Daniel made over the 5-day period.

Ans: _____

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)

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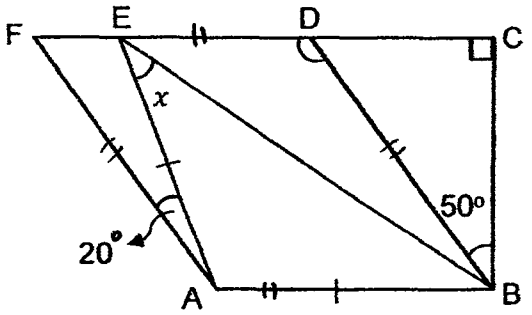
6. In the figure, FC is a straight line, AE = AB and ABDF is a parallelogram. $\angle$BCD is a right angle, $\angle$CBD = 50° and ~~$\angle$AEF = 120°~~. Find $\angle x$.
$\wedge$ L FAE= 20°



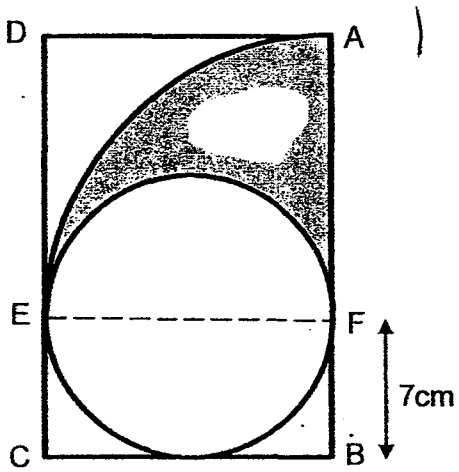
Ans: _____ [3]

7. Hannah put 78 paper clips in Box A, 56 paper clips in Box B and 182 paper clips in Box C. Hannah then added an equal number of paper clips into each of the boxes. As a result, Box C contained the same number of paper clips as the total number of paper clips in Boxes A and B. How many paper clips were there in all three boxes at the end?

Ans: _____ [3]

Sub-Total:

8. The shaded part in the figure is made up of a quadrant and a semicircle which are drawn within the rectangle ABCD. FB = 7cm. What fraction of rectangle ABCD is shaded? (Take $\pi = \frac{22}{7}$)



Ans: _____ [3]

Sub-Total:

9. At a bakery, Lisa bought 8 fruit tarts. Mandy bought 6 fruit tarts and 3 chicken pies at $2 each. Altogether, she spent $3.20 less than Lisa. What was the amount of money Mandy spent?

Ans: _____ [3]

10. The average marks for Mathematics of a group of pupils was 82. When a pupil with 94 marks left the group, the average marks for the remaining pupils was 80. How many pupils were in the group at first?

Ans: _____ [3]

Sub-Total:

11. Janice spent $\frac{5}{9}$ of her money on a bag and 7 pairs of earrings. The cost of each pair of earrings is $\frac{1}{8}$ of her remaining money. The total cost of 7 pairs of earrings is \$128 more than the cost of the bag.

(a) What fraction of her money was spent on 7 pairs of earrings?

(b) How much did she have at first?

Ans: (a) _____ [1]

(b) _____ [3]

Sub-Total:

12. In a bookshop, 4 storybooks and 4 boxes of pencils cost as much as 3 storybooks and 8 boxes of pencils. Each storybook cost $18 more than a box of pencils.

(a) What is the cost of a storybook?

(b) What is the total cost of the 4 storybooks and 4 boxes of pencils?

Ans: (a)_____ [2]

(b) _____ [2]

Sub-Total:

13. Devi prepares chocolates for the guests who are attending her party. The ratio of the number of adults to the number of children is 3 : 4. Of the children, $\frac{1}{5}$ are boys and the rest are girls. She prepared a total of 500 chocolates so that each adult gets 3 chocolates and each child gets 4 chocolates.

(a) What fraction of Devi's guests are girls?

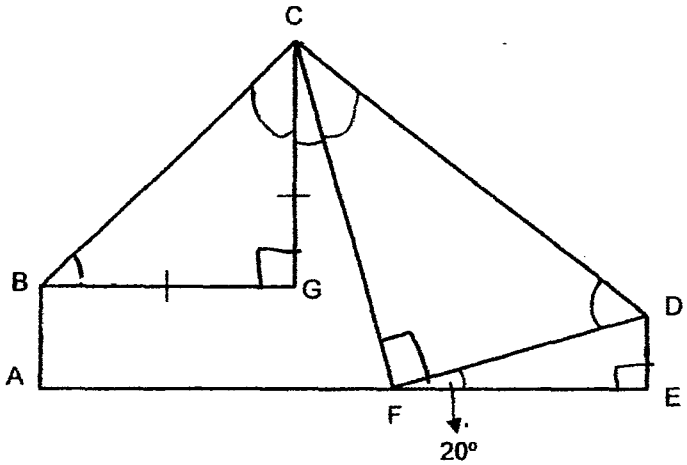
(b) How many adults are attending Devi's party?

Ans: (a) _____ [1]

(b) _____ [3]

Sub-Total:

14. The figure below, not drawn to scale, is formed by folding a rectangular piece of paper at two of its corners, F and G. CG = BG and ∠DFE = 20°.



(a) Find ∠CDF.

(b) Find ∠GCF.

Ans: (a)_____ [2]

(b) _____ [2]

Sub-Total:

15. Kai Kai and Jia Jia started on a 50-km cycling trip at the same time. They cycled at the same speed for the first 10 km. For the remaining 40 km, Kai Kai cycled at a greater speed. He arrived at the finishing point 40 minutes before Jia Jia who was 10 km behind him. Jia Jia did not change her speed throughout her trip and she completed it at 11 30.

(a) At what time did the journey start?

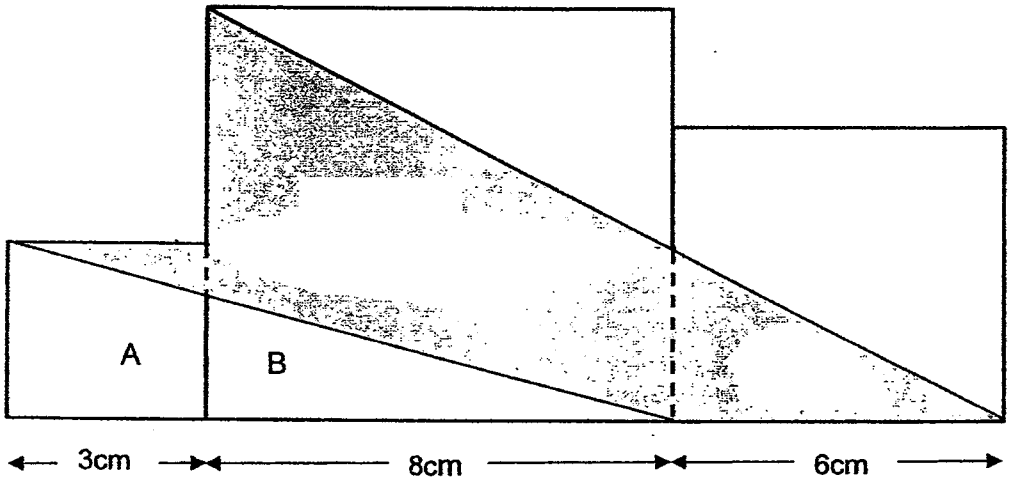
(b) What was Kai Kai's average speed for the remaining 40 km of the trip in m/min?

Ans : (a) _____ [2]

(b) _____ [2]

Sub-Total:

16. The figure shows 3 squares of side 3 cm, 8 cm and 6 cm.



(a) Find the total area of A and B.

(b) Find the area of the shaded part.

Ans: (a) _____ [1]

(b) _____ [4]

Sub-Total:

17. During the Great Singapore Sale, the discount given by Shop A and Shop B are shown below.

Shop A	Shop B
Discount of $6 for every $30 spent	20% off Store-wide

(a) Mrs Wong wants to buy a bag. The price of the bag before discount in both shops is $280. Which Shop should Mrs Wong buy from in order to save more money?

Mr Lim bought a pair of shoes and a shirt from shop A and paid $168.

(b) What was the total cost of the pair of shoes and the shirt before discount?

(c) The price of the same shirt after discount at Shop B is $38.40. Given that the price of the shirt before discount is the same in both shops, what is the percentage discount given to the shirt at Shop A?

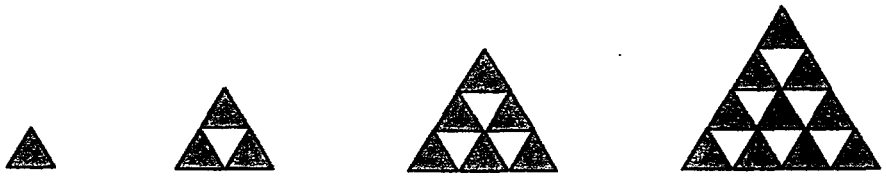
Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

Sub-Total:

18. Paul used black and white triangles to form some patterns. The first four patterns are shown below.



Pattern 1 Pattern 2 Pattern 3 Pattern 4

(a) Complete the table below.

Pattern Number	Number of **shaded** triangles	Total number of triangles
1	1	1
2	3	4
3	6	9
4	10	16
5		

[1]

b) Find the total number of **shaded** triangles for Pattern 28.

c) Find the total number of **unshaded** triangles for Pattern 28.

Ans : (b) _____ [2]

(c) _____ [2]

~ End of Paper ~

Sub-Total:

ANSWER KEY

YEAR	:	**2017**
LEVEL	:	**PRIMARY 6**
SCHOOL :	:	**ANGLO-CHINESE SCHOOL (JUNIOR)**
SUBJECT :	:	**MATHEMATICS**
TERM	:	**SA1**

Paper 1

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

Q16 46

Q17 347.4

Q18 5

Q19 $2\frac{1}{4}$

Q20 175%

Q21 6

Q22 108°

Q23 (75π) cm^2

Q24 384 ml

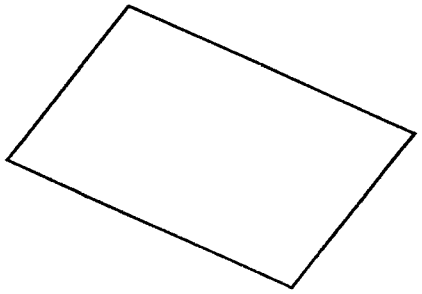
Q25 12 h 45 min

Q26 1 bag → 16
9 bags → 144
144 ÷ 2 = 72
At first → 72 + 23 ⇒ <u>95</u>

Q27 3 : 13

Q28 (a) 67°

(b)



Q29 7u x 4 → 28u
6u x 3 → 18u
10u → 20
28u ⇒ <u>56 guppies</u>

Q30 10 x 2 → 20
20 + 10 + 8 + 8 ⇒ <u>46 cm</u>

<u>Paper 2</u>

Q1 630 – 72 – 36 → 522
522 ÷ 3 → 174
174 + 36 ⇒ <u>210 stamps</u>

Q2 7 : 8

Q3 $56

Q4 27 cm^2

Q5 (a) <u>Wednesday</u> and <u>Friday</u>

(b) 12 + 24 + 10 + 20 +12 ⇒ <u>78</u>

Q6 ∠BDE → 50° + 90° = 140°
∠EAB → 140° - 20° = 120°
∠x → (180° - 120°) ÷ 2 ⇒ <u>30°</u>

Q7 $182 - 56 - 78 \rightarrow 48$
$(182 + 48) \times 2 \Rightarrow$ <u>460 paper clips</u>

Q8 $\frac{1}{2} \times \frac{22}{7} \times 7 \times 7 = 77$

$\frac{1}{4} \times \frac{22}{7} \times 14 \times 14 = 154$

$154 - 77 = 77$
$7 \times 14 = 98$
$(14 \times 14) + 98 = 294$

$\frac{77}{294} \Rightarrow \mathbf{\frac{11}{42}}$

Q9 1 CP $\rightarrow$ 2
3 CP $\rightarrow$ 6
8 FT + 3.2 $\rightarrow$ 6 FT + 6
8 FT – 6 FT $\rightarrow$ 3.2 + 6
2 FT $\rightarrow$ 9.2
1 FT $\rightarrow$ 4.6
6 FT $\rightarrow$ 4.6 x 6 = 27.6
27.6 + 6 $\Rightarrow$ <u>$33.60</u>

Q10 $82 - 80 \rightarrow 2$
$94 - 80 \rightarrow 14$
$14 \div 2 \Rightarrow$ <u>7 pupils</u>

Q11 (a) $\frac{1}{8} \times \frac{4}{9} \rightarrow \frac{1}{18}$

$\frac{1}{18} \times 7 \Rightarrow \mathbf{\frac{7}{18}}$

Q11 (b) $1e \rightarrow \frac{1}{18}$

$7e \rightarrow \frac{7}{18}$

$1b \rightarrow \frac{10}{18} - \frac{7}{18} = \frac{3}{18}$

$\frac{7}{18} - \frac{3}{18} = \frac{4}{18}$

$4u \rightarrow 128$
$1u \rightarrow 32$
$18u \Rightarrow \underline{\$576}$

Q12 (a) $4S + 4P \rightarrow 3S + 8P$
$4S \rightarrow 4u + 72$
$4P \rightarrow 4u$
$3S \rightarrow 3u + 54$
$8P \rightarrow 8u$
$4u + 4u + 72 \rightarrow 3u + 8u + 54$
$8u + 72 \rightarrow 11u + 54$
$3u \rightarrow 18$
$1u \rightarrow 6$
$18 + 6 \Rightarrow \underline{\$24}$

Q12 (b) \$240

Q13 (a) $\frac{16}{35}$

Q13 (b) 60 adults

Q14 (a) $(180° - 90°) \div 2 = 45°$
$180° - 20° - 90° = 70°$
$180° - 70° = 110°$
$110° \div 2 = \underline{55°}$

Q14 (b) $180° - 90° - 55° = 35°$
$180° - 45° - 45° - 35° - 35° = \underline{20°}$

Q15 (a) 8:10am

Q15 (b) $333\frac{1}{3}$ m/min

Q16 (a) $3 + 8 = 11$
$\frac{1}{2} \times 11 \times 3 = \underline{16.5\ cm^2}$

Q16 (b) $\frac{1}{2} \times 8 \times 14 = 56$

$8 \times 8 = 64$
$6 \times 6 = 36$
$(36 + 64) - 56 = 44$
$3 \times 3 = 9$
$36 + 64 + 9 = 109$
$109 - 44 - 16.5 = \underline{48.5\ cm^2}$

Q17 (a) Shop B

Q17 (b) $210

Q17 (c) 12.5%

Q18 (a)

5	15	25

Q18 (b) 406

Q18 (c) Total triangles $\rightarrow 28 \times 28 = 784$
Unshaded triangles $\rightarrow 784 - 406 \Rightarrow \underline{378}$

End

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION ONE (2017)

PRIMARY SIX

MATHEMATICS

PAPER 1

(BOOKLET A)

Name : _____( )

Class : Primary 6 _____

Date : 5 May 2017

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. Round 16 641 to the nearest hundred.

   (1) 16 000

   (2) 16 600

   (3) 16 700

   (4) 17 000

---

2. Which one of the following is the same as 3090 g?

   (1) 3 kg 9 g

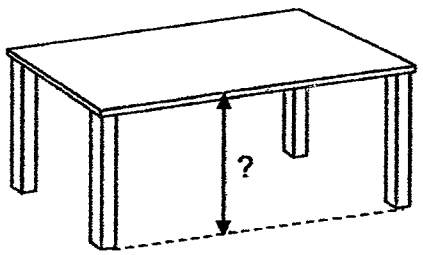
   (2) 3 kg 90 g

   (3) 30 kg 9 g

   (4) 30 kg 90 g

---

3. Which one of the following is likely to be the height of a dining table top from the ground?



   (1) 8.5 cm

   (2) 8.5 m

   (3) 85 cm

   (4) 85 m

(Go on to the next page)

4. What is the value of 2 ones, 8 tenths and 14 hundredths?

(1) 2.804

(2) 2.814

(3) 2.84

(4) 2.94

---

5. Which one of the following has the same value as $7 \div \frac{3}{5}$?

(1) $\frac{7}{1} \times \frac{5}{3}$

(2) $\frac{7}{1} \times \frac{3}{5}$

(3) $\frac{1}{7} \times \frac{3}{5}$

(4) $\frac{1}{7} \times \frac{5}{3}$

---

6. Express 0.7% as a fraction.

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

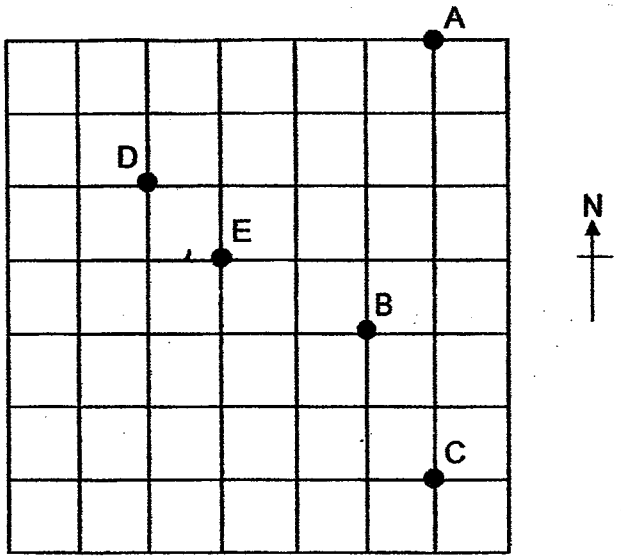
(2) $\frac{7}{10}$

(3) $\frac{7}{100}$

(4) $\frac{7}{1000}$

(Go on to the next page)

7. Five landmarks A, B, C, D and E on a map are shown in the square grid below.



Dennis is at landmark E.
He faces west and turns 135° anti-clockwise.
Which one of the following landmark is he now facing?

(1) A

(2) B

(3) C

(4) D

---

8. Wendy paid $280 for 3 similar shirts and 2 similar belts. The price of each belt is half the price of each shirt. What is the price of each belt?

(1) $35

(2) $40

(3) $56

(4) $70

(Go on to the next page)

9. Jane used a packet of flour to bake some muffins and cupcakes. After using $\frac{2}{5}$ of the packet of flour for muffins and 210 g of flour for cupcakes, she had 150 g of flour left. What was the mass of flour used for the muffins?

(1) 70 g

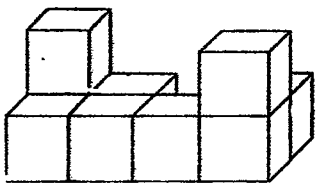
(2) 120 g

(3) 240 g

(4) 600 g

---

10. The solid shown is formed using some unit cubes.
How many unit cubes are used to form the solid?



(1) 8

(2) 9

(3) 10

(4) 11

---

11. The price of a Pego figure set was $20. Sally bought one such figure set and had to pay 7% GST on the price. How much did she pay for the Pego figure set?

(1) $1.40

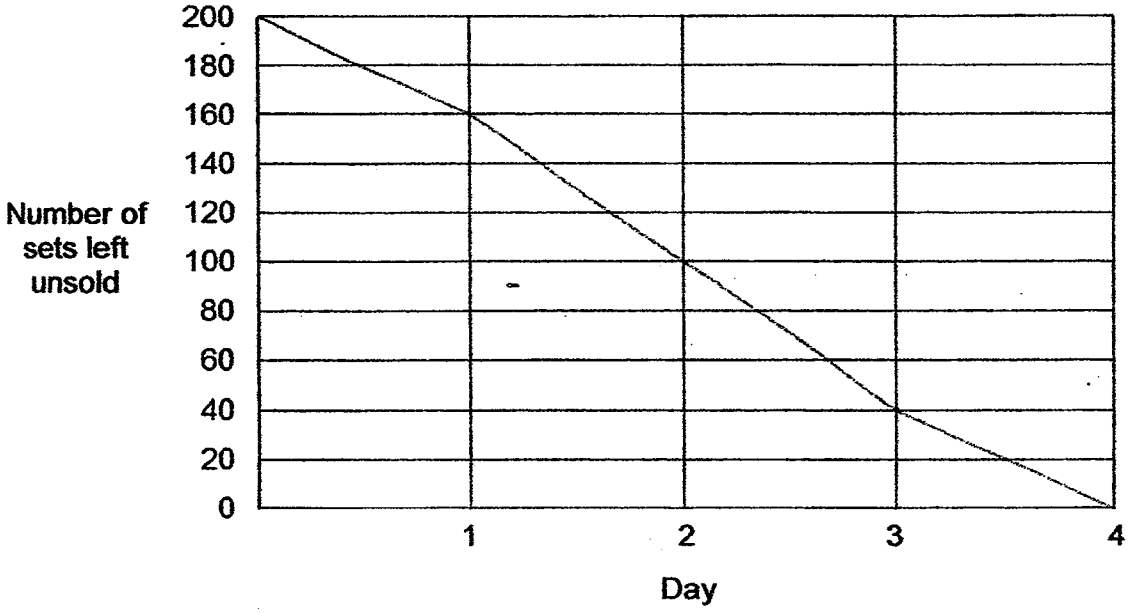
(2) $9.80

(3) $21.40

(4) $27

(Go on to the next page)

12. A toy store sold 200 sets of brick games during a 4-day sale. The line graph shows the number of sets left unsold at the end of each day.



What percentage of the brick games were sold at the end of Day 3?

(1) 20%

(2) 40%

(3) 60%

(4) 80%

---

13. John had thrice as many local stamps as foreign stamps. After giving away 59 local stamps and 11 foreign stamps, John had equal number of local and foreign stamps left. How many foreign stamps were there at first?

(1) 24

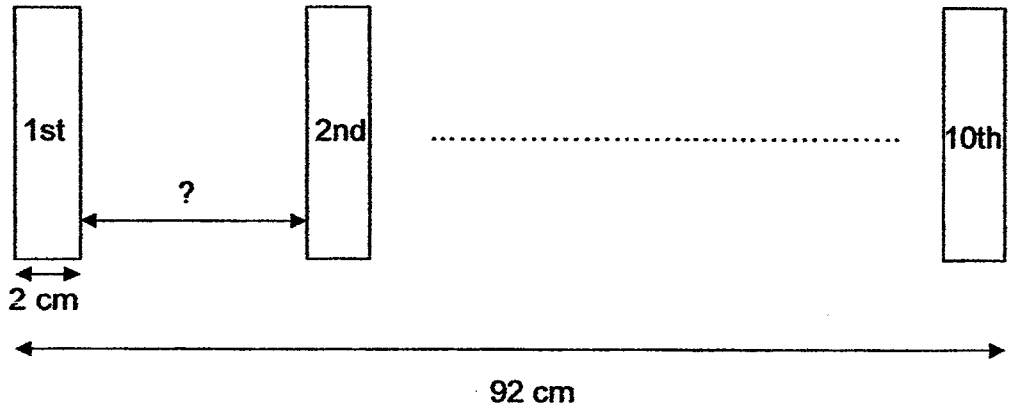
(2) 35

(3) 72

(4) 105

(Go on to the next page)

14. 10 identical rectangular cards are placed in a straight line at equal distance from one card to the next card.



How far apart is one rectangular card from the next one?

(1) 7.2 cm

(2) 8 cm

(3) 9 cm

(4) 9.2 cm

---

15. A box contained equal number of red and blue marbles. The blue marbles are repacked into 2 smaller bags in the ratio 5 : 7. The difference in the number of marbles between the two bags is 30 marbles. How many marbles were there in the box at first?

(1) 90

(2) 105

(3) 180

(4) 360

END OF BOOKLET A

PRELIMINARY EXAMINATION (2017)

PRIMARY SIX

MATHEMATICS

PAPER 1

(BOOKLET B)

Name : _____ ( )

Class : Primary 6 _____

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)

Do not write in this space

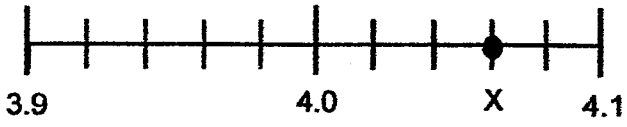
16. Write one million, ten thousand and ninety in numerals.

Ans: _____

17. Find the value of 56 – (20 ÷ 5) x 3 + 1

Ans: _____

18. The number line below is marked at equal intervals.
What is the value of X?



Ans: _____

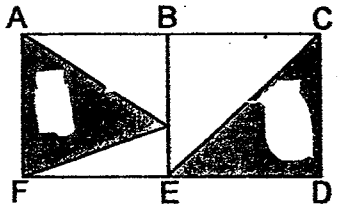
(Go on to the next page)

19. Write down all the common factors of 30 and 36.

Do not write in this space

Ans:_____

20. Figure ABCDEF is made up of 2 identical squares ABEF and BCDE.
What fraction of the figure is shaded?
Give your answer in the simplest form.



Ans: _____

21. Find the value of $\frac{8m}{3} - m$ when $m = 6$.

Ans:_____

(Go on to the next page)

22. The table shows the car park charges at a car park.

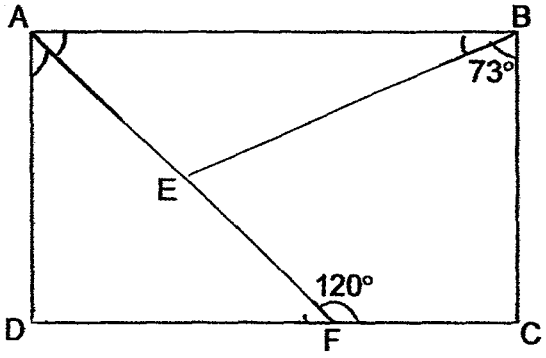
First hour	\$2.50
Every subsequent $\frac{1}{2}$ hour or part thereof	\$1.50

Mrs Lee parked in the car park from 8.45 a.m. to 11.00 a.m. on the same day. How much did she pay for the car park charges?

Ans:\$ _____

Do not write in this space

23. In the figure, ABCD is a rectangle. AEF is a straight line. Find ∠BEF.

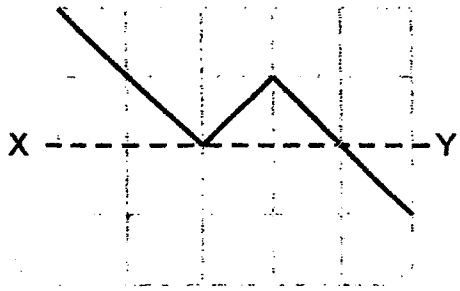


Ans: _____ °

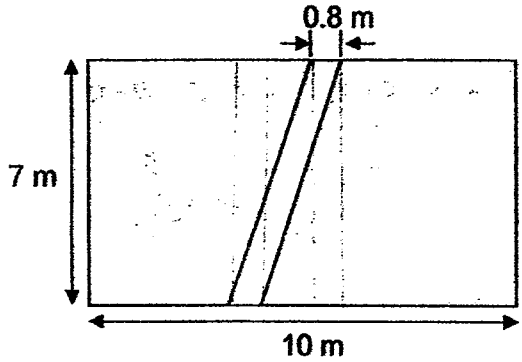
(Go on to the next page)

24. In the square grid below, three straight lines are drawn.
Draw three more straight lines to form a symmetric figure with XY as the line of symmetry.

Do not write in this space



25. The figure below shows a rectangular garden of length 10 m and breadth 7 m with a footpath of 0.8 m wide. What is the area of the garden excluding the footpath?



Ans: _____ m^2

marks for questions 16 to 25

(Go on to the next page)

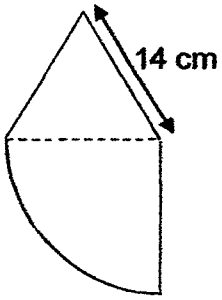
Questions **26** to **30** carry 2 marks each. Show your working and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

26. At a fruit stall, 3 mangoes cost as much as 2 papayas. Each papaya costs \$0.70 more than a mango. What is the cost of a papaya?

Ans: \$_____.

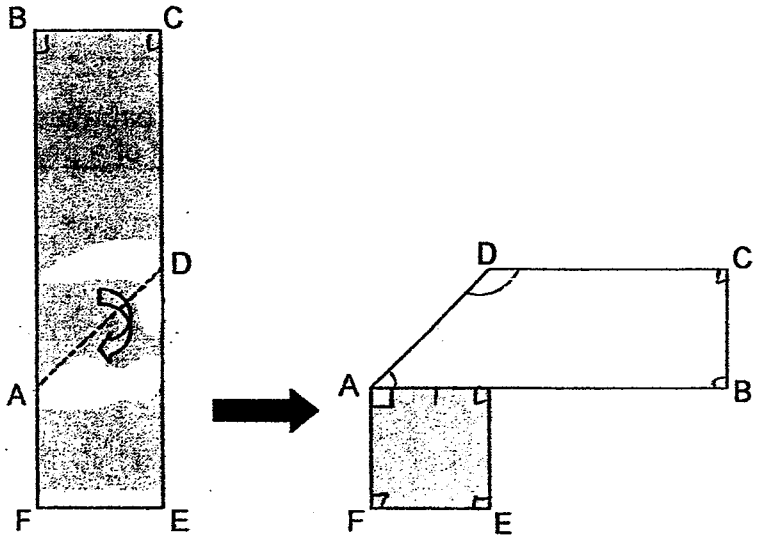
27. The figure below is made up of a quarter circle and an equilateral triangle. Find the perimeter of the figure. Give your answer in terms of π.



Ans: _____ cm

(Go on to the next page)

28. A rectangular piece of paper BCEF is folded along the dotted line AD as shown below. Find ∠ADC.



Before folding

After folding

Ans: _____ °

29. Some chicken nuggets were shared among a group of children. When each child tried taking 5 chicken nuggets, there were 12 chicken nuggets left over. When each child tried to take 8 chicken nuggets, they found that they needed 6 more nuggets. How many children were there in the group?

Ans: _____

Do not write in this space

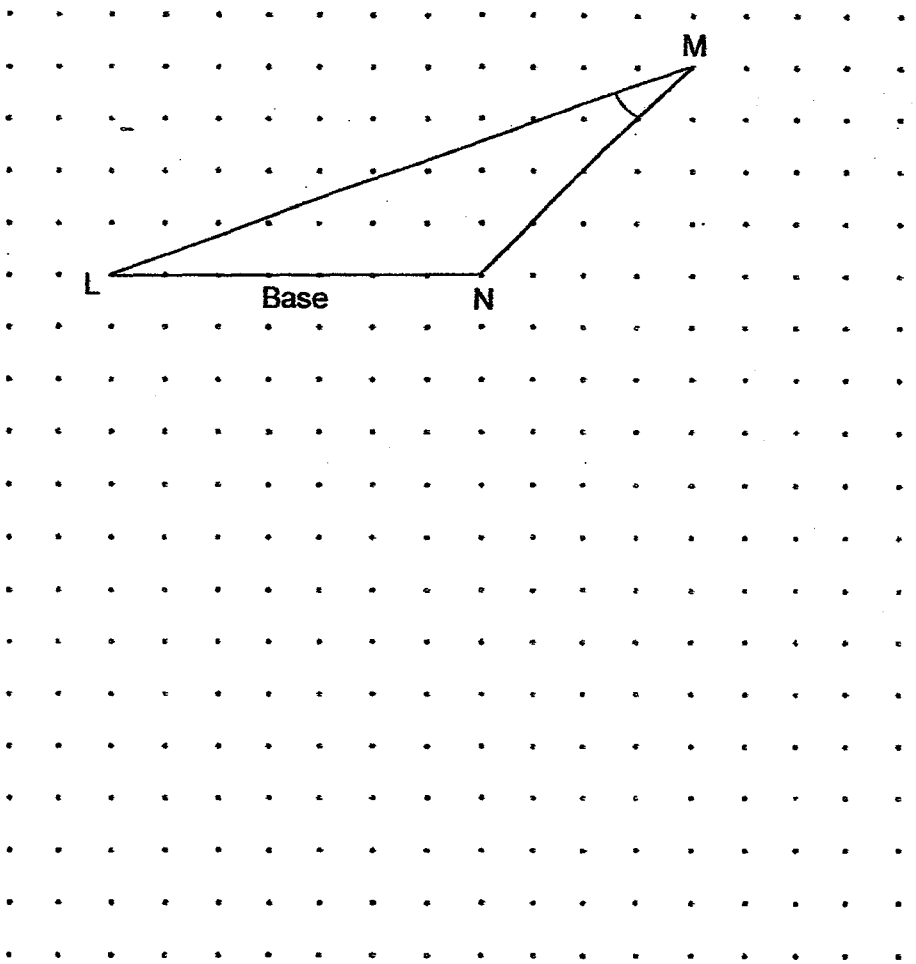
(Go on to the next page)

30. A triangle LMN is drawn by joining dots on the square grid below with three straight lines.

Do not write in this space

(a) Measure and write the size of ∠LMN.

(b) In the same way, draw a right-angled triangle with the same area as triangle LMN and the same base LN.



Ans: (a) _____ °

Total marks for questions 26 to 30

END OF BOOKLET B
END OF PAPER 1

PRELIMINARY EXAMINATION (2017)

PRIMARY SIX

MATHEMATICS

PAPER 2

Name :_____( )

Class : Primary 6 _____

Paper 1 Booklet A	20
Paper 1 Booklet B	20
Paper 2	60
Total Marks	100

Total Time: 1 h 40 min

18 questions

60 marks

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)

Do not write in this space

1. A fish burger costs $1 less than a chicken burger. The total cost of 4 fish burgers is $x.

   (a) Express the cost of 20 fish burgers in terms of x.

   (b) Express the cost of a chicken burger in terms of x.

Ans: (a) $_____

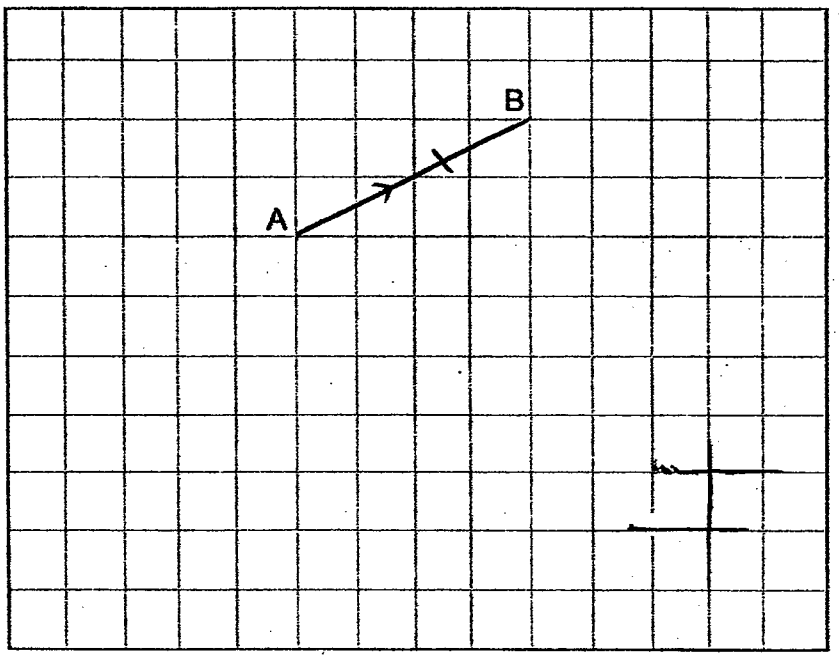
(b) $_____

2. The average of 4 numbers is 27. When one of the numbers is removed, the sum of the remaining numbers is 72. What is the number that has been removed?

Ans: _____

3. In the square grid below, AB is one side of a trapezium ABCD.
   (a) Draw and label BC that is equal in length as AB and perpendicular to AB.
   (b) Draw and label CD that is parallel to AB and twice the length of AB.

Do not write in this space

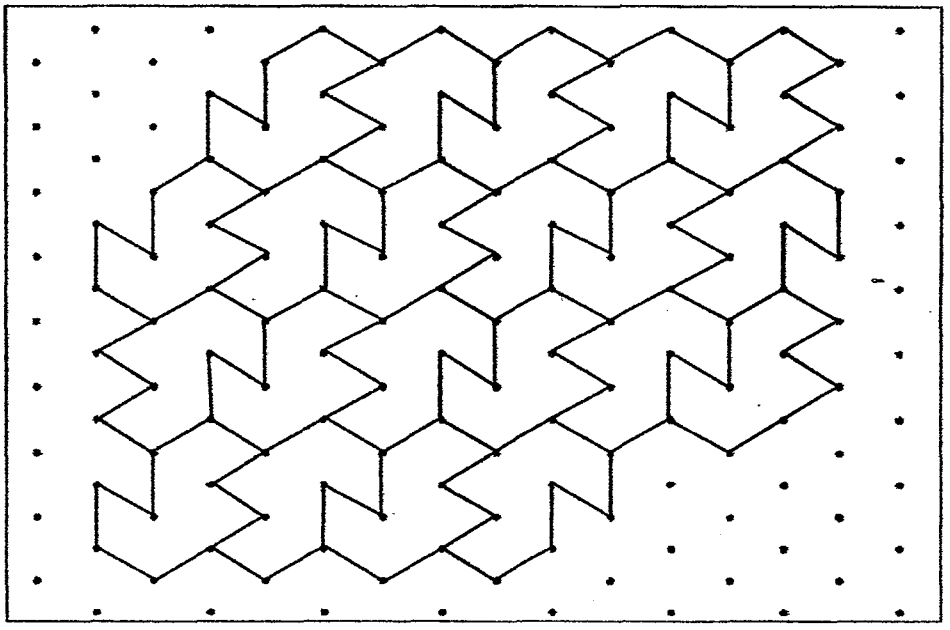


4. Maverick and Nathan completed a run with a total time of 23 minutes. Maverick was 5 minutes faster than Nathan. How long did Maverick take to complete the run?

Ans: _____ min

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.

Do not write in this space



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)

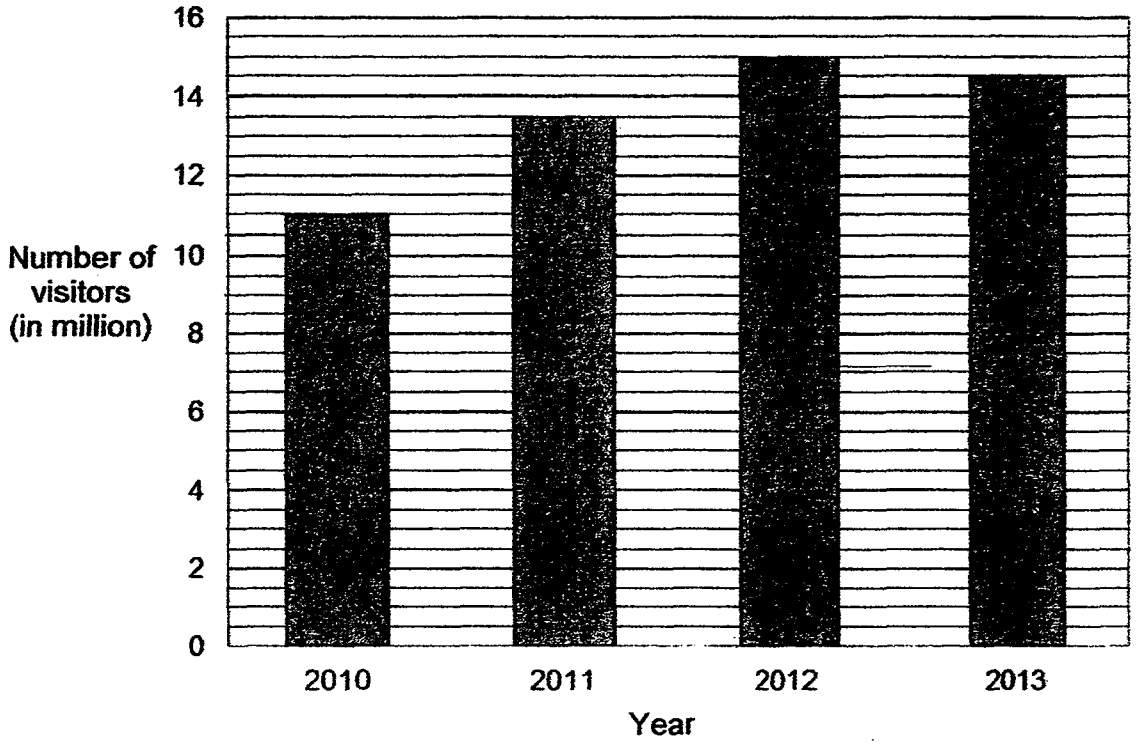
Do not write in this space

6. The mass of a container with 50 identical cups is 1500 g. When 30 of the cups are removed, the mass of the container with the remaining cups is 660 g. What is the mass of each cup?

Ans: _____ [3]

7. The graph below shows the number of visitors who arrived in Singapore from 2010 to 2013.

Do not write in this space



(a) What was the ratio of the number of visitors in 2011 to the number of visitors in 2012 to the number of visitors in 2013?

(b) What was the percentage increase in the number of visitors who visited Singapore in 2013 compared to 2010? Give your answer correct to 2 decimal places.

Ans: (a) _____ [1]

(b) _____ [2]

8. Jack and Alison have a total of \$352 at first. After Jack spent $\frac{2}{3}$ of his money and Alison spent $\frac{3}{5}$ of her money, they had equal amount of money left. How much money did Jack spend?

Do not write in this space

Ans: _____ [3]

9. The ratio of the volume of liquid in container A to the volume of liquid in container B was 5 : 2. When 112 mℓ of liquid from container A was poured into container B, the ratio of the volume of liquid in container A to the volume of liquid in container B became 1 : 2. What was the volume of liquid in container B in the end?

Do not write in this space

Ans _____ [3]

10. 398 candies were given to some children at a festival. Each boy was given 5 candies and each girl was given 3 candies. There were 18 more girls than boys at the festival. How many children were there at the festival?

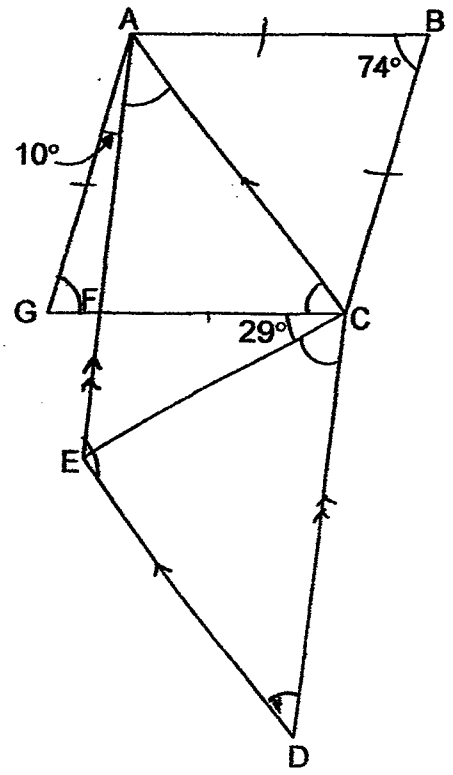
Do not write in this space

Ans: _____ [3]

11. In the figure, ABCG is a rhombus and ACDE is a parallelogram. $\angle ABC = 74°$, $\angle FCE = 29°$ and $\angle GAF = 10°$.

(a) Find $\angle FAC$.

(b) Find $\angle ECD$.



Do not write in this space

Ans: (a) _____ [2]

(b) _____ [2].

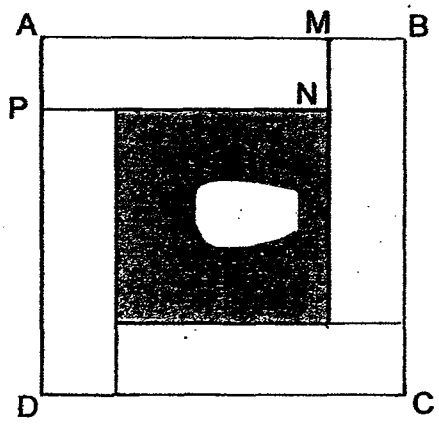
12. Anne ~~Anne~~ has 150 more stamps than Betty. After Anne sold $\frac{1}{3}$ of her stamps and Betty sold $\frac{5}{8}$ of her stamps, Anne has 191 more stamps than Betty. How many stamps do both girls have in total at first?

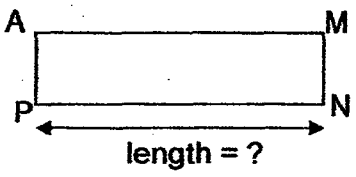
Do not write in this space

Ans: _____ [4]

13. Derek uses four identical rectangles to form the figure ABCD with a shaded square in the middle as shown below. Rectangle AMNP is one such rectangle. The perimeter of rectangle AMNP is 30 cm. The area of the shaded square is 81 cm^2.

Do not write in this space





(a) Find the length of PN.

(b) What is the area of figure ABCD?

Ans: (a) _____ [2]

(b) _____ [2]

14. After a discount of 25%, the price of a theme park ticket is \$65.25. Senior citizens are given a further discount of \$7.

(a) What is the total amount of discount given to senior citizens for the ticket?

(b) What is the percentage discount given to senior citizens for the ticket? Give your answer to the nearest whole number.

Do not write in this space

Ans (a): _____ [2]

(b): _____ [2]

15. At the start of a birthday party, $\frac{5}{7}$ of the children were boys and the rest were girls. During the party, some boys left and the remaining number of boys were $\frac{2}{5}$ of the children. 32 boys then joined the party. The number of children was 10 more than the number of children at the start of the party. How many children were there at the start of the party?

Do not write in this space

Ans: _____ [4]

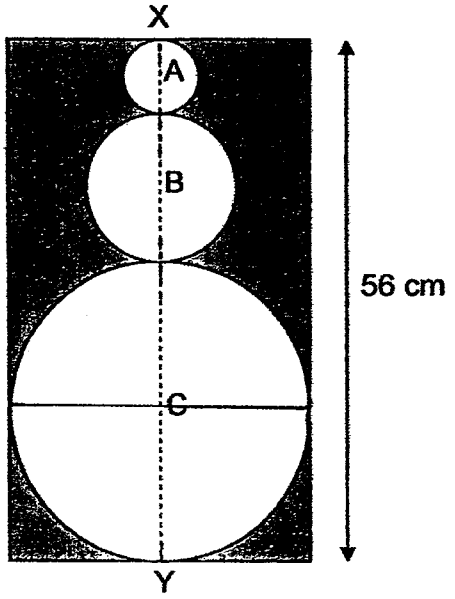
16. The figure below is formed by a rectangle and three circles A, B and C. The diameter of circle A is half that of circle B and the diameter of circle B is half that of circle C. Line XY is the line of symmetry of the figure.

Do not write in this space

(a) What is the diameter of circle A?

(b) Find the shaded area.

Take $\pi = 3.14$



Ans: (a) _____ [2]

(b) _____ [3]

17. Candies were only sold in packets of 12. Each packet was sold at $5. Mrs Lim had $128 and bought as many packets of candies as possible. She re-packed them into 42 boxes. Some boxes contained 6 candies while the rest contained 8 candies.

(a) How many candies did she buy?

(b) How many boxes contained 6 candies?

Do not write in this space

Ans: (a) _____ [2]

(b) _____ [3]

18. Three boys Alan, Ben and Carl had the same number of coins. Alan and Ben each had a mix of twenty-cent and fifty-cent coins. Alan had 7 twenty-cent coins while Ben had 17 twenty-cent coins. Carl had only fifty-cent coins.

(a) Of the three boys, who had the most money and who had the least?

(b) What was the difference in the total value of Alan and Ben's coins?

(c) Ben used all his fifty-cent coins to buy stationery. He then had $9.10 less than Carl. How many fifty-cent coins did Carl have?

Ans: (a) Most _____

Least _____ [1]

(b) _____ [2]

(c) _____ [2]

END OF PAPER.
PLEASE CHECK YOUR WORK CAREFULLY.

EXAM PAPER 2017
LEVEL : PRIMARY 6
SCHOOL : CATHOLIC HIGH SCHOOL
SUBJECT : MATHEMATICS

Paper 1

Section A

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

Section B

Q16 1010090

Q17 45

Q18 4.06

Q19 1,2,3,6

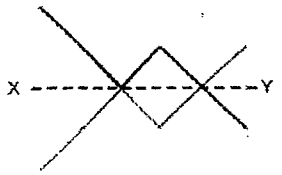
Q20 $\frac{1}{2}$

Q21 10

Q22 $7

Q23 77°

Q24



Q25 64.4m^2

Q26 $2.10

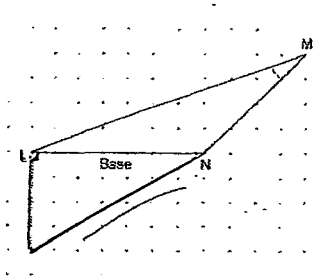
Q27 $(7\pi + 42)$cm

Q28 135°

Q29 6

Q30 (a) 25°

(b)



Paper 2

Q1 (a) 4 fish burgers = \$x

1 fish burger = $\frac{\$x}{4}$

20 fish burgers = $\frac{\$x}{4} x\ 20$

= **\$5x**

(b) 1 chicken burger = 1 fish burger + \$1

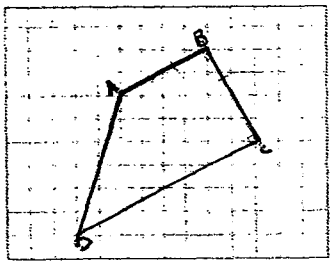
= $\frac{\$x}{4}$ + \$1

= **\$ ($\frac{x}{4}$ + 1)**

Q2 27 x 4 = **108**

108 – 72 = **36**

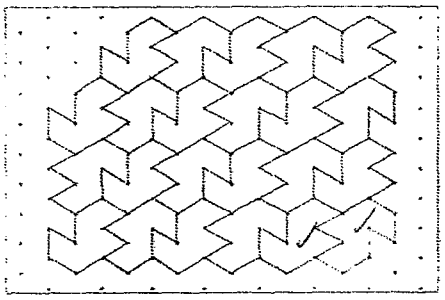
Q3



Q4 23 – 5 = 18

18 ÷ 2 = **9**

Q5



Q6 Mass of 50 cups + container = 1500g

Mass of 20 cups + container = 660g

Mass of 30 cups = 840g

Mass of 1 cup = 840g ÷ 30

= **28g**

Q7 (a)

2011	:	2012	:	2013
13.5	:	15	:	14.5
27	**:**	**30**	**:**	**29**

X2

(b) 14.5 – 11 = 3.5

3.5 ÷ 11 = 0.3182

0.3182 x 100% = **31.82%**

Q8

	spent	Left
Jack	$\frac{2}{3}$m	$\frac{1}{3}$m
Alison	$\frac{3}{5}$m	$\frac{2}{5}$m

$\frac{1}{3}$ of Jack = $\frac{2}{5}$ of Alison

Equal Fraction

$\frac{2}{6}$ of Jack = $\frac{2}{5}$ of Alison

6 + 5 = 11
$352 ÷ 11 = $32
6 – 2 = 4
4 x $32 = **$128**

Q9

	A	:	B	Total
At first	$5u_{x3}$	:	$2u_{x3}$	$7u_{x3}$
At the end	$1u_{x7}$	:	$2u_{x7}$	$3u_{x7}$

Total remained unchanged

	A	:	B	Total
At first	15u	:	6u	21u
At the end	7u	:	14u	21u

15u – 7u = 8u
112*ml* ÷ 8 = 14*ml*
14 x 14*ml* = **196*ml***

Q10 3 x 8 = 54
398 – 54 = 344
5 + 3 = 8
344 ÷ 8 = 43
43 x 2 = 86
86 + 18 = **104**

Q11 (a) 180° – 74° = 106°
106° ÷ 2 = 58°
53° - 10° = **43°**

(b) 180° – 43° = 137°
53° + 29° = 82°
137° – 82° = **55°**

Q12 191 -150 = 41

$\frac{1}{3}A = \frac{5}{8}B - 41$

$A = 1\frac{7}{8}B - 123$

A = B + 150

150 + 123 = 273

$\frac{7}{8}B = 273$

$\frac{1}{8}B = 273 \div 7$

= 39

B = 39 x 8

= 312

A = 312 + 150

= 462

A + B = 462 + 312

= **774**

Q13 (a) 9 x 9 = 81

9 + 9 = 18

30 – 18 = 12

12 ÷ 4 = 3

9 + 3 = **12**

(b) 12 x 3 = 36

36 x 4 = 144

144 + 81 = **225**

Q14 (a) 100 – 25 = 75

$62.25 ÷ 3 = $21.75

$21.25 + $7 = **$28.75**

(b) $21.75 x 4 = $87

$28.75 ÷ $87 = 0.33

0.33 x 100% = **33%**

Q15 Before

Boys	:	Girls	Total
$5u_{x3}$	:	$2u_{x3}$	
15u	:	6u	21u

After

Boys	:	Girls	Total
$2u_{x2}$	:	$3u_{x2}$	
4u	:	6u	10u

Girls remained unchanged

10u + 32 = 21u +10 (32 boys joined, 10 more children)

11u = 22

1u = 2

21u = **42**

Q16 (a) 1u + 2u + 4u = 7u
7u = 56
1u = 56 ÷ 7
= **8**

(b) Area of circle A = 3.14 x 4 x 4
= 50.24cm^2
Area of circle B = 3.14 x 8 x 8
= 200.96 cm^2
Area of circle C = 3.14 x 16 x 16
= 803.84 cm^2
Area of rectangle = 56 x 32
= 1792cm^2

Total area of circles = 1055.04cm^2
Area of shaded = 1792 – 1055.04
= **736.96 cm^2**

Q17 (a) \$128 ÷ \$5 = 25.6
25 x 12 = **300**

(b) Assume all are 8 candies boxes
42 x 8 = 336
336 – 300 = 36
8 – 6 = 2
36 ÷ 2 = **18**

Q18 (a)

	20¢	**50¢**
Alan	7	17
Ben	17	7
Carl	-	24

Alan = 0.2x7 + 0.5x17
= \$9.90
Ben = 0.2x17 + 0.5x7
= \$6.90 (Least)
Carl = 0.5x24
= \$12 (Most)

(b) \$9.90 - \$6.90 = **\$3**

(c) 0.20x17 = \$3.40
\$3.40 + \$9.10 = \$12.50
\$12.50 ÷ 0.50 = **25**

HENRY PARK PRIMARY SCHOOL
2017 SEMESTRAL EXAMINATION 1
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. In 178.234, which digit is in the hundredths place?

   (1) 1
   (2) 2
   (3) 3
   (4) 4 ( )

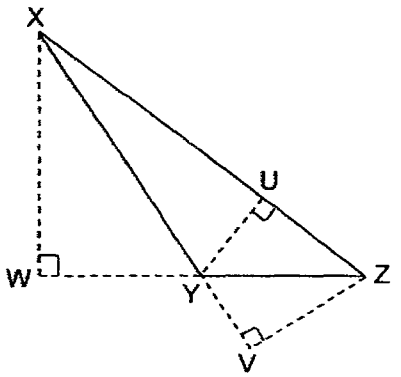
2. Arrange the following from the smallest to the largest.

   1.402, $\frac{7}{5}$ 1.41

   (1) $\frac{7}{5}$, 1.402, 1.41
   (2) $\frac{7}{5}$, 1.41, 1.402
   (3) 1.41, 1.402, $\frac{7}{5}$
   (4) 1.402, 1.41, $\frac{7}{5}$ ( )

(Go on to the next page)

3. The figure below shows triangle XYZ. Given that XY is the base of the triangle, which one of the following is its corresponding height?



(1) VZ

(2) XZ

(3) YU

(4) YZ ( )

4. Which one of the following would most likely be the height of the classroom door?

(1) 0.25 m

(2) 2.5 m

(3) 25 m

(4) 250 m ( )

5. For their Math test, David, Ali, Sam and Joey scored 19, 9, 0 and 8 marks respectively. What was their average marks for their Math test?

(1) 9

(2) 10

(3) 11

(4) 12 ( )

(Go on to the next page)

6. A photocopying machine can print 200 identical pieces of document in 180 seconds. How long does the same machine take to print 50 such pieces of document?

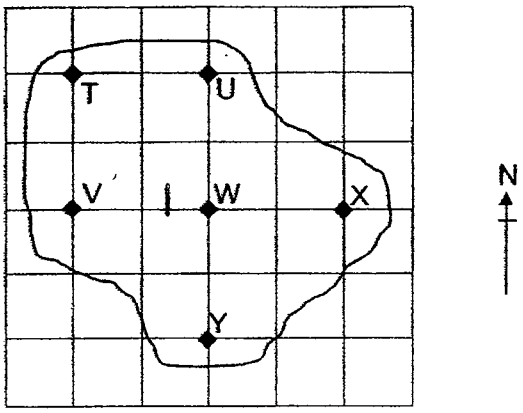
(1) 30 seconds

(2) 36 seconds

(3) 45 seconds

(4) 55 seconds ( )

7. Six landmarks, T, U, V, W, X and Y are shown in the square grid below.



Mr Lye is standing at one of the landmarks. He is facing Y. When he turns 90° clockwise, he faces U. Which landmark is Mr Lye standing at?

(1) T

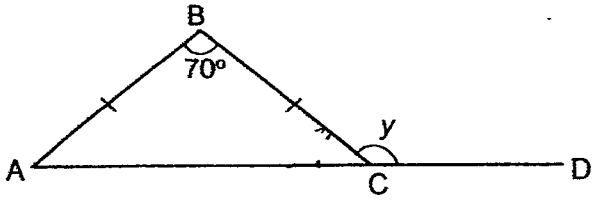
(2) V

(3) W

(4) X ( )

(Go on to the next page)

8. In the figure below, ACD is a straight line. Find $\angle y$.



(1) 55°

(2) 110°

(3) 125°

(4) 135° ( )

9. Brandon had some red and blue balloons. The ratio of the number of red balloons to the number of blue balloons was 3 : 2. What percentage of his balloons was blue?

(1) 60%

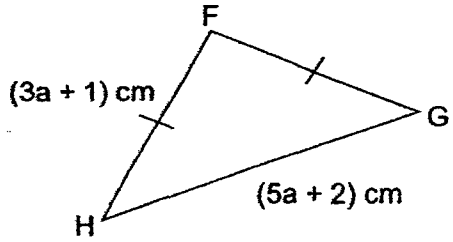
(2) 20%

(3) 30%

(4) 40% ( )

(Go on to the next page)

10. The figure below shows an isosceles triangle FGH.
HG is (5a + 2) cm while HF is (3a + 1) cm.
Find the perimeter of triangle FGH.



(1) (8a + 3) cm

(2) (11a + 3) cm

(3) (11a + 4) cm

(4) (13a + 5) cm ( )

11. Find the value of $90 - 6 \div 2 + 5 \times 2$

(1) 97

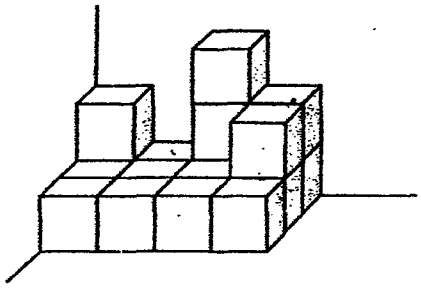
(2) 94

(3) 52

(4) 24 ( )

(Go on to the next page)

12. The solid below is made up of 1-cm cubes. How many more 1-cm cubes are needed to form a cube of sides 5 cm?



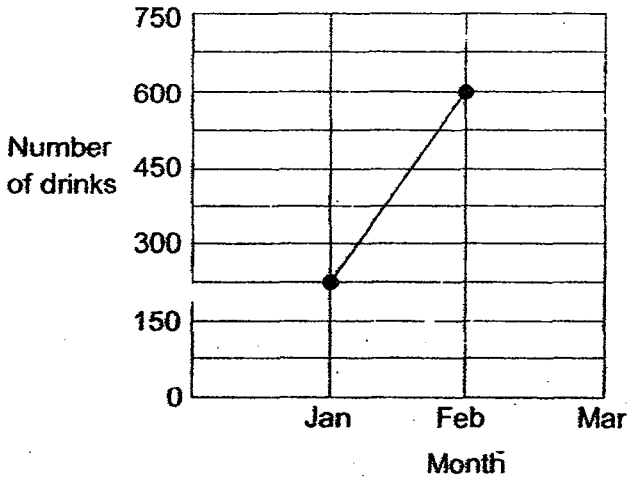
(1) 19

(2) 88

(3) 104

(4) 108 ( )

13. The graph below shows the number of drinks sold at a drink stall for a period of 3 months. Given that the average number of drinks sold from January to March was 450, what was the number of drinks sold in March?



(1) 425

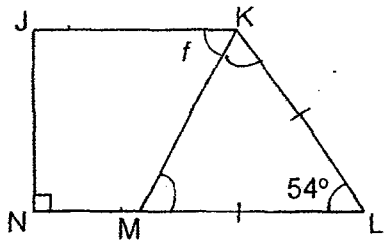
(2) 475

(3) 525

(4) 575 ( )

(Go on to the next page)

14. In the figure below, JKLN is a trapezium and KLM is an isosceles triangle where KL = ML. Find $\angle f$.



(1) 54°

(2) 63°

(3) 72°

(4) 74° ( )

15. Harold and Betty shared the total cost of a present. Harold paid \$18 more than $\frac{2}{5}$ of the total cost of the present. Betty paid \$24. How much did Harold pay for the present?

(1) \$14

(2) \$21

(3) \$28

(4) \$46 ( )

(Go on to Booklet B)

2017 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. Find the value of $\frac{4}{15} \div \frac{8}{9}$. Give your answer in its simplest form.

Ans: _____

17. Express $\frac{5}{8}$ as a decimal.

Ans: _____

18. What is 16 050 centimetres in metres?

Ans: _____ m

(Go on to the next page)

Do not write in this space

19. A delivery truck left Town A for Town B at 10.45 p.m.
It reached Town B at 6.10 a.m. the next day.
How long was the journey in hours and minutes?

Ans: _____h _____min

20. Use all the digits below to form an **even** number closest to 7000.
Each digit can only be used once.

8	7	6	0

Ans: _____

21. $\frac{1}{3}$ of Adam's stamps is equal to $\frac{1}{4}$ of Bala's stamps. What is the ratio of the number of Bala's stamps to that of Adam's stamps?

Ans: _____

(Go on to the next page)

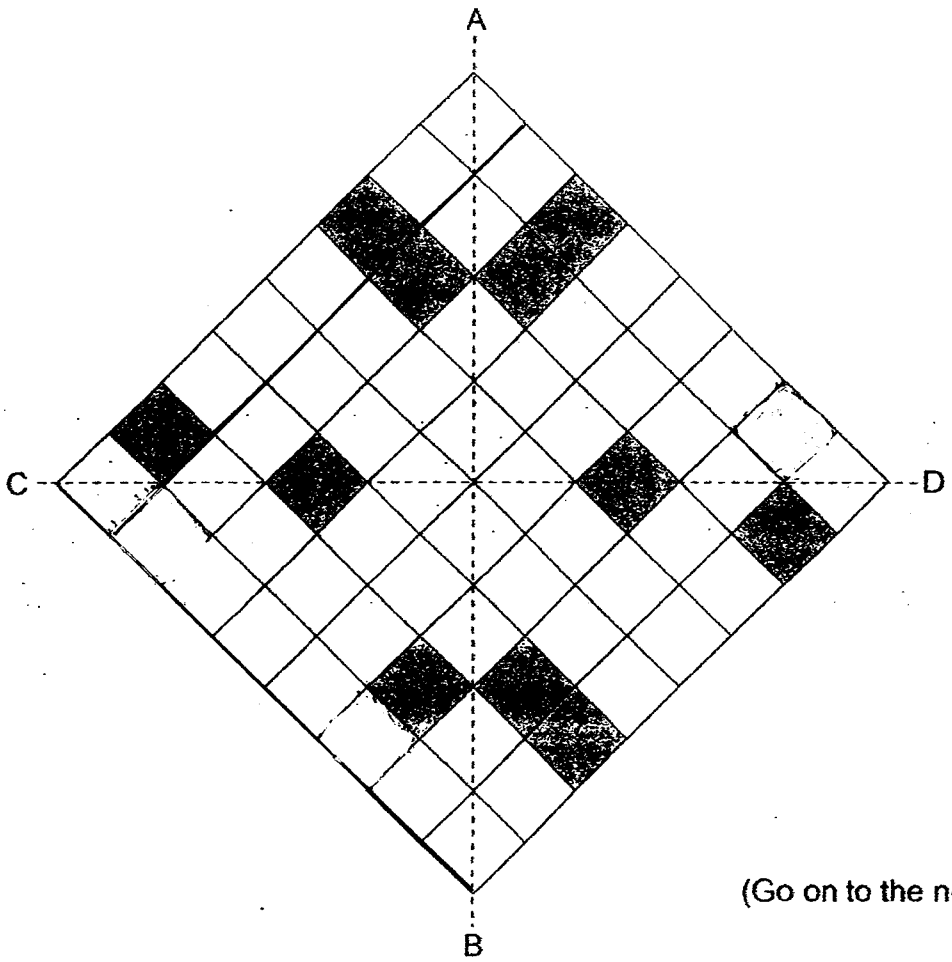
22. The table below shows the time taken by 5 different swimmers in a swimming competition.

Swimmer	Time taken in seconds
Evan	25.3
Felix	30.8
George	28.9
Henry	23.1
Iram	27.0

What was the average time taken by the two fastest swimmers?

Ans: _____ seconds

23. Shade 3 more squares to form a symmetric figure with AB and CD as the two lines of symmetry.



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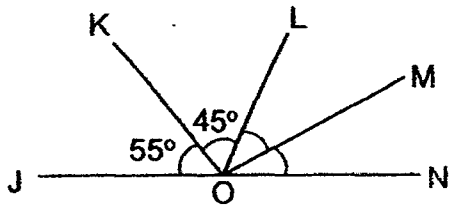
24. In the figure below, JON is a straight line and ∠LOM = ∠MON. Find ∠LOM.

Do not write in this space



Ans: _____ °

25. Kelly had $3950 in her bank account at the beginning of the year. Given that she received an interest of 2% per year, how much interest would she receive at the end of one year?

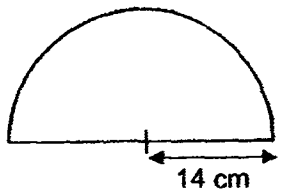
Ans: $_____

(Go on to the next page)

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

(10 marks)

26. Find the perimeter of the semi-circle of radius 14 cm. Take $\pi = \frac{22}{7}$.

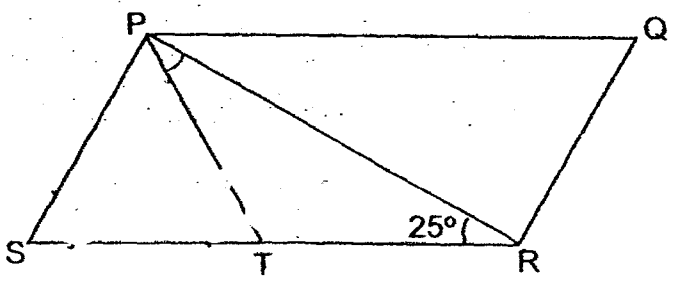


Ans: _____ cm

27. The ratio of the number of roses to the number of lilies is 1 : 3.
The ratio of the number of carnations to the number of lilies is 5 : 4.
Express the number of roses as a fraction of the number of carnations in the simplest form.

Ans: _____

28. In the figure below, PQRS is a parallelogram.
PTS is an equilateral triangle. $\angle PRT = 25^\circ$. Find $\angle TPR$.



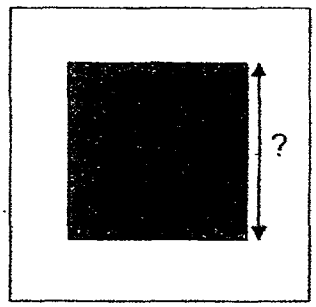
Ans: _____ °

(Go on to the next page)

29. It takes 5 minutes to cut a ribbon into 15 equal pieces.
How long would it take to cut the same ribbon into 8 equal pieces?

Ans: _____ minutes

30. The figure shows a black square tile glued onto a bigger white square tile.
The area of the white square tile **not** covered by the black square tile is 65 cm^2. The length of each square tile is a whole number.
What could the **smallest** possible length of the black square tile be?



Ans: _____ cm

Do not write in this space

End of Paper 1

2017 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)

Do not write in this space

1. The table shows the parking charges at a carpark.

First hour	\$2.80
Every subsequent $\frac{1}{2}$h or part thereof	\$1.20

How much does Mr Tay have to pay for parking his car at the carpark from 2.00 p.m. to 5.45 p.m.?

Ans: \$ _____

2. Ahmad mixed 3.5 litres of syrup with 5 times as much water to make fruit punch. He poured all the fruit punch into identical jugs of 1.2 litres each. What is the least number of such jugs he would need?

Ans: _____

(Go on to the next page)

3. Charlie's age is twice of Timothy's age. John is 6 years older than Timothy. Their average age is 18 years. How old is Timothy?

Do not write in this space

Ans: _____ years

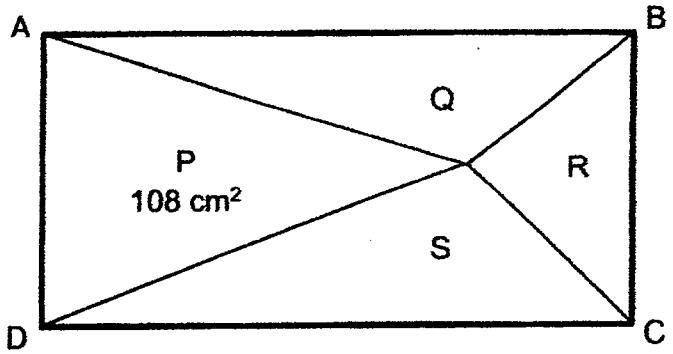
4. 10 boys lined up in a straight row. They stood at an equal distance apart from each other. The distance between the 3rd and the 5th boy was 1.2 m. What was the distance between the first and the last boy?

Ans: _____ m

Go on to the next page)

5. Rectangle ABCD shown below has an area 312 cm^2. It is divided into 4 different triangles, P, Q, R and S. Triangle P has an area of 108 cm^2. Find the area of triangle R.

Do not write in this space



Ans: _____ cm^2

(Go on to the next page)

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. The table below shows the prices of some snacks sold at Silver Village Cinema.

Type of Snack	Price per packet
Popcorn	$ w
Nacho	$ (w – 2)

a) Jayne bought 2 packets of popcorn and 1 packet of nacho for her sisters. Express the total amount of money she spent in terms of w in its simplest form.

b) Jayne paid for the 2 packets of popcorn and 1 packet of nacho with some money. She received a change of $28.
Given that $w = 8$, how much money did she give to the cashier at first?

Ans: (a) _____ [1]

(b) _____ [2]

(Go on to the next page)

7. Mrs Chan paid \$512 for 6 identical chairs and 2 identical tables. Each chair cost \$24 less than a table. How much money did she pay for 2 such tables?

Do not write in this space

Ans: _____ [3]

8. Last month, Mrs Tan spent $\frac{1}{6}$ of her salary on a washing machine. She spent $\frac{2}{3}$ of the remaining money on a microwave oven and saved the rest of her money. Given that she saved \$750, how much was her salary last month?

Ans: _____ [3]

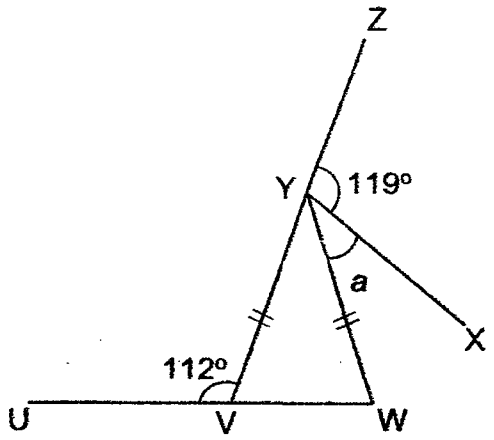
(Go on to the next page)

9. James has some 10-cent coins and 50-cent coins in a coin box.
The total value of all the coins in the coin box is $17.
There are 26 more 10-cent coins than 50-cent coins in the coin box.
What is the value of all the 50-cent coins in the coin box?

Do not write in this space

Ans: _____ [3]

10. In the figure below, VYW is an isosceles triangle. UVW and VYZ are straight lines. Find $\angle a$.

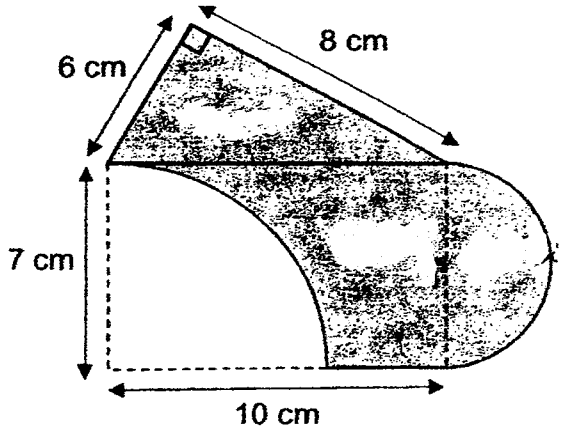


Ans: _____ [3]

(Go on to the next page)

11. The figure below is made up of a right-angled triangle, a semi-circle and a rectangle with a quadrant cut out from it. Find the area of the shaded figure. Round off your answer to 2 decimal places. (Take $\pi = 3.14$)

Do not write in this space



Ans: _____ [4]

(Go on to the next page)

12. Constance had 360 paper and plastic bookmarks in her collection. 25% of her bookmarks were made of plastic. How many plastic bookmarks must she buy to increase the number of plastic bookmarks in her collection to 46%?

Do not write in this space

Ans: _____ [4]

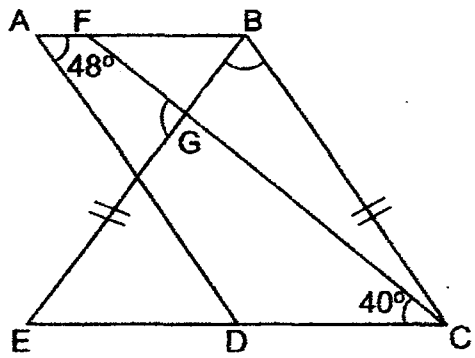
(Go on to the next page)

13. In the figure below, ABCD is a parallelogram and EBC is an isosceles triangle. FGC is a straight line. $\angle DAB = 48^\circ$ and $\angle FCD = 40^\circ$

Do not write in this space

a) Find $\angle EBC$.

b) Find $\angle FGE$.



Ans: (a) _____ [2]

(b) _____ [2]

(Go on to the next page)

14. The number of marbles in Box A is $\frac{1}{2}$ of the number of marbles in Box B. 40% of the marbles in Box A and 10% of the marbles in Box B was moved to Box C. As a result, the number of marbles in Box C increased by 30%. There are 234 marbles in Box C now. How many marbles were there in Box B at first?

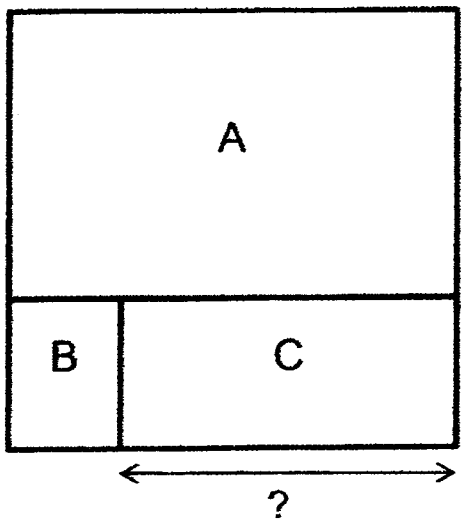
Do not write in this space

Ans: _____ [4]

(Go on to the next page)

15. The figure below shows a square which is made up of three rectangles. The ratio of the area of Rectangle A to the area of Rectangle B to the area of Rectangle C is 8 : 1 : 3 respectively. The area of the square is 324 cm^2. Find the length of Rectangle C.

Do not write in this space



Ans: _____ [5]

(Go on to the next page)

16. Mrs Tay sold basketballs and netballs. Each basketball cost \$21 and each netball cost $\frac{3}{7}$ as much as the basketball. Mrs Tay sold $\frac{1}{3}$ of the balls and collected \$2070. $\frac{2}{5}$ of the balls sold were basketballs.

Do not write in this space

a) How many netballs were sold?

b) How much money did Mrs Tay receive from the sales of the basketballs?

Ans: (a) _____ [3]

(b) _____ [2]

(Go on to the next page)

17. Olivia bought 12 identical magazines and her sister bought 12 identical notebooks. The total mass of all the items Olivia and her sister bought was 4.8 kg. Olivia then exchanged a magazine with her sister for a notebook. After the exchange, the total mass of the items Olivia had was $\frac{2}{3}$ of the total mass of the items her sister had.

Do not write in this space

a) Find the total mass of all the items Olivia's sister had after the exchange.

b) Find the mass of a magazine.

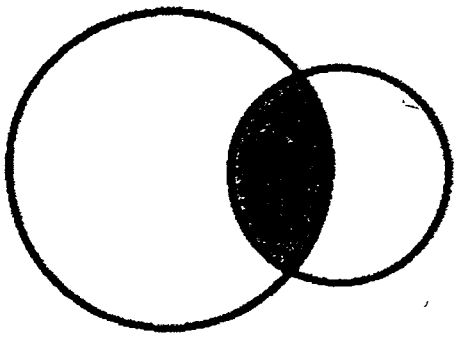
Ans: (a) _____ [2]

(b) _____ [3]

(Go on to the next page)

18. The figure below is made up of a large and small circle overlapping each other. The ratio of the area of the large circle to the area of the small circle is 3 : 1.

The ratio of the area of the unshaded part of the large circle to the area of the unshaded part of the small circle to 4 : 1. Given that the area of the shaded part is 12 cm^2, find the area of the figure.



Do not write in this space

Ans: _____ [4]

End of Paper

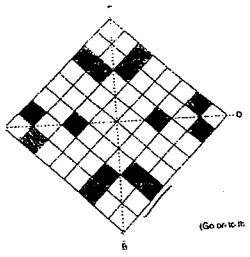
Setters:
Mrs Josephine Lai, Ms Grace Chan and Ms Yew Hew Mei

EXAM PAPER 2017 **9 May 2017**
LEVEL : PRIMARY 6
SCHOOL : HENRY PARK PRIMARY SCHOOL
SUBJECT : MATHEMATICS
TERM : SEMESTRAL ASSESSMENT 1

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

Q16. 3/10 **Q17. 0.625** **Q18. 160.5** **Q19. 7h 25min** **Q20. 7068** **Q21. 4:3**

Q22. 24.2 **Q23.** **Q24. 40** **Q25. 79** **Q26. 72**



Q27. 4/15 **Q28. 35** **Q29. 2.5** **Q30. 43**

PAPER 2

Q1. 2.80 + 1.20 + 1.20 + 1.20 + 1.20 + 1.20 + 1.20 = 10 **Answer: 10**

Q2. 3.5 X 5 = 17.5
17.5 + 3.5 = 21
21/12 = 17.5 ≈ 18 **Answer: 18**

Q3. 18 X 3 = 54
54 – 6 = 48
48/4 = 12 **Answer: 12**

Q4. 2u → 1.2
1.2/2 = 0.6
0.6 X 9 = 5.4 **Answer: 5.4**

Q5. 312/2 = 156
156 – 108 = 48 **Answer: 48**

Q6. 2w + w – 2 = 3w – 2
8 X 2 = 16
16 + 6 = 22
28 + 22 = 50 **Answer: a) $(3w – 2)** **b) $50**

Q7. 24 X 2 = 48
512 – 48 = 464
8u → 464
1u → 464/8 = 58
58 + 24 = 82
82 X 164 **Answer: $164**

Q8. 150 ÷1/3 = 2250
$2250 \div \frac{5}{6} = 2700$ **Answer: $2700**

Q9. 26 X 0.1 = 2.6
1 – 2.6 = 14.4
14.4/(0.1 + 0.5) = 24
24 X 0.5 = 12 **Answer: 12**

Q10. 180 – 112 = 68
180 – 68 – 68 = 44
180 – 44 – 119 = 17 **Answer: 17°**

Q11. 0.5 X 6 X 8 = 24
10 X 7 = 70
0.25 X 3.14 X 7 X 7 = 38.465
70 – 38.465 = 31.535
0.5 X 3.14 X 3.5 X 3.5 = 19.2325
24 + 31.535 + 19.2325 = 74.7675 ≈74.77 **Answer: 74.77cm^2**

Q12. 25% X 360 = 90
360 – 90 = 270
100% - 46% = 54%
54% → 270
1% → 270 X 54% = 5
46% → 46 X 5 = 230
230 – 90 = 140 **Answer: 140**

Q13. 180 – 48 – 48 = 84
48 – 40 = 8
180 – 84 – 8 = 88 **Answer: a)84° b) 88°**

Q14. 130% of C = 234
30% of C = 54
3 u → 54
10u = 180 **Answer: 180**

Q15. 12u → 324
1u = 324/12 = 27
27 X 3 = 81
81 + 27 = 108
108/18 = 6
81/6 = 13.5 Answer: 13.5cm

Q16. 21/7 X 3 = 9
42u + 27u = 69u
69u → 2070
3u X 3 = 90
2 X 30 = 60
60 X 21 = 1260 Answer: a) 90 b) $1260

Q17. 12m + 12n = 4.8kg
11m + 1n + 11n + 1m = 4.8 kg
5u → 4.8
1u → 0.96
21.12 – 2.88 = 18.24
18.24 = 120
1m + 11n = 2.88kg
121m + 11n = 21.12 kg
1m = 0.152 Answer: a) 2.88kg b) 0.152kg

Q18. L:S:Diff = 9:3:6 US of L: US of S= 8:2
9u – 8u = 1u
1u → 12
9 + 3 – 1 = 11
11u → 132 Answer: $132cm^2$

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

MID-YEAR EXAMINATION 2017
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: 5 May 2017

/ 20

This booklet consists of 6 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 Round off 81 604 to the nearest thousand.

(1) 80 600
(2) 81 000
(3) 81 600
(4) 82 000

2 In 946 875, which digit is in the ten thousands place?

(1) 8
(2) 7
(3) 6
(4) 4

3 Which one of the following fractions is greater than $\frac{1}{3}$?

(1) $\frac{7}{21}$
(2) $\frac{6}{17}$
(3) $\frac{4}{13}$
(4) $\frac{3}{11}$

4 In a group of 80 children, 56 were girls. What percentage of the children were boys?

(1) 24 %
(2) 30 %
(3) 43 %
(4) 70 %

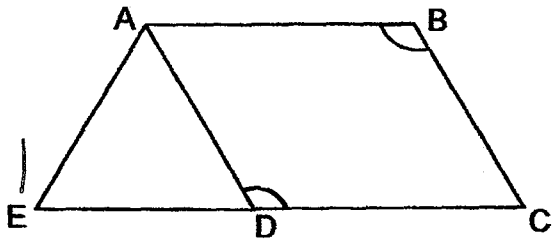
5 The breadth of a rectangle is 12 cm and its length is 20 cm. Find the ratio of the breadth of the rectangle to its area.

(1) 1 : 12
(2) 1 : 20
(3) 3 : 5
(4) 3 : 16

6 Mark cycled 11.05 km, swam 5 050 m and ran 10.01 km as part of his training for a triathlon in 3 hours. What was the total distance that he covered in metres?

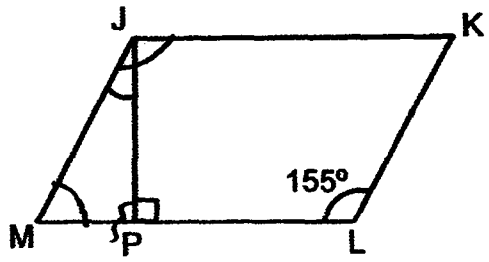
(1) 26.56 m
(2) 7 156 m
(3) 26 110 m
(4) 71 560 m

7 In the figure, ADE is an equilateral triangle and ABCD is a parallelogram. CDE is a straight line. Find ∠ABC.



(1) 30°
(2) 60°
(3) 120°
(4) 150°

8 In the figure below, JKLM is a parallelogram. Find ∠PJM.



(1) 25°
(2) 45°
(3) 65°
(4) 115°

9 Find the value of $8h + 6 + 3h - 2$ when $h = 6$.

(1) 64
(2) 70
(3) 72
(4) 74

10 Which one of the following statements is **false**?

(1) The radius of a circle is half the length of its diameter.
(2) The diameter of a circle passes through the centre of a circle.
(3) The diameter is slightly more than three times the circumference of a circle.
(4) The circumference of a circle is slightly more than three times its diameter.

11 At a party, $\frac{3}{5}$ of the guests were adults. $\frac{1}{6}$ of the adults were men. $\frac{3}{4}$ of the children were boys. What fraction of the guests were males?

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

(2) $\frac{31}{60}$

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

(4) $\frac{11}{12}$

12 There are apples, oranges and pears in a basket. The ratio of the number of apples to the number of oranges is 5 : 2. The ratio of the number of oranges to the number of pears is 1 : 4. What is the ratio of the number of apples to the total number of fruits in the basket?

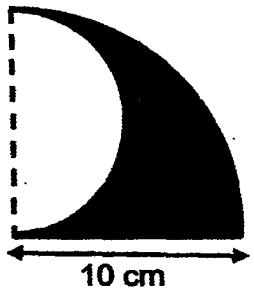
(1) 1 : 2
(2) 1 : 3
(3) 5 : 7
(4) 5 : 11

13 Janice baked some muffins. She gave 20% of the muffins to her friends and ate $\frac{1}{3}$ of the remaining muffins. She had 24 muffins left.

How many muffins did she bake?

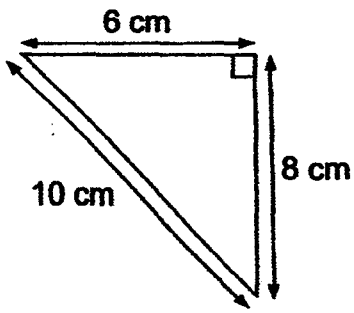
(1) 9
(2) 12
(3) 36
(4) 45

14 The figure below is made of a quarter circle and a semi-circle. What is the perimeter of the figure? Leave your answer in terms of π.



(1) 7.5π cm
(2) 10π cm
(3) $(10\pi + 10)$ cm
(4) $(15\pi + 10)$ cm

15 The triangle below is not drawn to scale. What is its area?



(1) 24 cm^2
(2) 30 cm^2
(3) 40 cm^2
(4) 48 cm^2

MID-YEAR EXAMINATION 2017
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: 5 May 2017

Parent's Signature: _____

Paper 1 Booklet A	**/ 20**
Paper 1 Booklet B	**/ 20**
Paper 2	**/ 60**
TOTAL	**/ 100**

This booklet consists of 8 printed pages including this.

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)

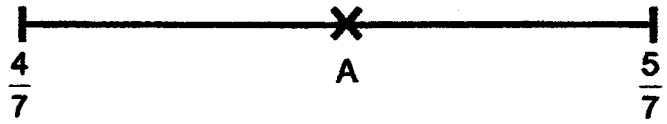
Do not write in this space

16 Find the value of 206 x 50.

Ans: _____

17 In the number line below, A is the mid-point of two fractions.

What is the value of A? Give your answer in the simplest form.



Ans: _____

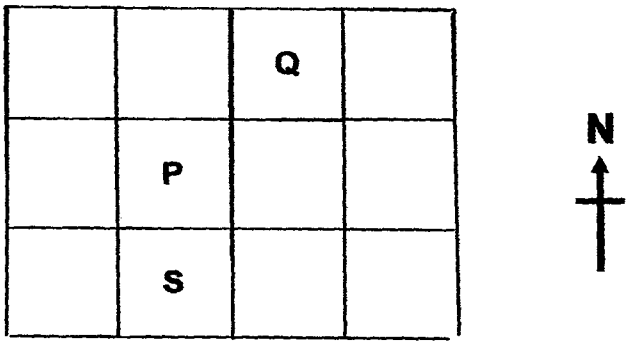
18 $\frac{1}{2}$ of A is equal to $\frac{2}{5}$ of B. What is the ratio A : B?

Ans: _____

(Go on to the next page)

For **Questions 19** and **20**, refer to the grid below.

The grid shows the plan of a city. Town P is north of Town S.



19 Town R is South-West of Town P and West of Town S.

20 Town T is East of Town P and South-East of Town Q.

21 The number of apples is $\frac{5}{6}$ of the number of pears. What is the ratio of the number of pears to the total number of fruits?

Ans: _____

Do not write in this space

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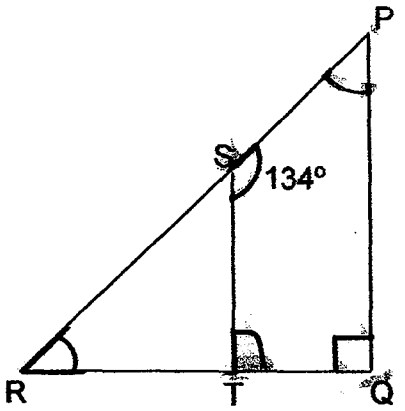
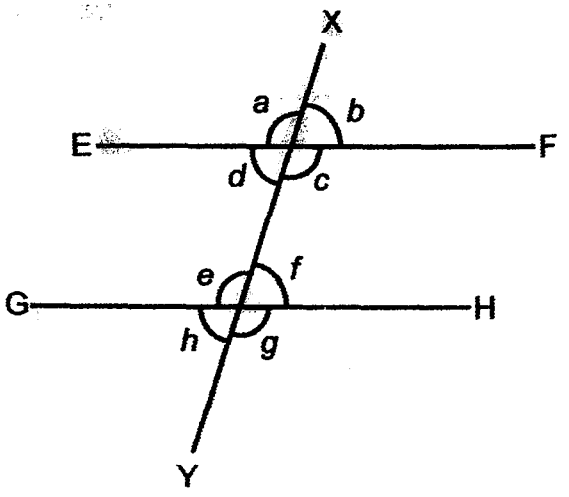
Do not write in this space

22 In the figure below, PQTS is a trapezium and PQR is a right-angled triangle. Find ∠PRQ.



Ans: _____ °

23 In the figure below, XY is a straight line and EF is parallel to GH. Name all the angles that are equal to ∠a.

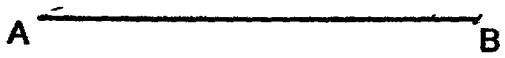


Ans: _____

(Go on to the next page)

24 AB is a straight line. Draw a triangle with $\angle CBA = 125^\circ$.
Label the point C.

Do not w
in this spa



25 A school hall has 720 chairs. Three out of every four chairs are occupied.
How many chairs are vacant?

Ans: _____

(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)

Do not write in this space

26 Ali needed to pack 1 450 cans into cartons. He could only pack 250 cans into each carton. How many cans were left unpacked?

Ans: _____

27 The perimeter of a rectangle is twice the perimeter of a square.
The breadth of the rectangle is the same as the length of the square.
What is the length of the rectangle, given that the breadth of the rectangle is b cm? Give your answer in terms of b.

Ans: _____ cm

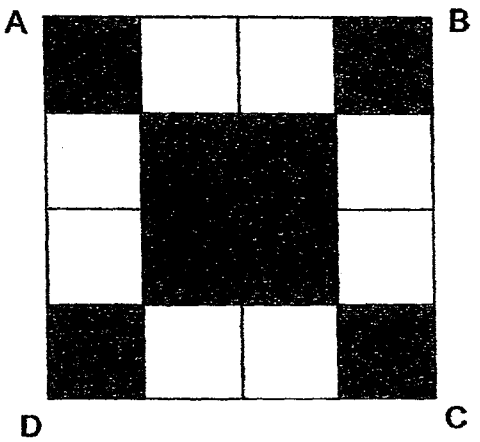
(Go on to the next page)

28 The amount of money that Ruth and Amanda had was in the ratio of 4 : 9. After Amanda gave \$30 to Ruth, they had the same amount of money. How much did they have altogether?

Ans: \$ _____

Do not
in this s

29 The figure ABCD, not drawn to scale, is made up of 16 identical squares. The area of the shaded parts is 648 cm^2. Find the perimeter of figure ABCD.



Ans: _____ cm

(Go on to the next page)

30 1 kg of prawns cost \$$n$ and 1 kg of fish cost \$3 more.

Bala bought 3 kg of prawns and 2 kg of fish.

How much did he pay altogether for the prawns and fish?

Do not write in this space

Ans: \$ _____

End of Paper

M'Mid -YEAR EXAMINATION 2017
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: 5 May 2017

Parent's Signature: _____

60

This booklet consists of 15 printed pages including this page.

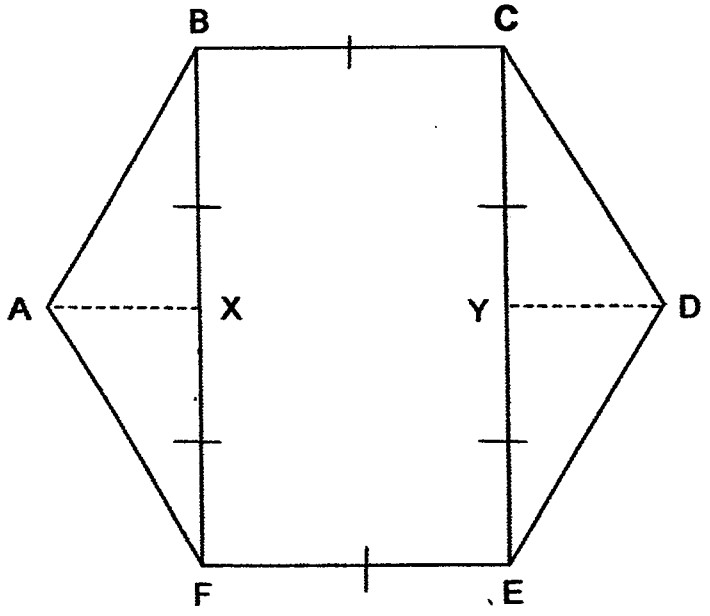
Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

1 The figure below is made up of 2 identical triangles, ABF and CDE, and a rectangle, BCEF. The area of triangle ABF is 15 cm^2.

BC = CY = YE = EF = FX = XB = 3 cm.

Find the area of the figure below.



Ans: _____ cm^2

2 Sally received 60% of the votes for chairperson and she received 38 more votes than the other candidates. What was the total number of votes cast?

Do not write in this space

Ans: _____

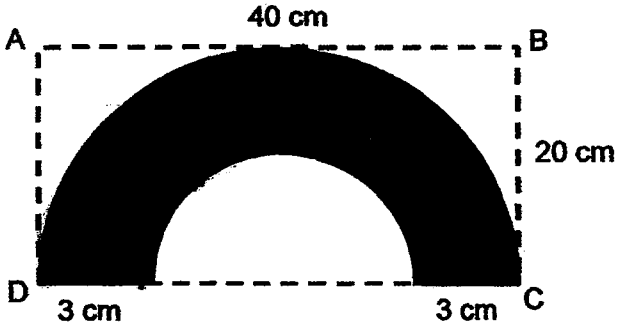
3 The mass of a box with 50 identical balls in it is 1 070 g.
When 10 of the balls are removed, the mass of the box with the remaining balls is 950 g. What is the mass of each ball?

Ans: _____ g

(Go on to the nexxt page)

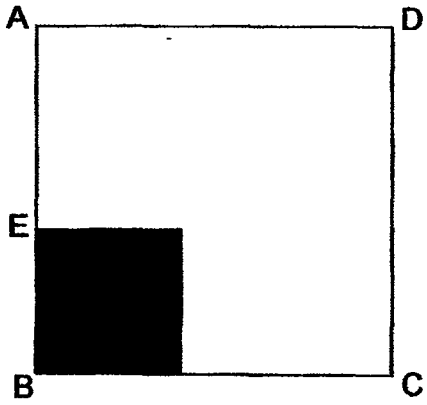
4 ABCD is a rectangular cardboard measuring 40 cm by 20 cm. Mary cut out a semicircle and 2 corners from it. Find the perimeter of the remaining cardboard which is shaded below. Leave your answer in terms of π.

Do not write in this space



Ans: _____ cm

5 ABCD is a square of area 1 296 cm². The shaded square within ABCD has an area of 81 cm² What is the length of AE?



Ans: _____ cm

(Go on to the nexxt page)

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 Gavin was paid $4.80 to assemble a table.

He received an additional $6.60 for every 8 tables that he assembled.

Gavin received a total of $253.80. How many tables did Gavin assemble?

Ans: _____ [3]

7 Three children sold a number of tickets. Ally sold $\frac{1}{8}$ of the tickets.

Brenda sold 4 tickets more than Ally. Cathy sold 32 tickets.

How many tickets did they sell altogether?

Ans: _____ [3]

(Go on to the nexxt page)

8 40% of the number of shells that June has is equal to 25% of the number of shells that Sharon has. June has 45 shells less than Sharon.
How many shells do they have altogether?

Do not write in this space

Ans: _____ [3]

9 Mrs Lim's age and her daughter's age are in the ratio of 6 : 1.
Mrs Lim is 30 years older than her daughter.
In how many years' time will Mrs Lim be 4 times as old as her daughter?

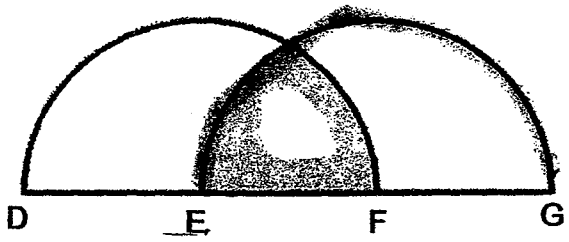
Ans: _____ [3]

10 The figure below shows 2 similar semicircles that overlap.

The area of the shaded region is $\frac{3}{7}$ of the area of one semicircle.

DE = EF = FG = 7 m.

Find the area of the unshaded region. (Take $\pi = \frac{22}{7}$)



Do not write in this space

Ans: _____ [3]

(Go on to the nexxt page)

11 Jane went to a boutique with $434, which was just enough to buy 6 similar dresses and 5 similar skirts. When she was there, she bought 5 similar dresses and 6 similar skirts instead. She had $21 left. What was the cost of a dress?

Do not write in this space

Ans: _____ [4]

(Go on to the nexxt page)

12 May Lin paid a total of \$120 for some books and pens. A book cost \$$m$. 6

She bought 4 more books than pens.

(a) How much did May Lin spend on the pens?

Give your answer in terms of m.

(b) If $m = 6$, how much did she spend on the books?

Do not write in this space

Ans: (a) _____ [2]

(b) _____ [2]

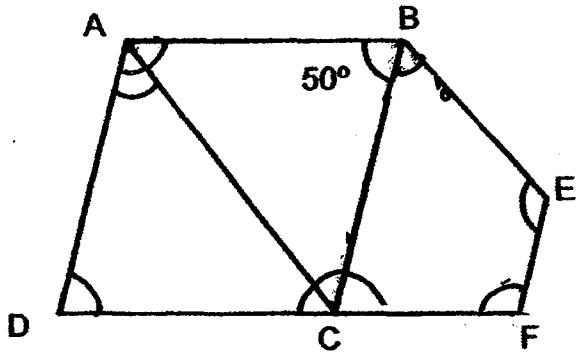
13 In the figure below, ABCD is a rhombus and BEFC is a trapezium.

AC is parallel to BE and BC is parallel to EF.

DCF is a straight line. $\angle ABC$ is 50°.

(a) Find $\angle CAD$.

(b) Find $\angle BEF$.



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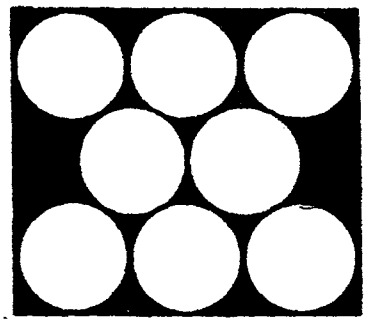
Ans: (a) _____ [2]

(b) _____ [2]

14 A square tile of sides 51 cm has the following design made up of 8 similar circles. What is the area of the region not covered by the circles? (Take π=3.14)

Do not write in this space



Ans: _____ [4]

15 Mr Ng bought 5 kg of white rice and 4 kg of brown rice for \$27.
The cost of 1 kg of white rice was \$2.25 less than the cost of 1 kg of brown rice. He mixed the white and brown rice and re-sold the mixture at \$1.50 per kg.

(a) How much did he sell 9 kg of the mixture for?

(b) How much did 1 kg of white rice cost at first?

Do not write in this space

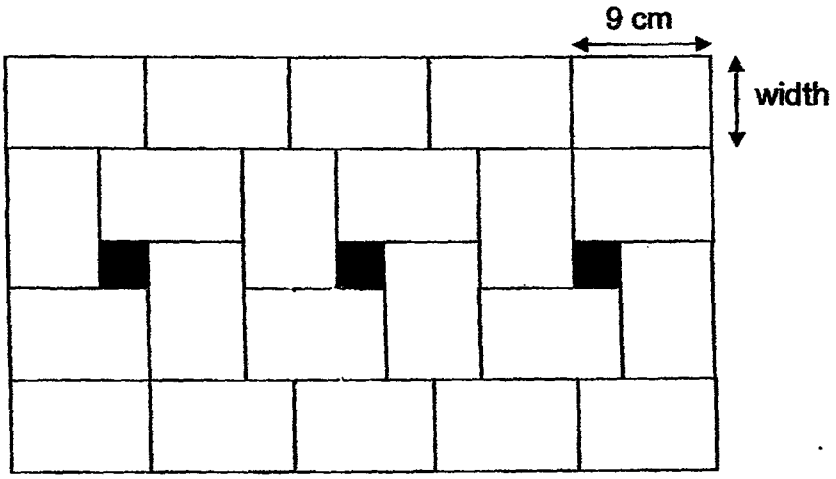
Ans: (a) _____ [1]

(b) _____ [3]

16 Some identical rectangular tiles were arranged to form a rectangle as shown. The length of each tile was 9 cm.

(a) What was the width of each tile?

(b) Find the total area of the shaded regions.



Do not write in this space

Ans: (a) _____ [2]

(b) _____ [3]

17 In the beginning, the ratio of Pamela's beads to Dani's beads was 10 : 7. Pamela gave 30% of her beads to Dani. Dani then gave 25% of her beads to Pamela. In the end, Dani had 32 beads fewer than Pamela. How many beads did Pamela have at first?

Do not write in this space

Ans: _____ [5]

(Go on to the nexxt page)

18 Martha put some erasers and pens in 2 boxes. She put the same number of erasers in each box.

In Box A, the ratio of the number of erasers to the number of pens was 3 : 4.

In Box B, the number of erasers was twice the number of pens.

Martha then transferred half of the number of pens from Box A to Box B.

The number of items in Box A then became 120.

(a) What was the ratio of the number of erasers to the number of pens in Box B after the transfer?

(b) What was the number of items in Box B after the transfer?

Do not write in this space

Ans: (a) _____ [3]

(b) _____ [2]

END OF PAPER

EXAM PAPER 2017
LEVEL : PRIMARY 6
SCHOOL : MGS
SUBJECT : MATHEMATICS
TERM : SA1

Paper 1

Booklet A

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

Booklet B

Q16 10300

Q17 $\frac{9}{14}$

Q18 4:5

Q19/Q20

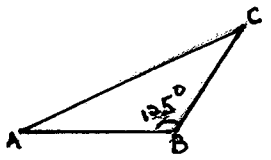
		Q	
	P		T
R	S		

Q21 6 :11

Q22 44

Q23 $\angle c, \angle g, \angle e$

Q24



Q25 180

Q26 200 cans

Q27 3b

Q28 156

Q29 144

Q30 (5n+6)

Paper 2

Q1. Area of rectangle BCEF = 3 x 6 = 18 cm^2
Total area = (15+15+18) = **48 cm^2**

Q2 100% - 60% = 40%
60% - 40% = 20%
20% → 38
100% → **190**

Q3 50 balls + 1box → 1070g
40 balls + 1 box → 950g
10 balls → 120g
1 ball → 120 ÷ 10 = **12g**

Q4 $\frac{1}{2}$ x 40 x π = 20π
40 – 3 – 3 = 36
$\frac{1}{2}$ x 36 x π = 17π
20π + 17π = 37π
Perimeter of the shaded = **(37π + 6)cm**

Q5 √1296 = 36
√81 = 9
36 – 9 = **27cm**

Q6 \$4.80 x 8 = \$38.40
\$38.40 + \$6.60 = \$45
\$253.80 ÷ 45 = $5\frac{2}{3}$
5 x 8 = 40
\$4.80 x 40 = \$192
\$6.60 x 5 = \$33
\$192 + \$33 = \$225
\$253.80 - \$225 = \$28.80
\$28.80 ÷ \$4.80 = 6
Number of tables = 40 + 6 = **46 tables**

Q7 32 + 4 = 36
36 ÷ 6 = 6
6 x 8 = **48 tickets**

Q8 $\frac{2}{5}$ of June = $\frac{1}{4}$ of Sharon
$\frac{3}{5}$ of June = $\frac{2}{8}$ of Sharon

3u → 45
1u → 15
15 x 13 = **195 shells**

Q9 $5u \rightarrow 30$
$1u \rightarrow 6$
$6 \times 6 = 36$

$3u \rightarrow 30$
$1u \rightarrow 10$
$10 \times 4 = 40$

$40 - 36 =$ **4 years**

Q10 $\frac{1}{2} \times 7 \times 7 \times \frac{22}{7} = 77$
$77 \div 10 = 7.7$
$7.7 \times 14 = 107.8$
$\frac{4}{7} \times 77 = 44$
$44 \times 2 =$ **88 m²**

Q11 $(6D + 5S = \$434)_{\times 6}$
$(5D + 6S = \$413)_{\times 5}$

$36D + 30S = \$2604$
$25D + 30S = \$2065$

$11D = \$539$
$1D =$ **\$49**

Q12 (a) $(\$120 - 4m) \div 2 = \$(\frac{120-4m}{2})$

(b) Cost of pens = \$48
Cost of books = \$120 - \$48 = **\$72**

Q13 (a) $130^\circ - 2 =$ **65°**
(b) $360^\circ - 65^\circ - 50^\circ - 130^\circ =$ **115°**

Q14 Diameter of 1 circle = $51 \div 3 = 17$cm
Area of 1 circle = $3.14 \times 8.5 \times 8.5 = 226.865$cm²
Area of 8 circles = $226.865 \times 8 = 1814.92$cm²
Area of square = $51 \times 51 = 2601$ cm²
Area of shaded = $2601 - 1814.92 =$ **786.08cm²**

Q15 (a) $\$1.50 \times 9 = \$13.50$

(b) $5W + 4B = \$27$
$(1B = 1W + \$2.25)_{\times 4}$
$4B = 4W + \$9$

$5W + 4W + \$9 = \$27$
$9W = \$18$
1W = \$2

Q16 (a) 5 length of rectangle → 45cm
3 length of rectangle + 3 width → 45

2 length of rectangle → 3 width
3 width → 2 x 9 = 18cm
1 width = **6cm**

(b) 9 x 5 = 45
6 x 6 = 36
45 – 36 = 9
9 ÷ 3 = 3
3 x 3 = 9 (area of 1 shaded square)
9 x 3 = **27cm²**

Q17

Pamela	**:**	**Dani**	
10	:	7	x2
20	**:**	**14**	Pamela gave 30% to Dani
-6		+6	
14	:	20	Dani gave 25% to Pamela
+5		-5	
19	:	15	

4u → 32
20u → 160 beads

Q18

Box A

Eraser	**:**	**Pen**
3	:	4
6	**:**	**8**
		-4
6	:	4

Box B

Eraser	**:**	**Pen**	
6	**:**	**3**	No. of eraser twice the pen
		+4	Transferred half pen to box B from Box A
6	:	7	

(a) **6 : 7**

(b) 10u → 120
13u → 156 items

4
END

NAN HUA PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1 – 2017
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 : 9 May 2017 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. There were 333 548 visitors to the Singapore Zoological Gardens last year. Express this number to the nearest thousand.

   (1) 300 000

   (2) 330 000

   (3) 333 000

   (4) 334 000

2. The mass of a can of soft drink which is completely filled with drink weighs approximately _____.

   (1) 30 g

   (2) 300 g

   (3) 3 kg

   (4) 30 kg

3. If A is $\frac{1}{4}$ of B, what is the ratio of B : A ?

   (1) 1 : 4

   (2) 3 : 4

   (3) 4 : 1

   (4) 4 : 3

4. Find the value of $30 - 2 \times (2 + 8)$.

(1) 280

(2) 34

(3) 18

(4) 10

5. Which one of the following fractions is larger than $\frac{1}{4}$?

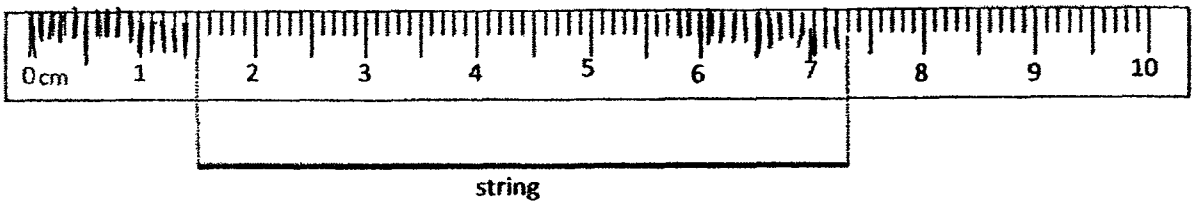
(1) $\frac{3}{12}$

(2) $\frac{2}{9}$

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

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

6. The figure below shows a string placed next to a ruler. What is the length of the string?



(1) 5.08 cm

(2) 5.8 cm

(3) 7.03 cm

(4) 7.3 cm

7. Express 0.2 as a percentage.

(1) 0.002 %

(2) 0.2 %

(3) 20 %

(4) 200 %

8. The ratio of the number of apples to the number of bananas to the number of pears in a basket is 2 : 3 : 4. There are 81 fruits in the basket, how many pears are there?

(1) 9

(2) 18

(3) 27

(4) 36

9. How many 2-digit even numbers can you make from the following digits if each digit can only be used once for each number?

1	2	0	6

(1) 9

(2) 2

(3) 7

(4) 4

10. The table below shows the age of 4 children. Whose age is the nearest to their average age?

Name	Age in years
Ann	27
Bala	23
Candy	12
Duncan	18

(1) Ann

(2) Bala

(3) Candy

(4) Duncan

11. The mass of a container is 2.8 kg when full. When it is $\frac{3}{4}$ full, it has a mass of 2.6 kg. Find the mass of the container when it is empty.

(1) 2.2 kg

(2) 2 kg

(3) 0.6 kg

(4) 0.2 kg

12. Debbie had some cherries. For every 10 cherries she ate, she gave 5 away. After she gave the last 5 cherries away, she had eaten 40 cherries altogether. How many cherries did Debbie have at the start?

(1) 45

(2) 55

(3) 60

(4) 75

13. 30% of the people at a fun fair are adults and the rest are children. 60% of the children are boys. If there are 150 adults at the fun fair, how many girls are there at the fun fair?

(1) 15

(2) 42

(3) 140

(4) 210

14. Fatimah baked some vanilla, chocolate and lemon cookies. The ratio of the number of vanilla cookies to the number of chocolate cookies is 2 : 3. The ratio of the number of lemon cookies to the total number of cookies is 1 : 2. What is the ratio of the number of vanilla cookies to the number of chocolate cookies to the number of lemon cookies Fatimah baked?

(1) 2 : 3 : 1

(2) 2 : 3 : 2

(3) 2 : 3 : 5

(4) 2 : 3 : 10

15. Jolene had a total of 130 Singapore and Malaysia stamps. $\frac{1}{2}$ of the Singapore stamps were 10 fewer than $\frac{1}{3}$ of the Malaysia stamps. How many Singapore stamps did Jolene have?

(1) 40

(2) 60

(3) 90

(4) 126

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. A 4-sided figure is drawn on square grid 1. Draw a different 4-sided figure which has the same area on square grid 2.

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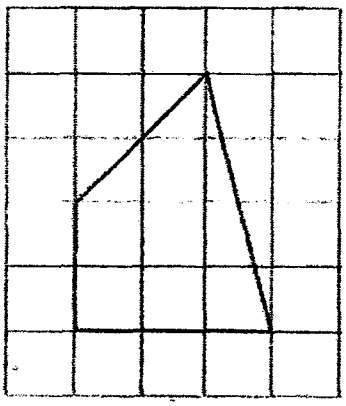
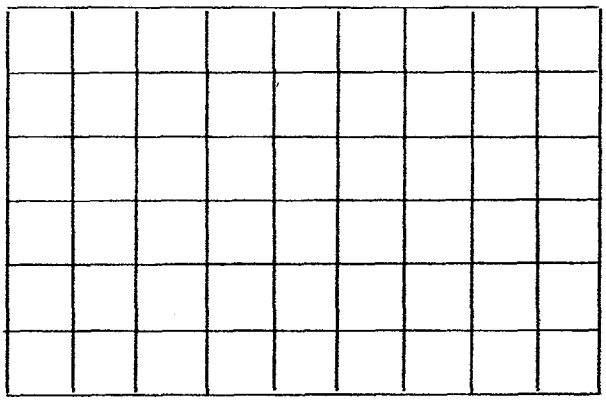
Square grid 1



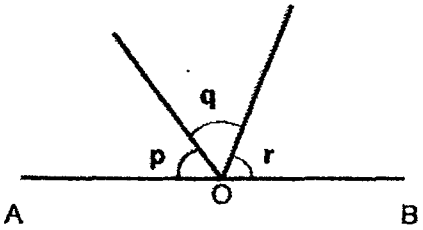
Square grid 2



17. Two boys collected plastic bottles for recycling. John collected $4w$ plastic bottles. Ali collected twice as many plastic bottles as John. How many plastic bottles did they collect together?
Give your answer in terms of w in the simplest form.

Ans : _____

18. In the figure below (not drawn to scale), AOB is a straight line and $\angle p = \angle q$. If $\angle r = 80^\circ$, find $\angle p + \angle r$.



Ans: _____ °

Subtotal	/ 3

19. Find the area of the shaded triangle shown below.

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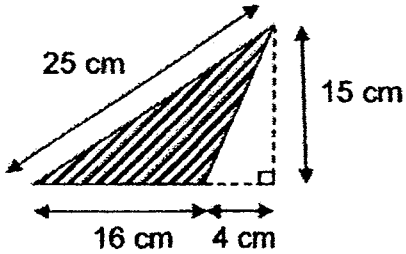

Ans : _____ cm^2

20. Two decimal numbers add together to get 1. One of the decimal numbers is 0.007. What is the other decimal number?

Ans : _____

21. Ken is k years old. Jenny is 4 times as old as Ken. Paul is $\frac{1}{2}$ as old as Jenny. Express Paul's age in terms of k.

Ans : _____ years old

Subtotal	/ 3

22. The line graph below shows the amount of petrol left in a lorry and the distance it travelled.

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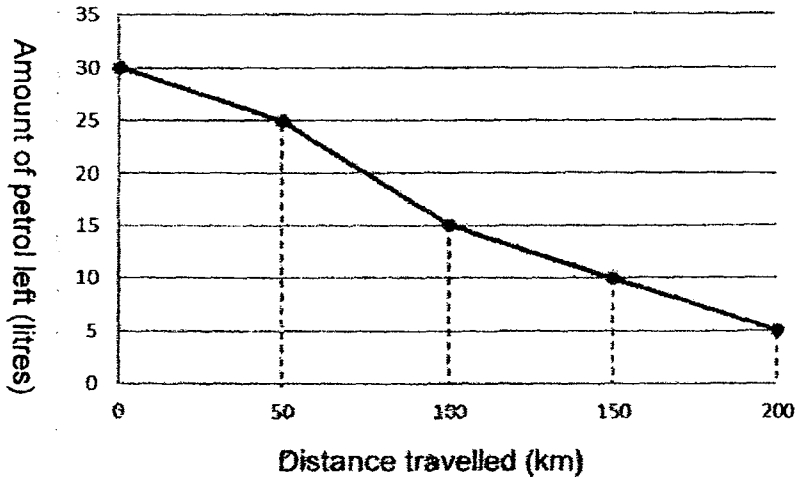


When the lorry had travelled 150 km, how much petrol was **used**?

Ans : _____ litres

23. Two numbers are in the ratio 4 : 5. One of the numbers is 60. There are two possible values for the other number. What are the two possible values?

Ans : _____ and _____

Subtotal	/ 2

24. A library imposes a fine on overdue books. The rate for the fine is as follows:

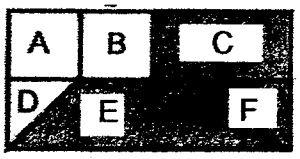
Do not write in this space

Fine for 1st day	\$0.25
Fine for each subsequent day	\$0.40

Jeremy has a book that is overdue for 5 days. How much does he need to pay?

Ans: \$_____

25. The figure below is a rectangle made up of 2 identical rectangles cut into six parts, A, B, C, D, E and F. A and B are squares. Each square is $\frac{1}{8}$ of the figure.



What fraction of the figure is shaded?

Ans : _____

Subtotal	/ 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 each questions which require units, give your answers in the units stated.
[10 marks]

Do not write in this space

26. Kit spent a total of $8*n* on a book, a file and a pen. The book cost twice as much as the file. The pen cost $3.

(a) Express the total cost of the book and file in terms of *n*.
(b) If $n = 3$, how much did the file cost?

Ans : (a) $ _____

(b) $ _____

27. A cyclist went 1km up a hill at 4 km/h. Then she went 1km down the hill at 6 km/h. What is her average speed for whole journey?

Ans : _____ km/h

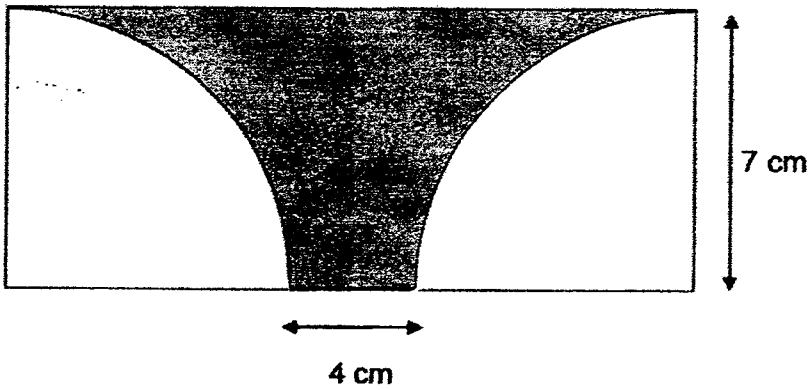
Subtotal	/ 4

28. A mini bus has a seating capacity of either 21 adults or 28 children. 10 adults and 12 children are already seated inside the mini bus, how many more adults can board the mini bus?

Do not write in this space

Ans: _____

29. Two quadrants are drawn inside a rectangle. Find the perimeter of the shaded part. (Take $\pi = \frac{22}{7}$)



Ans: _____ cm

Subtotal	/ 4

30. Mei Mei chose a number less than 20.
She divided it by 2 and then added 6
She then divided this result by 3.
Her answer was 4.5.
What was the number she started with?

Do not write in this space

Ans: _____

END OF PAPER 1

Subtotal	/ 2

SEMESTRAL ASSESSMENT 1 – 2017
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 : 9 May 2017 **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.

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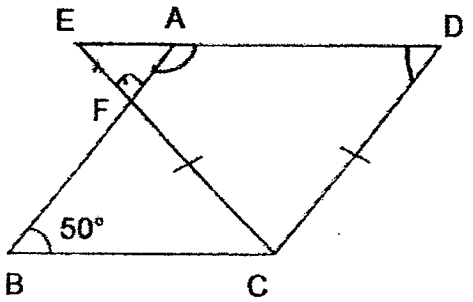
1. In the figure below, not drawn to scale, ABCD is a rhombus. If $\angle FBC = 50°$ and CE = CD, find $\angle EFA$.



Ans: _____ °

2. Ray has 358 marbles, Ali has 310 marbles and Tom has 241 marbles. How many marbles must Ray and Ali give to Tom altogether so that they will each have the same number of marbles?

Ans: _____

Subtotal	/ 4

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3. Yasmin uses grey and white tiles to form figures that follow a pattern as shown below.

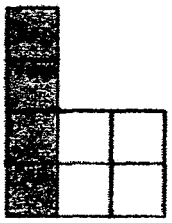


Figure 1

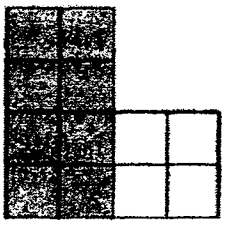


Figure 2

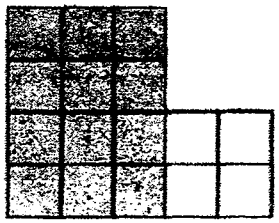
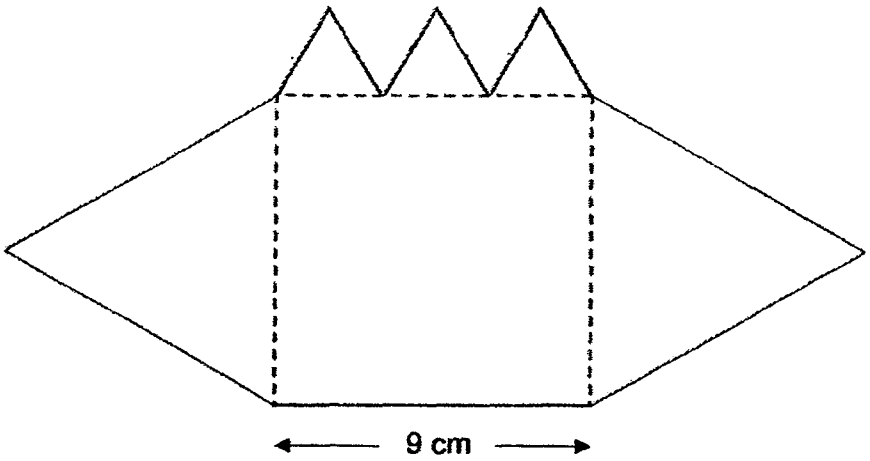


Figure 3

Find the difference between the number of grey and white tiles in Pattern 25.

Ans: _____

4. The figure below shows five equilateral triangles and a square of side 9 cm each. What is the perimeter of the figure?



Ans: _____ cm

Subtotal	/ 4

5. The ratio of Seth's age to his father's age is 2 : 7 at present.
Twelve years later, the ratio will become 2 : 5.
Find Seth's present age.

Do not write in this space

Ans:_____ years old

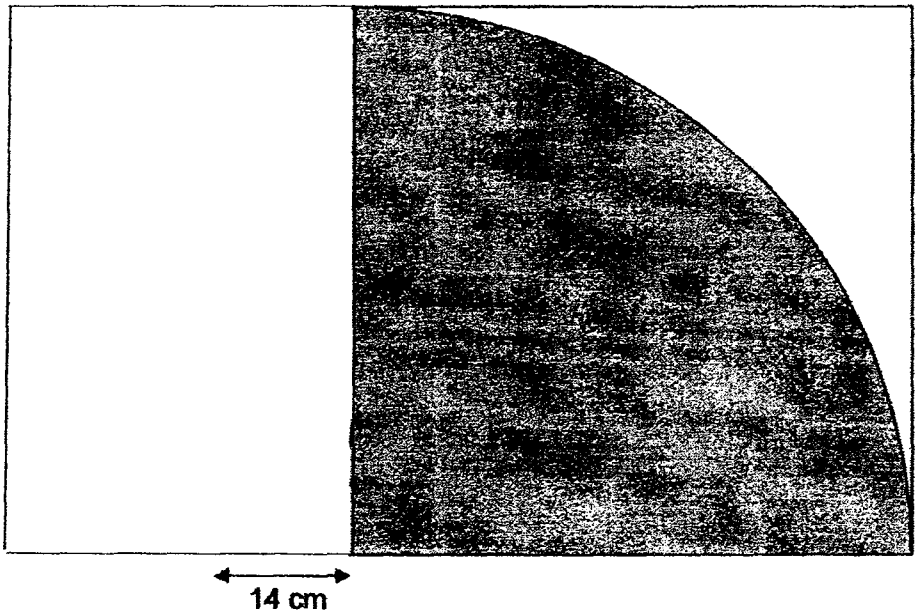
Subtotal	/ 2

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.

Do not write in this space

6. The figure below shows quadrants within squares of different sizes.

Find the area of the shaded quadrant. (Take $\pi = \frac{22}{7}$)

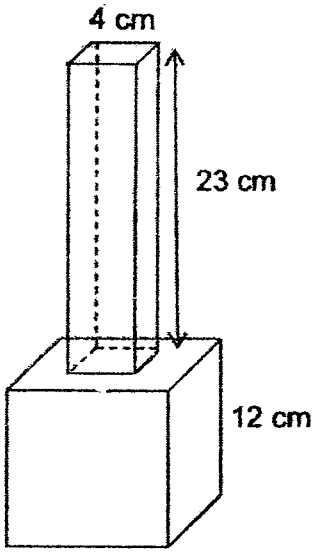


Ans: _____ [3]

Subtotal	/ 3

Do not write in this space

7. The figure below shows an empty flower vase of height 35 cm. It is made from two containers. The top container is in the shape of a cuboid which has a square base of side 4 cm and height 23 cm. The bottom container is in the shape of a cube of side 12 cm. Find the volume of the whole flower vase.



Ans: _____ _____ [3]

8. In a quiz game two people will have to answer 100 questions each. They score one point for each correct answer. The quiz game has not ended yet. Each person has already answered 90 questions. The table shows the results so far.

Person A	Person B
60% of the first 90 questions correct	50% of the first 90 questions correct

What is the minimum number of points that Person A must get from the last 10 questions in order to win the quiz game?

Do not write in this space

Ans: _____. [3]

9. The total length of the blue and yellow ribbons Martha had was 221 cm. After using $\frac{3}{4}$ of the blue ribbon and $\frac{4}{5}$ of the yellow ribbon, she was left with $\frac{1}{2}$ as much yellow ribbon as blue ribbon. How much blue ribbon did she use?

Do not write in this space

Ans: _____ [3]

Do not write in this space

10. Albert and Xavier started out on a 10-km walkathon at the same time. Both of them were walking at uniform speeds. When Xavier completed the 10-km walkathon, Albert still had 2.5 km to walk. Albert then completed the walk 30 min later.

Find Xavier's walking speed in km/h.

(Give your answer correct to 2 decimal places)

Ans:_____[3]

11. Box A contained 50-cent coins while Box B contained 20-cent coins. Box B had 53 more coins but the value of the coins in Box A was \$8.30 more than the value of the coins in Box B. How much money was there in Box A?

Do not write in this space

Ans: _____ [3]

12. Mr Lee had a total of 378 apples and oranges. He sold $\frac{1}{3}$ of his oranges and bought another 14 apples. After which, the number of apples he had was $\frac{1}{4}$ the number of oranges. How many more oranges than apples did he have at first?

Do not write in this space

Ans: _____ [4]

13. The usual price of a television is 20% more than the usual price of a computer. During the Great Singapore Sale, 20% discount was given on the television and 25% discount was given on the computer. Due to the promotion, the money collected from one computer was $210 less than that of one television. What is the usual price of one television?

Do not write in this space

Ans: _____ .[4]

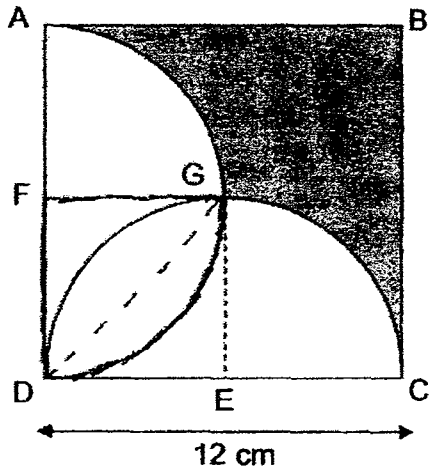
14. At a game stall, every child needed 4 tokens to exchange for a prize, while an adult needed 5 tokens. The ratio of the number of adults to the number of children who exchanged their tokens for prizes was 2 : 1 and a total of 1092 tokens were collected by the game stall, how many tokens were collected from the children?

Do not write in this space

Ans: _____ [4]

15. The figure below is not drawn to scale.
It is formed by a square with 2 identical semi-circles in it.
ABCD is a square of side 12 cm.
AGD and DGC are semicircles with centres F and E respectively.

Do not write in this space



For each of the following, use the calculator value of π to find
(a) the area of the shaded part, correct to 1 decimal place.
(b) the perimeter of the shaded part, correct to 1 decimal place.

Ans :(a) _____ [3]

(b) _____ [2]

16. Mrs Ong had some pears and lemons in 2 baskets. In basket A, the number of pears to the number of lemons was in the ratio 5 : 9. In basket B, there were thrice as many pears as lemons. After Mrs Ong transferred $\frac{1}{3}$ of the lemons from basket A to basket B, the number of fruits left in basket A was 187 and the ratio of the number of pears to the number of lemons in basket B became 7 : 8. How many fruits are there in ~~Box~~ basket B in the end?

Do not write in this space

Ans: _____ [5]

17. At noon, a bus travels from Town X to Town Y at an average speed of 60 km/h. At the same time, a van travels from Town Y to Town X. At 3 p.m., the bus and the van are 30 km apart after having passed each other earlier. If the bus arrives at Town Y at 5 p.m., find the time at which the van will arrive at Town X.

Do not write in this space

Ans: _____ [5]

18. Jie Min and Rudy had a total of 470 red marbles and 600 blue marbles. 40% of Jie Min's marbles were red while the rest were blue. 60% of Rudy's marbles were red while the rest were blue. After giving some red marbles to Rudy, Jie Min had 32 more red marbles than Rudy. How many red marbles did Jie Min give to Rudy?

Do not write in this space

Ans: _____ [5]

End of Paper 2

Remember to check your work.

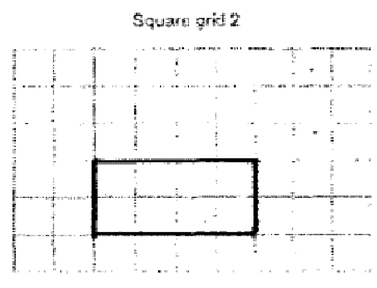
ANSWER KEY

YEAR	:	2017
LEVEL	:	PRIMARY 6
SCHOOL :	:	NAN HUA PRIMARY
SUBJECT :	:	MATHEMATICS
TERM	:	SA1

Paper 1

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

Q16



Q17 12w

Q18 130°

Q19 120 cm^2

Q20 0.993

Q21 2k years old

Q22 20 litres

Q23 48 and 75

Q24 $1.85

Q25 $\frac{11}{16}$

Q26 (a) 1B + 1F + 1P = \$8n
<u>\$(8n – 3)</u>

(b) 8 x 3 → 24
24 – 3 → 21
21 ÷ 3 ⇒ <u>\$7</u>

Q27 $4\frac{4}{5}$ or 4.8 km/h

Q28

A	:	C
21	:	28
3	:	4

12 ÷ 4 → 3
3 x 3 → 9
9 + 10 → 19
21 – 19 ⇒ <u>2</u>

Q29 44 cm

Q30 15

<u>Paper 2</u>

Q1 180 – 50 → 130
180 – 130 → 50
180 – 50 – 50 ⇒ <u>80°</u>

Q2 Total → 358 + 310 + 241 = 909
Each same → 909 ÷ 3 = 303
Ali must give → 310 – 303 = 7
Ray must give → 358 – 303 = 55
55 + 7 ⇒ <u>62 marbles</u>

Q3 25 x 4 → 100
100 – 4 ⇒ <u>96</u>

Q4 $9 \div 3 = 3$
$3 \times 2 = 6$
$6 \times 3 = 18$
$9 \times 5 = 45$
$45 + 18 = \underline{63\text{ cm}}$

Q5 18 years old

Q6 2464 cm^2

Q7 Cube volume $\rightarrow 12 \times 12 \times 12 = 1728$
Cuboid volume $\rightarrow 4 \times 4 \times 23 = 368$
Total volume $\rightarrow 1728 + 368 \Rightarrow \underline{2096\text{ cm}^3}$

Q8 2 points

Q9

	2u		1u	
B	$\frac{1}{4}$	=	$\frac{1}{5}$	Y
B	$\frac{2}{8}$	=	$\frac{1}{5}$	Y

Total units $\rightarrow 8u + 5u = 13$
$13u \rightarrow 221$
$1u \rightarrow 221 \div 13 = 17$
$8u - 2u \rightarrow 6u$
$6 \times 17 \Rightarrow \underline{102\text{ cm}}$

Q10 Albert's speed $\rightarrow 2.5 \div \frac{1}{2} = 5$
$10 - 2.5 = 7.5$
Time (X) $\rightarrow 7.5 \div 5 = 1\frac{1}{2}$

Xavier's speed $\rightarrow 10 \div 1\frac{1}{2} = 6.666 \approx \underline{6.67\text{ km/h}}$

Q11 \$31.50

Q12 $7u = 378 + 14 \rightarrow 392$

$1u = 392 \div 7 \rightarrow 56$

$5u + 14 = 5 \times 56 + 14 \Rightarrow \underline{294}$

Q13

T	:	C
6	:	5
30	:	25
120	:	100
96	:	75

$96u - 75u = 21$

$21u = 210$

$1u = 210 \div 21 \rightarrow 10$

$10 \times 120 \Rightarrow \underline{\$1200}$

Q14

A	:	C
2	:	1

$A \rightarrow 2u \times 5 = 10u$ } **14u**

$C \rightarrow 1u \times 4 = 4u$ }

$1092 \div 14 \rightarrow 78$

$78 \times 4 \Rightarrow \underline{312 \text{ tokens}}$

Q15 (a) 51.5 cm^2

Q15 (b) $\frac{1}{4} \times \pi \times 2 \times 6 = 3\pi$

$12 + 12 + 3\pi + 3\pi$

$= 24 + 6\pi$

$\approx 42.84 \Rightarrow \underline{42.8 \text{ cm}}$

Q16 $187 \div 11 = 17$

$17 \times 6 = 102$

$17 \times 5 = 85$

$102 \div 2 = 51$

$24 - 7 = 17$

$51 \div 17 = 3$

$72 + 63 = \underline{135 \text{ fruits}}$

Q17 $60 \times 2 = 120$

$30 \div 60 = \frac{1}{2}$

$\frac{1}{2}$ h = 30 min

Speed of van → $150 \div 3 = 50$

$150 \div 50 = 3$

3pm 3 h 6pm

Q18 93 red marbles

End

NANYANG PRIMARY SCHOOL

FIRST SEMESTRAL EXAMINATION 2017

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	**/ 20**
Booklet B	**/ 20**

Paper 1 Total: / 40

Name: _____ ( )

Class: Primary 6 ( )

Date: 3 May 2017

Any query on marks awarded should be raised by 18 May 2017. 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 pairs of numbers has exactly four common factors?

(1) 12 and 26

(2) 16 and 26

(3) 16 and 30

(4) 18 and 30

2 What is the value of 80 ÷ 4000?

(1) 50

(2) 5

(3) 0.02

(4) 0.002

3 The following fractions are arranged from the smallest to the largest.

$$\frac{3}{10}, \frac{2}{5}, \boxed{}, \frac{3}{5}, \frac{3}{4}$$

What could be the missing fraction in the box?

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

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

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

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

4 Jovan's mass was 32 kg last year. This year, his mass is 40 kg. What is the percentage increase in Jovan's mass?

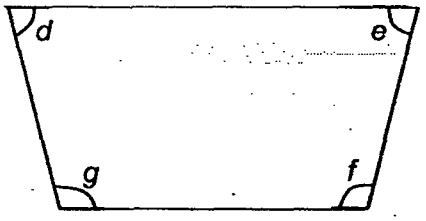
(1) 20%

(2) 25%

(3) 80%

(4) 125%

5 The figure shows a trapezium. Which of the two angles given in the figure add up to 180°?



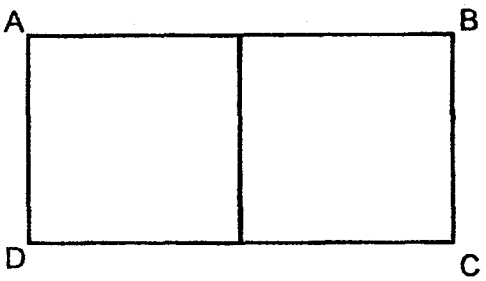
(1) $\angle d$ and $\angle e$

(2) $\angle e$ and $\angle f$

(3) $\angle f$ and $\angle g$

(4) $\angle e$ and $\angle g$

6 Rectangle ABCD is made up of 2 identical squares. The area of each square is 100 cm^2. Find the perimeter of Rectangle ABCD.



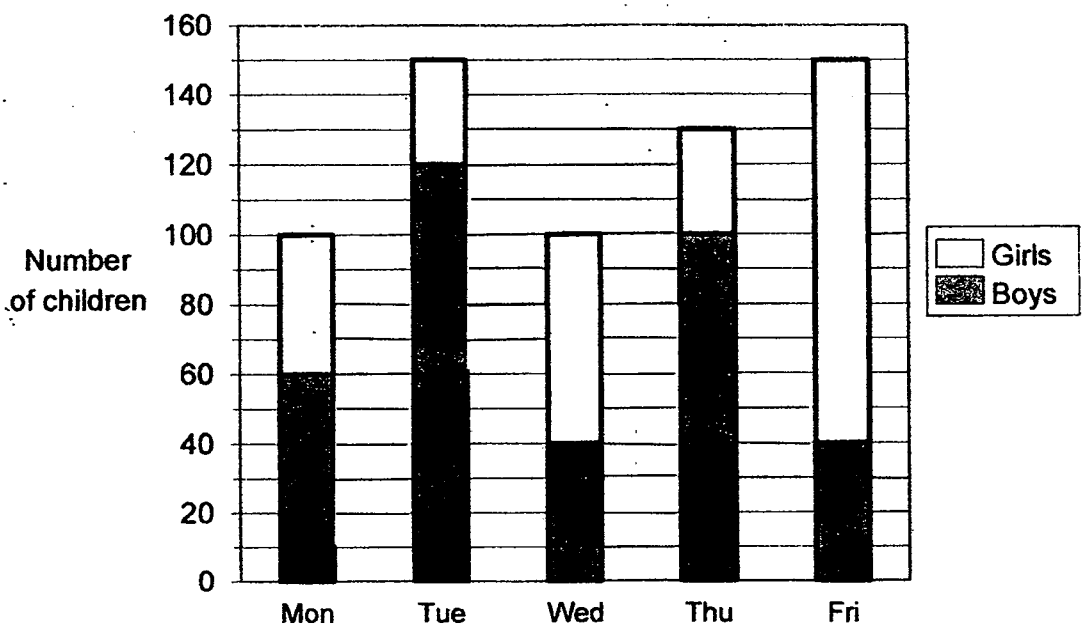
(1) 60 cm

(2) 80 cm

(3) 150 cm

(4) 300 cm

7 The graph shows the number of children at the park from Monday to Friday. On which two days were there the same number of girls at the park?



(1) Mon and Wed

(2) Wed and Thu

(3) Wed and Fri

(4) Tue and Thu

8 Alvin bought $3y$ stickers. Bernard bought 7 fewer stickers than Alvin. Charles bought $\frac{1}{4}$ as many stickers as Bernard. How many stickers did Charles buy?

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

(2) $\frac{3y-7}{4}$

(3) $3y+\frac{7}{4}$

(4) $3y-\frac{7}{4}$

9 There were 4500 participants in a marathon. 35% of the participants were female. How many female participants were there?

(1) 2925

(2) 2705

(3) 1575

(4) 1355

10 The ratio of the number of stamps Si Hui had to the number of stamps Pei Xuan had is 4 : 3. Pei Xuan had 84 stamps. How many stamps did Si Hui have?

(1) 48

(2) 63

(3) 112

(4) 196

11 Menon bought $\frac{5}{8}$ l of milk and drank $\frac{1}{3}$ of it. How much milk was left?

(1) $\frac{5}{24}$ l

(2) $\frac{7}{24}$ l

(3) $\frac{10}{24}$ l

(4) $\frac{23}{24}$ l

12 Which one of the following numbers is the smallest?

(1) 0.087

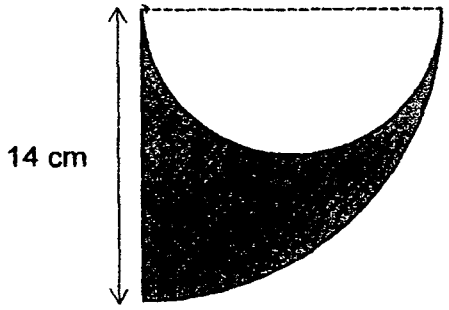
(2) 0.807

(3) 0.708

(4) 0.078

13 The figure is made up of a quarter circle and a semicircle. The radius of the quarter circle is 14 cm. Find the perimeter of the shaded part.

(Take $\pi = \frac{22}{7}$)



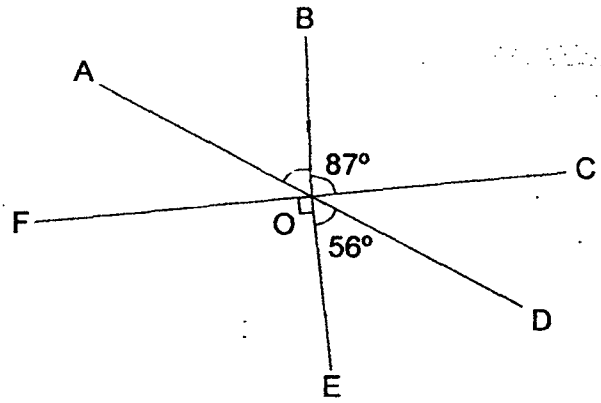
(1) 58 cm

(2) 44 cm

(3) 36 cm

(4) 22 cm

14 In the figure, AD and CF are straight lines. $\angle BOC = 87^\circ$, $\angle DOE = 56^\circ$ and $\angle EOF = 90^\circ$. Find $\angle AOB$.



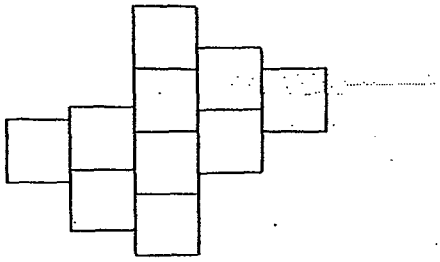
(1) 37°

(2) 53°

(3) 56°

(4) 59°

15 The figure is made up of 10 identical squares. The length of each square is 3 cm. Find the perimeter of the figure.



(1) 48 cm

(2) 51 cm

(3) 54 cm

(4) 57 cm

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)

---

16 Simplify the following algebraic expression.

$$4r + 15 + 12r \div (2 \times 3) - 7$$

Ans: _____

---

17 Suzie bought 3512 yellow buttons and 1648 blue buttons. How many more yellow buttons than blue buttons did she buy?

Ans: _____

---

18 Find the value of $16 + 8 \times (24 - 16 \div 4)$.

Ans: _____

---

19 Express $3\frac{1}{50}$ as a decimal.

Ans: _____

---

20 Round off 8.765 to the nearest tenth.

Ans: _____

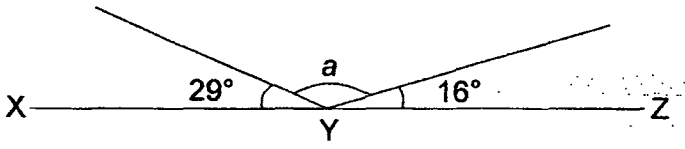
---

21 Express 18 *l* 52 ml in litres.

Ans: _____ *l*

---

22 In the figure, XYZ is a straight line. Find $\angle a$.



Ans: _____ °

---

23 Tarita starts a savings account with $3600 at a bank. The interest rate is 2% per year. How much interest will she get in her savings account at the end of one year?

Ans: $_____

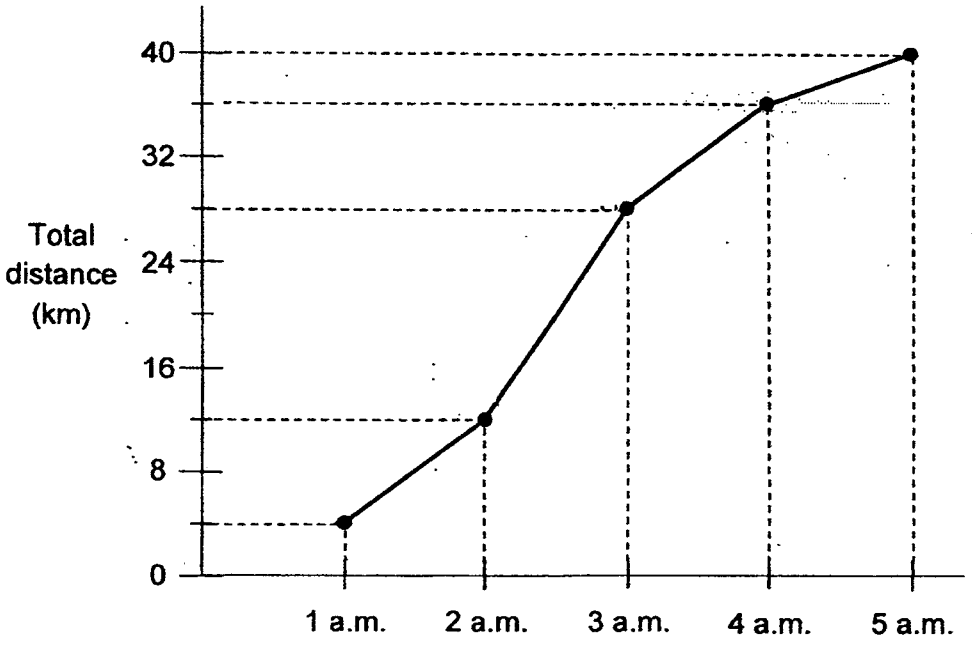
---

24 There were a total of 210 men and women who took part in a cooking competition. The ratio of the number of men to the number of women is 5 : 2. How many more men than women took part in the competition?

Ans: _____

---

25 Jeremy took part in a cycling expedition. The line graph shows the total distance cycled by Jeremy from 1 a.m. to 5 a.m.



During which one-hour period was the distance cycled by Jeremy the greatest?

Ans: _____ a.m. to _____ a.m.

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 Annabel bought 10 packets of flour. Each packet of flour weighed 950 g. She used 1.2 kg of flour for some baking. How much flour had she left after baking?

Ans: _____ kg

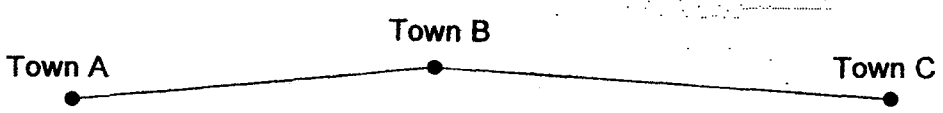
---

27 Yana had \$24 more than Trisha. 50% of the amount of money Yana had is equal to $\frac{3}{4}$ of the amount of money Trisha had. How much did they have altogether?

Ans: \$_____

---

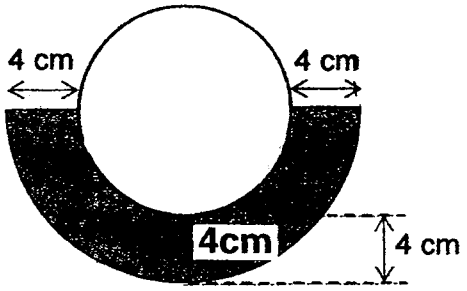
28 Tim drove from Town A to Town C through Town B. He left Town A at 7.45 a.m. and reached Town C at 5.15 p.m. The time he took to travel from Town B to Town C was twice as long as the time he took to travel from Town A to Town B. What was the time taken by Tim to travel from Town A to Town B? Give your answer in minutes.



Ans: _____ min

---

29 A circular piece of paper of radius 6 cm is placed on top of a semicircular piece of paper. Find the area of the shaded part. Leave your answer in terms of π.



Ans: _____ cm^2

---

30 The table shows the marks obtained by Jun Yi in an examination. A portion of the table is covered by an ink blot.

Subject	Marks
English	9
Chinese	
Mathematics	9

For each subject, the marks obtained is a whole number and its maximum is 100. Jun Yi obtained an average of 86 marks for English and Mathematics. The total marks he obtained for Chinese and English is 176. How many marks did Jun Yi obtain for Chinese?

Ans: _____

FIRST SEMESTRAL EXAMINATION 2017

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	**/ 60**

GRAND TOTAL	**/ 100**

Name: _____ ( )

Class: Primary 6 (

Date: 3 May 2017

Any query on marks awarded should be raised by 18 May 2017. 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 Qian Hao is $1\frac{1}{2}$ m tall, Amir is 1.65 m tall and Jinesh is 1.35 m tall.

What is the ratio of Qian Hao's height to Amir's height to Jinesh's height? Give your answer in the simplest form.

Ans: _____

---

2 The total mass of Jake and Lokesh is $15p$ kg. Jake is $6p$ kg.
If $p = 7$, what is the mass of Lokesh?

Ans: _____ kg

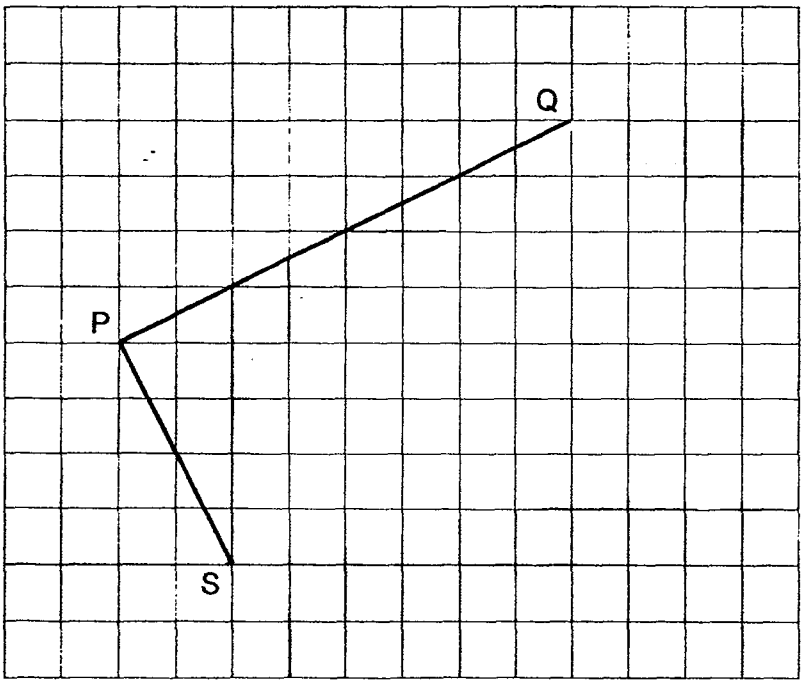
---

3 At a funfair, the number of popsicles sold at Stall A was thrice the number of popsicles sold at Stall B. The number of popsicles sold at Stall A was 5 times the number of popsicles sold at Stall C. What is the ratio of the number of popsicles sold at Stall B to the number of popsicles sold at Stall C to the number of popsicles sold at Stall A?

Ans: _____

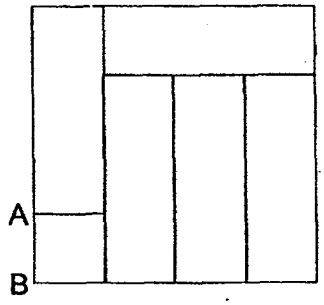
---

4 PQ and PS are two sides of a rectangle. Complete the rectangle by drawing the other 2 sides in the square grid below.



---

5 The figure is made up of 5 identical rectangles and a square. The area of the figure is 576 cm^2. Find the length of AB.



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 Leroy earns \$0.50 for every book that he sells. For every 60 books that he sells, he will earn an additional bonus of \$10. How much did he earn from selling 203 books?

Ans: _____ [3]

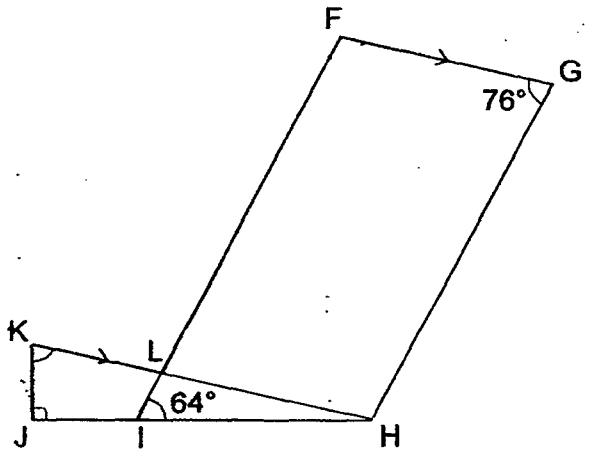
---

7 There were a total of 270 stickers in Bag A and Bag B. After 56 stickers from Bag A were moved to Bag B, the ratio of number of stickers in Bag B to the number of stickers in Bag A is 3 : 2. How many stickers were there in Bag A at first?

Ans: _____ [3]

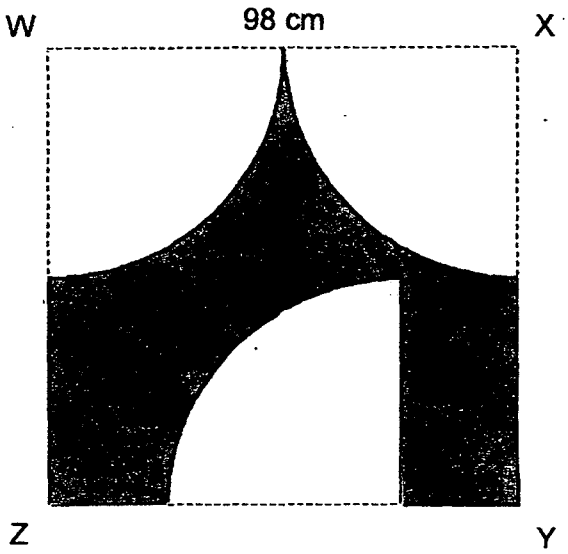
---

8 In the figure, FGHI is a trapezium and HJK is a right-angled triangle. $\angle FGH = 76°$, $\angle HIL = 64°$ and FG is parallel to KH. Find $\angle HKJ$.



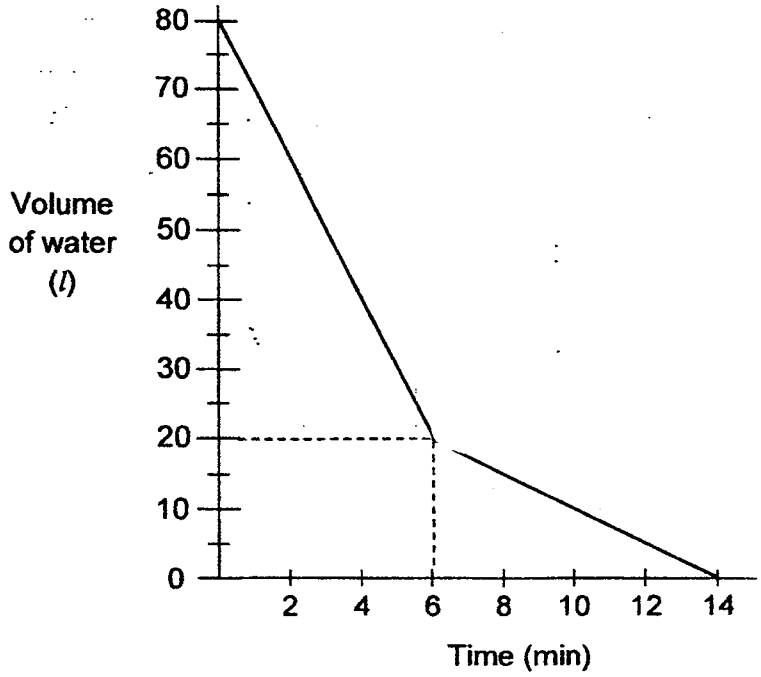
Ans: _____ [3]

9 The figure shows a square WXYZ with 3 identical quarter circles removed. The length of WX is 98 cm. Find the perimeter of the shaded part. (Take $\pi = \frac{22}{7}$)



Ans: _____ [3]

10 At first, a tank was filled with 80 *l* of water. The water was drained out using two taps, Tap A and Tap B. Both taps were turned on at the same time and after a few minutes, Tap B was turned off. The line graph shows the amount of water in the tank over 14 minutes.



(a) How many minutes after both taps were turned on was Tap B turned off?

(b) In one minute, how many litres of water flowed from Tap A?

Ans: (a) _____ [1]

(b) _____ [2]

11 Alicia bought a handbag for \$428 after a discount of 20%. She also bought a purse at 28% discount. The total discount for the handbag and the purse was \$121. What was the price of the purse before the discount?

Ans: _____ [4]

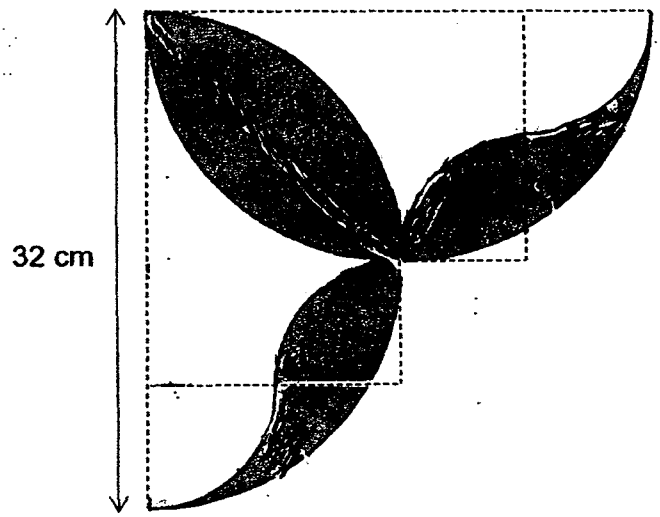
12 Chong and Darren brought a total sum of $4976 for a tour. At the end of the tour, the amount of money Chong had left was 5 times the amount he had spent. The amount of money Darren had spent was thrice the amount he had left. The total amount of money Chong and Darren had left was $2126. How much did Darren bring for the tour?

Ans: _____ [4]

13 Mdm Thana baked 360 muffins. $\frac{4}{9}$ of the muffins were chocolate muffins and the rest were blueberry muffins. After selling an equal number of chocolate and blueberry muffins, $\frac{3}{11}$ of the total muffins left were chocolate muffins. How many blueberry muffins did she sell?

Ans: _____ [4]

14 The figure is made up of two identical large semicircles and four identical small quarter circles. The diameter of the semicircle is 32 cm. Find the total area of the shaded parts. (Take $\pi = 3.14$)



Ans: _____ [4]

15 A box contained some pears and some mangoes. The ratio of the number of pears to the number of mangoes was 3 : 7 at first. After Mr Lim put in 28 pears and removed 60 mangoes from the box, the number of pears became equal to the number of mangoes in the box.

(a) How many pears were there in the box at first?

(b) How many fruits were there in the box at first?

Ans: (a) _____ [3]

(b) _____ [2]

16 Bernice had 600 beads. 20% of them were purple and the rest were green. She used 80 purple beads to make a necklace. After that, her mother gave her some purple beads and the percentage of purple beads became 40% of the total number of beads. How many purple beads did Bernice's mother give her?

Ans: _____ [5]

17 A florist ordered some flowers. 800 of the flowers were tulips while the rest were roses. $\frac{2}{5}$ of the roses were red. $\frac{1}{2}$ of the remaining roses were white and the rest of the remaining roses were blue. Given that 10% of the flowers were blue roses, how many flowers did she order?

Ans: _____ [5]

18 Mrs Heng wanted to decorate a rectangular piece of wall in the music hall. She divided the top part of the wall into equal parts of length 0.8 m and painted each part as shown in Figure 1. She divided the bottom part of the same wall into equal parts of length 1.2 m and painted each part as shown in Figure 2.

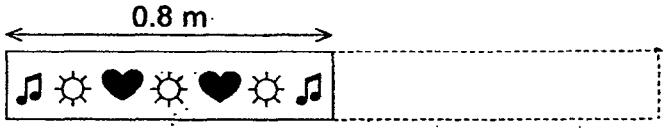


Figure 1

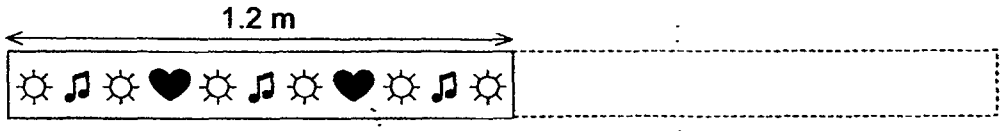


Figure 2

After she completed the decoration, there were 108 more ☼ than ♫ on the wall. Find the length of the wall.

Ans: _____ [4]

END OF PAPER

EXAM PAPER 2017
LEVEL : PRIMARY 6
SCHOOL : NANYANG PRIMARY SCHOOL
SUBJECT : MATH
TERM : SA1

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

Q16. 6r + 8 Q17. 1864 Q18. 176 Q19. 3.02 Q20. 8.8

Q21. 18.052 Q22. 135 Q23. 72 Q24. 90 Q25. 2a.m to 3a.m

Q26. 8.3 Q27. 120 Q28. 190 Q29. 36π Q30. 83

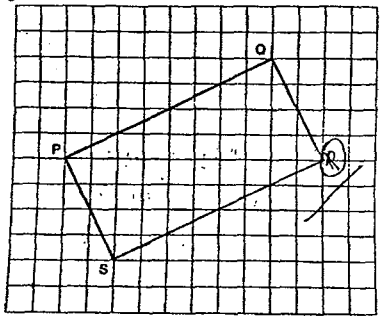
PAPER 2

Q1. 1.5:1.65:1.35 = 10: 11 : 9 Answer: 10:11:9

Q2. J + L → 15p kg = 15(7) kg = 105kg
Jake → 6p kg = 6(7) kg = 42kg
Lokesh → 105kg – 42kg = 63kg Answer: 63

Q3. A:B = 15nu:5nu A:C = 15nu:3nu
B:C:A = 5:3:15 Answer: 5:3:15

Q4.



Q5. 3 X 1 = 3
3 X 5 = 15
1 X 1 = 1 1 + 15 = 16
16u → 576
1u → 36
36 = 6 X 6 Answer: 6

Q6. 203/60 = 3 R23
60 X 3 = 180
203 – 180 = 23
3 X $10 = $30
203 X $0.50 = $101.50
$101.50 + $30 = $131.50 Answer: $131.50

Q7. 5u → 270
1u → 54
2u → 108
108 + 56 = 164 Answer: 164

Q8. 360 – 76 – 76 = 208
208/2= 104
180 – 76 = 104
180 – 104 – 64 = 12
180 – 12 – 90 = 78 Answer: 78°

Q9. 0.25 X 22/7 X 98 = 77
77 x 3= 231
98/2 = 49
231 + 49 + 49 + 49 + 49 = 427 Answer: 427cm

Q10. 14- 6 = 8
8min → 20
20/8 = 2.5 Answer: a) 6 minutes b) 2.5L

Q11. 80% → 428
1% → 5.35
20% → 107
121 – 107 = 14
28% → 14
1% → 0.50
100% → $50 Answer: $50

Q12. 1p + 5u → 2126 4p + 6u → 4976
6p + 30u → 1278 20p + 30u → 24880
14p → $24880 - $12756 = $12124
1p → $ 866
3p + 1p = 4p
4p → $3464 Answer: $3464

Q13. 25 + 20 = 45
45nu → 360
1nu → 8
25 – 8 = 17
17nu → 136 Answer: 136

Q14. 32/2 = 16
16 X 16 = 256
0.25 X 3.14 X 16 X 16 = 200.96
256 – 200.96 = 55.04
0.5 X 16 X 16 = 128
128 – 55.04 = 72.96
72.96 X 2 = 145.92
145.92 X 2 = 291.84 Answer: 291.84 cm^2

Q15. 4u → 60 + 28 = 88
1u → 22
3u → 66
7 + 3 = 10
10u → 22 X 10 = 220 Answer: a) 66 b) 220

Q16. 100% → 600
1% → 6
20% → 120
80% → 480
120 – 80 = 40
40 + 280 + 480 = 800 Answer: 280

Q17. 3nu → 10% of the total flowers
30nu → 100% of the total flowers
4nu + 6nu = 10nu
30-10 = 20nu
20nu → 66.333...% of the total flowers
20nu → 800
1nu → 40
30nu → 1200 Answer: 1200

Q18. 12 + 9 = 21
6 + 6= 12
21 – 12 = 9
108/9 = 12
12 X 2.4 = 28.8 Answer: 28.8m

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

Name: _____ ( )

Form Class: P6 _____ Math Teacher: _____

Date: 8 May 2017 Duration: 50 min

Your Score	
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.

SECTION A (20 marks)

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 your answer (1, 2, 3 or 4) on the OAS provided. All diagrams are not drawn to scale.

---

1. In 690 045, the value of the digit 9 is _____.

(1) 90

(2) 900

(3) 9000

(4) 90 000

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

$$\frac{7}{12}, \frac{5}{6}, \frac{3}{10}$$

(1) $\frac{5}{6}, \frac{3}{10}, \frac{7}{12}$

(2) $\frac{7}{12}, \frac{3}{10}, \frac{5}{6}$

(3) $\frac{3}{10}, \frac{5}{6}, \frac{7}{12}$

(4) $\frac{3}{10}, \frac{7}{12}, \frac{5}{6}$

3. Mrs Lee has a ribbon measuring 90.7 cm. She wants to cut it into pieces of 5 cm each. What is the maximum number of pieces she can cut from it?

(1) 18

(2) 19

(3) 450

(4) 453

4. Find the value of $12p + 9 - 4p$ when $p = 7$.

(1) 47

(2) 65

(3) 89

(4) 93

5. There were 280 pupils at a sports camp, 160 pupils wore glasses. Find the ratio of the number of pupils who wore glasses to the number of pupils who did not wear glasses.

(1) 7 : 3

(2) 7 : 4

(3) 3 : 4

(4) 4 : 3

6. During a sale, cups were sold in sets of 3 for $1.75. John bought 18 cups. How much did he pay?

(1) $10.50

(2) $11.25

(3) $31.50

(4) $94.50

7. Express 17.075 as a fraction.

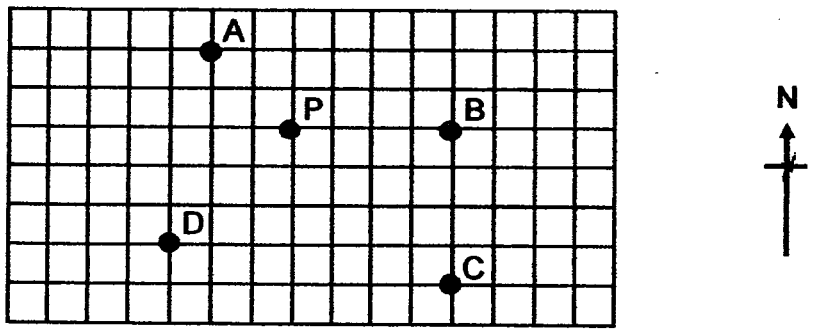
(1) $17\frac{1}{40}$

(2) $17\frac{3}{40}$

(3) $17\frac{1}{4}$

(4) $17\frac{3}{4}$

8. In the square grid below, Felicia wanted to plant a tree at south-east of point P. At which point should Felicia plant the tree?



(1) A

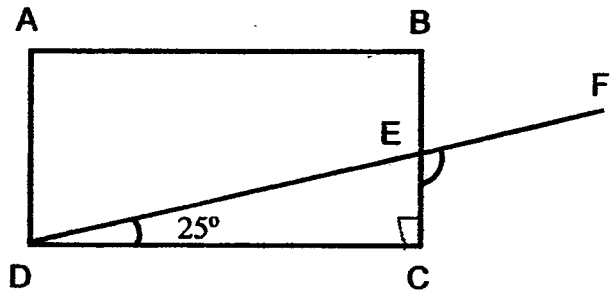
(2) B

(3) C

(4) D

9. In the figure below, ABCD is a rectangle and DEF is a straight line.

Find ∠CEF.



(1) 115°

(2) 125°

(3) 145°

(4) 155°

10. There were 24 male volunteers at a charity event. There were 12 more female volunteers than male volunteers. What percentage of the volunteers were female?

(1) 20%

(2) 40%

(3) 50%

(4) 60%

11. At a mass swimming event, swimmers were divided equally into Team A and Team B. In Team A, the ratio of the number of men to the number of women was 3 : 1. In Team B, the ratio of the number of men to the number of women was 7 : 5. Find the ratio of the number of men to the number of women at the mass swimming event.

(1) 1 : 3

(2) 2 : 1

(3) 3 : 1

(4) 5 : 3

12. $4.976 = 4 + 9 \times 0.1 + 6 \times 0.01 + \square \times \frac{1}{1000}$

What is the number in the box?

(1) 6

(2) 7

(3) 16

(4) 70

13. Which of the following is **closest** to 10?

(1) $\frac{49}{5}$

(2) $9\frac{4}{15}$

(3) $10\frac{3}{4}$

(4) $\frac{85}{8}$

14. Benedict spends $\frac{2}{5}$ of his monthly salary on food, $\frac{4}{5}$ of the remainder on transport and saves the rest. What percentage of his monthly salary does he save?

(1) 12%

(2) 24%

(3) 32%

(4) 48%

15. Jerry packed 96 English books and 60 Chinese books into as many bags as possible, with no remainder. He placed the same number of books in each bag. The number of English books in each bag was the same. How many bags of books did he pack?

(1) 5

(2) 8

(3) 12

(4) 13

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. Find the average of all the factors of 15.

Ans : _____

17. Find the value of $4 \times 7 - (12 \times 2) \div 3 + 5$

Ans. _____

18 Mandy's saving is $\frac{2}{5}$ of Andy's saving. Andy saves \$5690, how much do they save altogether?

Ans : \$_____

19. Jenny had $1\frac{2}{5}$ kg of rice. She cooked $\frac{1}{2}$ kg of it.
How much rice had she left?

Ans : _____kg

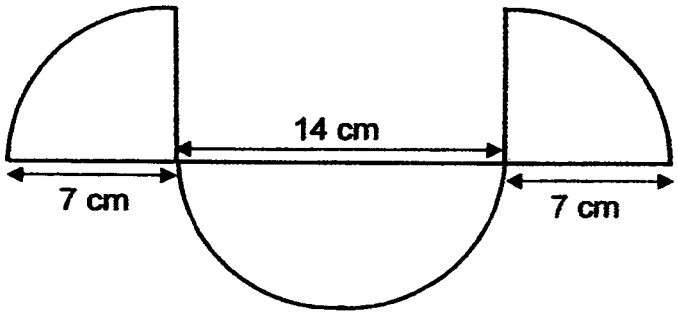
20. Express $2\frac{3}{8}$ as a decimal.

Ans : _____

21. Express 5 km 30 m in kilometres.

Ans : _____ km

22. The figure below is made up of 2 identical quadrants and 1 semi-circle. Find the perimeter of the figure. (Take $\pi = \frac{22}{7}$)

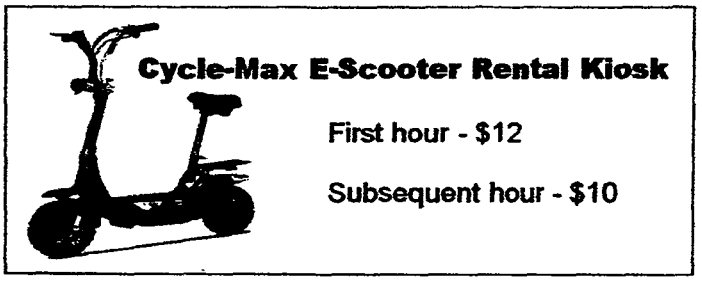


Ans : _____ cm

23. Jane is y years old. Mary is twice as old as Jane. Lynn is 5 years older than Mary. What is Lynn's age in terms of y?

Ans : _____

24.



5 friends rented one electric scooter for 3 hours and shared the rental cost equally. How much did each of them have to pay?

Ans : $_____

25. June needs 1 h 25 min to travel from her house to the airport. At what time must she leave her house if she has to reach the airport at 9.15 a.m.?

Ans : _____ a.m.

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.

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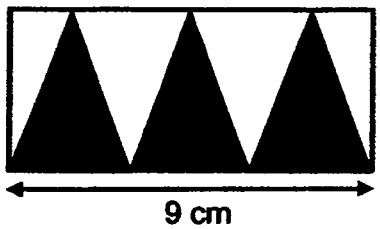
26. The figure below is made up of 1 rectangle and 3 identical shaded triangles. The total area of the 3 shaded triangles is 18 cm^2, find the height of one triangle.



Ans : _____ cm

27. At a funfair, Mrs Chan sold a total of 52 kg of popcorns. Each large packet weighed 500g and each small packet weighed 300g. An equal number of large and small packets of popcorns were sold. How many packets of popcorns did Mrs Chan sell altogether?

Ans : _____

28. $4\frac{3}{8}$ ℓ of oil was poured into 7 identical containers without spilling.

Find the volume of oil in each container.

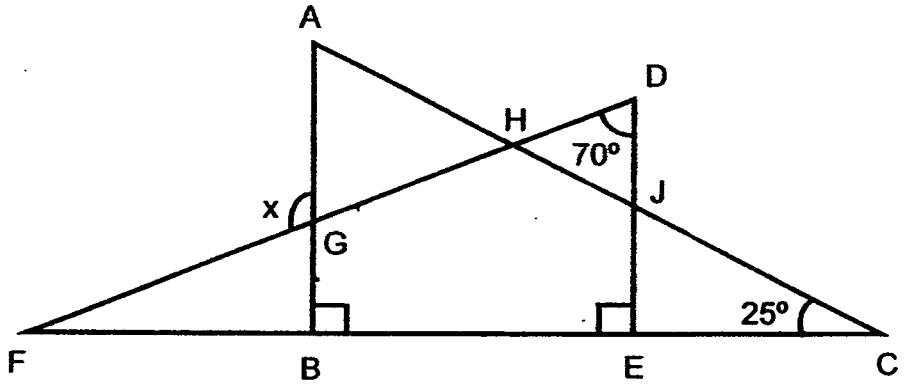
Ans : _____ ℓ

29. $10.7 + (11.3 - 3) \times 5 \boxed{} 5 = 19$

Fill in the box with +, −, × or ÷

Ans : _____

30. The figure below is made up of 2 right-angled triangles, ABC and DEF. Given that ∠FDE is 70° and ∠ACB is 25°, find ∠x.



Ans : _____ °

End of Paper-
☺ Please check your work carefully ☺

Setters : Ho Kai Huat, Jacqueline Seto, Wirda

SEMESTRAL ASSESSMENT 1
MATHEMATICS (PAPER 2)
PRIMARY 6

Name: _____ ( )

Form class: P6 _____ Math Teacher: _____

Date: 8 May 2017 Duration: 1 h 40 min

Your Paper 2 Score (Out of 60 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. 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.
For questions which require units, give your answers in the units stated.
Figures are not drawn to scale. (10 marks)

---

1. Alice wanted to use the recipe below to make 30 cookies.

Cookies Recipe for 12 cookies
Flour : 220 g
Butter : 140 g
Sugar : 80 g

How much flour would she need?

Ans : _____g

2. Mrs Tan prepared 8y cupcakes for a party. She gave 5 cupcakes to each child and had 2y cupcakes left. How many children were there at the party? Express the answer in terms of y.

Ans : _____

3. Amy baked some tarts and placed them on plate A and plate B in the ratio of 3 : 2. Then she repacked the tarts on plate A into a big box and a small box in the ratio of 4 : 1. There were 9 tarts in the small box.
How many tarts did Amy bake at first?

Ans : _____

4. Raju and Prisha started jogging at the same time from one end of a park connector. Raju's average speed was 15 m/min faster than Prisha's. When Raju reached the other end of the park connector 50 min later, Prisha only completed $\frac{9}{10}$ of the journey.

What was the total distance of the park connector?

Ans : _____ m

5. The mass of a floor mat was 350 g when it was dry. After it was soaked in water, its mass increased to 980 g. Find the percentage increase in the mass of the floor mat after it was soaked in water.

Ans : _____ %

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. Helen had $\frac{5}{7}$ as many beads as Kelly. Kelly had $\frac{2}{3}$ as many beads as Angela. If Angela had 242 more beads than Helen, how many beads did Kelly have?

Ans: _____ [3]

7. There were 1583 fishes in an aquarium. After $\frac{1}{2}$ of the swordtail fish and 218 of the guppies were sold, the ratio of the number of swordtail fish to the number of guppies left became 4 : 5. How many swordtail fish were sold?

Ans : _____ [3]

8. Mrs Hong baked 4 times as many vanilla muffins as banana muffins. She gave 115 vanilla muffins to her neighbours and baked another 65 banana muffins. In the end, she had 36 more banana muffins than vanilla muffins. How many muffins did Mrs Hong bake altogether?

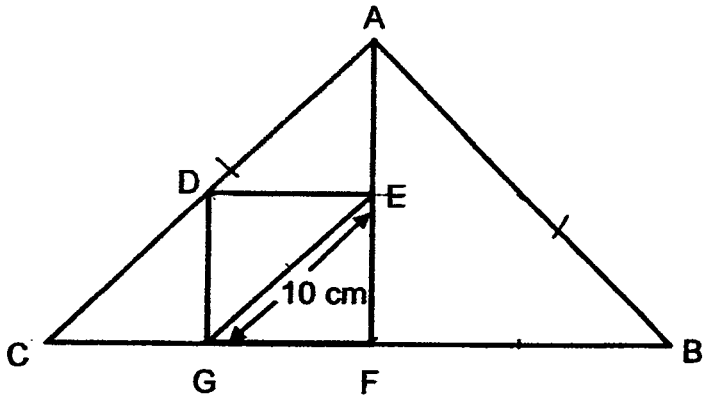
Ans : _____[3]

9. In a supermarket, 3 kg of fish cost $45. 1 kg of prawns cost twice as much as 1 kg of fish. Charlotte bought 3 kg of fish and 4 kg of prawns from the supermarket. How much change did she receive when she paid $200 for the fish and prawns?

Ans : _____[3]

10 ABC is an isosceles triangle. D and G are mid-point of AC and CF respectively. DEFG is a square and EG = 10 cm.

Find the area of triangle ABC.



Ans : _____ [3]

11. Alice and Bernard were given a sum of money by their parents. Alice received 35% of the money. After Bernard spent 80% of his money, he had $45.50 left. How much money did Alice receive?

Ans : _____ [3]

12 Harry had 2 containers, A and B of different capacities. Both the containers were filled with water to the brim. He used 480 mℓ of water from container A and it became $\frac{1}{5}$ full. Then he poured $\frac{5}{8}$ of the water from container B into container A. The amount of water in container A increased to 580 mℓ.
How much water was in container B at first?

Ans : _____ [4]

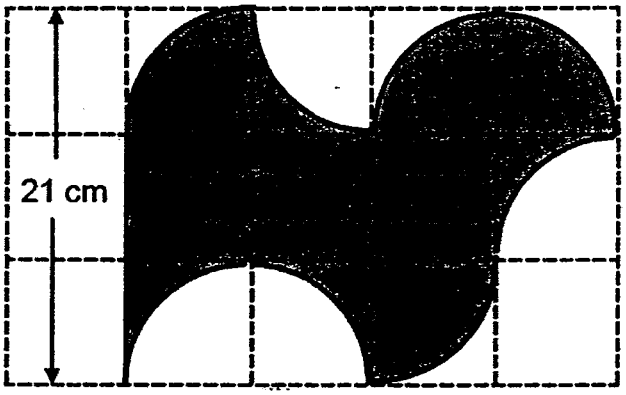
13. At 8.30 am., a bus left Town A for Town B travelling at the speed of 54 km/h. One hour later, a car started from Town B and travelled towards Town A. At 11 a.m., the car covered $\frac{1}{5}$ of the journey while the bus had to travel another 165 km before it reached the mid-point of the two towns. What was the average speed of the car?

Ans : _____ [4]

14. When $\frac{1}{3}$ of a box is filled with flour, its mass is 0.13 kg. When $\frac{3}{4}$ of the box is filled with flour, its mass is 0.23 kg. Find the mass of the box when it is empty.

Ans : _____ [4]

15. In the square grid below, the outline of the shaded figure is formed by 8 identical quarter circles and a straight line.



(a) Find the area of the shaded figure.

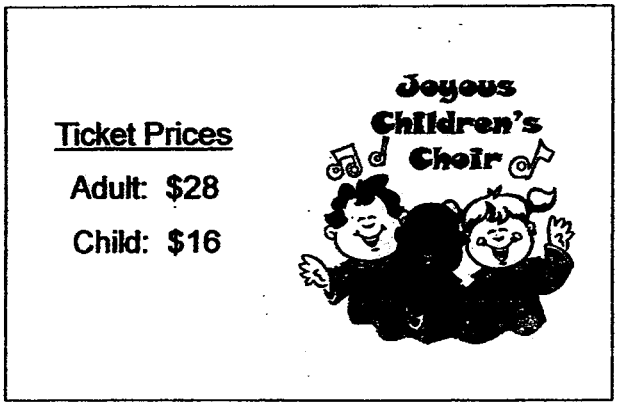
(b) Find the perimeter of the shaded figure.

(Take $\pi = \frac{22}{7}$)

Ans : (a) _____ [3]

(b) _____ [2]

16.



On Saturday, 300 more children than adults attended the performance. On Sunday, the number of children decreased by 40% while the number of adults increased by 20%. The concert hall with a capacity of 2700 seats was only 70% full on Sunday. What was the total amount of money collected from the sale of child tickets on both days?

Ans : _____ [5]

17. Mary had some twenty-cent coins and some fifty-cent coins in a money box. The ratio of the number of twenty-cent coins to the number of fifty-cent coins in the money box was 3 : 4 at first. When 40 fifty-cent coins were taken out and replaced by the same value of twenty-cent coins, the ratio of the number of twenty-cents coins to the number of fifty-cents coins became 4 : 1. What was the total amount of money in the money box at first?

Ans : _____ [5]

18. Aisha and Ismail had $751 and $360 respectively. Aisha saved $45 per week while Ismail saved $68 per week.

(a) How many weeks would it take for both of them to have the same amount of money?

(b) How much money would Aisha have altogether when Ismail saved $115 more than her?

Ans : (a) _____ [2]

Ans : (b) _____ [3]

End of Paper-

☺ Please check your work carefully ☺

Setters : Ho Kai Huat, Jacqueline Seto, Wirda

EXAM PAPER 2017

LEVEL : PRIMARY 6

SCHOOL : RAFFLES GIRLS' PRIMARY SCHOOL

SUBJECT : MATHEMATICS (PAPER 1)

TERM : SA1

SECTION A

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

SECTION B

Q16. 1+3+5+15=24

24 ÷ 4 = 6

Q17. 4 X 7 – 24 ÷ 3 + 5

= 28 – 24 ÷ 3 + 5

= 28 – 8 + 5

= 20 + 5

= 25

Q18. 5U = 5690

1U = $\frac{5690}{5}$

= 1138

2U + 5U = 70

70 = 1138 X 7 = 7966

Q19. $\frac{7}{5} - \frac{1}{2}$

= $\frac{14 - 5}{10}$

= $\frac{9}{10}$

Q20. $\frac{3}{8}$ = 0.375

0.375 + 2 = 2.375

Q21. 30m = 0.03km

5km + 0.03km = 5.03km

Q22. 1 circle = π X r X 2

= $\frac{22}{7}$ X 7 X 2

= 44

44 + 28 + 14 = 86

Q23. Jane = y
Mary = 2y
Lynn = 2y + 5 years old

Q24. 1h ($12) 1h ($10) 1h ($10)
Total = $12 + $10 + $10 = $32
1 friend = $\frac{\$32}{5}$
=$6.40

Q25. 1h 15min 10min
9.15am 8.15am 8.00am 7.50am
Ans : 7.50am

Q26. 3 triangles = $18cm^2$
1 triangles = $18cm^2 \div 3$
$= 6cm^2$
9cm ÷ 3 = 3cm
$6cm^2$ X 2 = $12cm^2$
$12cm^2$ ÷ 3cm = 4cm

Q27. 52kg = 52000g
1 set = 500g + 300g = 800g
No. of set = $\frac{52000}{800}$
= 65
65 X 2 = 130

Q28. $4\frac{3}{8} = \frac{35}{8}$
$\frac{35}{8} \div 7$
$= \frac{35}{8} \times \frac{1}{7}$
$= \frac{5}{8}$

Q29. 11.3 – 3 = 8.3
8.3 X 5 = 41.5
41.5 ÷ 5 = 8.3
8.3 + 10.7 = 19.0
Ans : ÷

Q30. $360^0 - (90^0 + 90^0) = 180^0$
$180^0 - 70^0 = 110^0$

EXAM PAPER 2017

LEVEL	:	PRIMARY 6
SCHOOL	:	RAFFLES GIRLS' PRIMARY SCHOOL
SUBJECT	:	MATHEMATICS (PAPER 2)
TERM	:	SA1

Q1. Recipe for 12 cookies

Needs to make 30 cookies

$$\frac{30}{12} = 2.5$$

Amount of flour needed = 2.5 X 220g

= 550g

Q2. Total given = 8y – 2y = 6y

No. of children = $\frac{6y}{5}$

Q3.

A : B	BB : 5B : Total
3 : 2	4 : 1 : 5
15 : 10	12 : 3 : 15

SB (3U) = 9

$$1U = \frac{9}{3}$$

$$= 3$$

Total (U) = 15U + 10U = 25U

25U = 3 X 25 = 75

Q4. How much more R had travelled = 15m / min X 150 min

= 750m

$$1 - \frac{9}{10} = \frac{1}{10}$$

$\frac{1}{10}$ of Distance = 750

Total Distance = 750 X 10 = 7500m

Q5. When dry = 350g

When wet = 980g

Increase = 980g – 350g = 630g

% increase = $\frac{630}{350}$ X 100% = 180%

Q6. H : K K : A

5 : 7 2 : 3

10 : 14 14 : 21

Different between A and H(v) = 21U – 10U

= 11U

11U = 242

$1U = \frac{241}{11}$

= 22

K(14U) = 22 x 14 = 308 beads

Q7. In the end $\frac{SF}{4} : \frac{G}{5}$

At first (U) = 4U X 2 = 8U

8U + 5U = 13U

13U = 1583 – 218 = 1365

$1U = \frac{1365}{13} = 105$

SF sold (4U) = 4 X 105 = 420 swordtail fish

Q8. VM : BM

4 : 1

4U – 115 = 1P

1U + 65 = 1P + 36

1U + 29 = 1P

4U – 115 = 1U + 29

4U – 1U = 29 + 115

3U = 144

$1U = \frac{144}{3} = 48$

At first (5U) = 48 X 5 = 240

240 + 65 = 305 muffins

Q9. 3kg F = \$45

1kg F = $\$\frac{45}{3}$ = \$15

1kg P = \$15 X 2 = \$30

4 kg P = \$30 X 4 = \$120

Total cost = \$45 + \$120 = \$165

Change = \$200 - \$165 = \$35

Q10. ▲ ABC = 8 small ▲

2 small ▲ = 10 X 5 = 50

8 small ▲ = 50 X 4 = 200cm^2

Q11. A got = 35%

B got = 100% - 35% = 65%

100% - 80% = 20%

20% of B = 45.50

B = 45.50 X 5 = 227.50

65% of total given = 227.50

1% of total given = $\frac{227.50}{65}$

35% of total given = $\frac{227.50}{65}$ X 35 = $122.50

Q12. $1 - \frac{1}{5} = \frac{4}{5}$

$\frac{4}{5}$ of A = 480

$\frac{1}{5}$ of A = $\frac{480}{4}$ = 120

580 – 120 = 460

$\frac{5}{8}$ of B =460

B = $\frac{460\ X\ 8}{5}$ = 736ml

Q13 Distance Bus covered by 11am = 54km/h X $2\frac{1}{2}$ h = 135km

Midpoint = 165km + 135km = 300km

300km X 2 = 600km

$\frac{1}{5}$ X 600km = 120km

Car travelled 120km in = $2\frac{1}{2}$ – 1h = $1\frac{1}{2}$ h

Speed of car = $\frac{D}{T} = \frac{120km}{1.5h}$ = 80km/h

Q14. $\frac{3}{4} - \frac{1}{3} = \frac{5}{12}$

$\frac{5}{12}$ of box = 0.23kg – 0.13kg = 0.1kg

$\frac{1}{3} = \frac{4}{12}$

$\frac{4}{12}$ of box = $\frac{0.1kg\ X\ 4}{5}$ = 0.08kg

0.13kg – 0.08kg = 0.05kg

Q15. a) Radius = 21 ÷ 3 = 7

7 X 7 X 7 = 343cm^2

b) Perimeter of 2 circles = π X r X 2 X 2

$= \frac{22}{7}$ X 7 X 2 X 2 = 88

88 + 7 + 7 = 102cm

Q16. People On Sunday = 2700 X $\frac{70}{100}$ = 1890

A on Sat = 100×

C on Sat = 100× + 300

A on Sun = 100× X $\frac{120}{100}$ = 120×

C on Sun = 60× + 180

120× + 60× + 180 = 1890

180× = 1890 – 180 = 1710

× = $\frac{1710}{180}$ = 9.5

(100 X 9.5) + 300 + (60 X 9.5) + 180 = 2000

2000 X 16 = $32000

Q17 Ratio of number at first

20¢	:	50¢
3	:	4

Ratio of value at first

20¢	:	50¢	:	Total
60	:	200	:	260

40 X 50¢ = $20
$20 ÷ 20¢ = 100

Ratio of number later

20¢	:	50¢
4	:	1
8	:	2

Ratio of value later

20¢	:	50¢	:	Total
80	:	50	:	130
160	:	100	:	260

8U – 3U = 5U
5U = 100 coins
1U = $\frac{100}{5}$ = 20

3U = 20 X 3 = 60
60 X 20 = 1200
Q17. 4U = 20 X 4 = 80
80 X 50 = 4000
1200 + 4000
= 5200¢ = $52

Q18. a) 751 – 360 = 391 (difference in saving at first)
68 – 45 = 23 (difference in saving per week)
391 ÷ 45 = 17 weeks

b) Aisha saving when they had same = 751 + (17 X 45) = 1516
No. of weeks for Ismail to have 115 more = 115 ÷ 23 = 5

(5 X 45) + 1516 = $1741

Word Problem Worksheet

& Solutions

Raffles Paper

P6 Mathematics SA1 2017

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. Helen had $\frac{5}{7}$ as many beads as Kelly. Kelly had $\frac{2}{3}$ as many beads as Angela. If Angela had 242 more beads than Helen, how many beads did Kelly have?

Ans: _____

---

7. There were 1583 fishes in an aquarium. After $\frac{1}{2}$ of the swordtail fish and 218 of the guppies were sold, the ratio of the number of swordtail fish to the number of guppies left became 4 : 5. How many swordtail fish were sold?

Ans: _____

---

8. Mrs Hong baked 4 times as many vanilla muffins as banana muffins. She gave 115 vanilla muffins to her neighbours and baked another 65 banana muffins. In the end, she had 36 more banana muffins than vanilla muffins. How many muffins did Mrs Hong baked altogether?

Ans: _____

---

9. In a supermarket, 3 kg of fish cost $45. 1 kg of prawns cost twice as much as 1 kg of fish. Charlotte bought 3 kg of fish and 4 kg of prawns from the supermarket. How much change did she receive when she paid $200 for the fish and prawns?

Ans: _____

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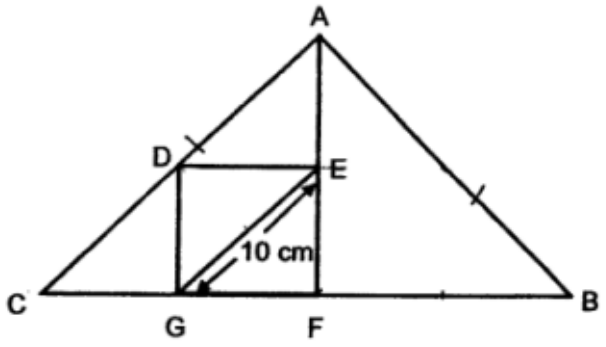
10. ABC is an isosceles triangle. D and G are mid-point of AC and CF respectively. DEFG is a square and EG = 10 cm. Find the area of triangle ABC.



Ans: _____

---

11. Alice and Bernard were given a sum of money by their parents. Alice received 35% of the money. After Bernard spent 80% of his money, he had $45.50 left. How much money did Alice receive?

Ans: _____

---

12. Harry had 2 containers, A and B of different capacities. Both the containers were filled with water to the brim. He used 480 mℓ of water from container A and it became $\frac{1}{5}$ full. Then he poured $\frac{5}{8}$ of the water from container B into container A. The amount of water in container A increased to 580mℓ. How much water was in container B at first?

Ans: _____

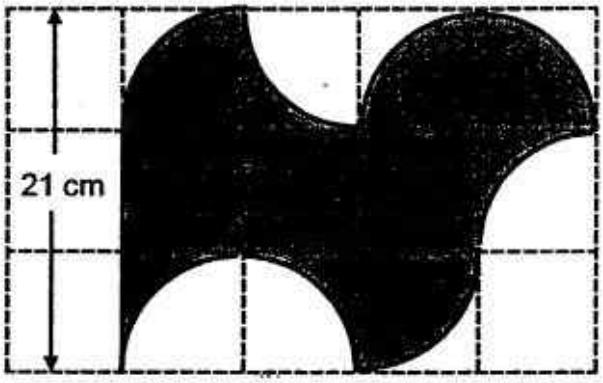
13. At 8.30 am., a bus left Town A for Town B travelling at the speed of 54 km/h. One hour later, a car started from Town B and travelled towards Town A. At 11 am., the car covered $\frac{1}{5}$ of the journey while the bus had to travel another 165 km before it reached the mid-point of the two towns. What was the average speed of the car?

Ans: _____

14. When $\frac{1}{3}$ of a box is filled with flour, its mass is 0.13 kg. When $\frac{3}{4}$ of the box is filled with flour, its mass is 0.23 kg. Find the mass of the box when it is empty.

Ans: _____

15. In the square grid below, the outline of the shaded figure is formed by 8 identical quarter circles and a straight line.



(a) Find the area of the shaded figure.

(b) Find the perimeter of the shaded figure.

(Take $\pi = \frac{22}{7}$)

Ans: (a) _____

(b) _____

16.

On Saturday, 300 more children than adults attended the performance. On Sunday, the number of children decreased by 40% while the number of adults increased by 20%. The concert hall with a capacity of 2700 seats was only 70% full on Sunday. What was the total amount of money collected from the sales of child tickets on both days?

Ans: _____

17. Mary had some twenty-cent coins and some fifty-cent coins in a money box. The ratio of the number of twenty-cent coins to the number of fifty-cent coins in the money box was 3 : 4 at first. When 40 fifty-cent coins were taken out and replaced by the same value of twenty-cent coins, the ratio of the number of twenty-cent coins to the number of fifty-cent coins became 4 : 1. What was the total amount of money in the money box at first?

Ans: _____

18. Aisha and Ismail had $751 and $360 respectively. Aisha saved $45 per week while Ismail saved $68 per week.

(a) How many weeks would it take for both to have the same amount of money?

(b) How much money would Aisha have altogether when Ismail saved $115 more than her?

Ans: (a) _____

(b) _____

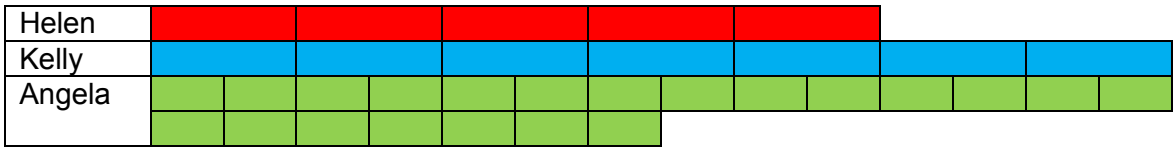
Answer Key

Subject: Primary 6 Maths – Word Problem Solutions
Paper: SA1 2017 Raffles

6. 308
7. 420
8. 305
9. $35
10. 200 cm^2
11. $122.50
12. 736 mℓ
13. 80 km/h
14. 0.05 kg
15. a) 343 cm^2 b) 102 cm
16. $32000
17. $52
18. a) 17 weeks b) $1741

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. Helen had $\frac{5}{7}$ as many beads as Kelly. Kelly had $\frac{2}{3}$ as many beads as Angela. If Angela had 242 more beads than Helen, how many beads did Kelly have?



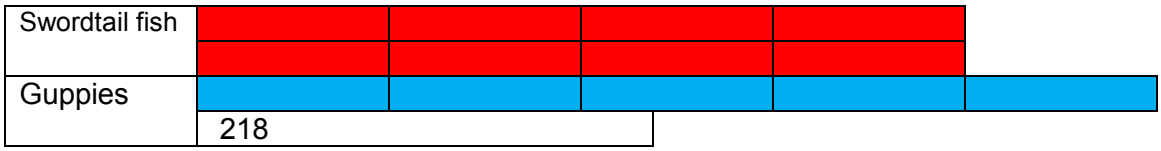
Let number of Angela's beads = 21u
Number of Helen's beads = 10u

Angela – Helen's beads = 21u – 10u = 11u = 242
u = 242 ÷ 11 = 22
Number of Kelly's beads = 14u = 14 x 22 = 308

Ans: 308

7. There were 1583 fishes in an aquarium. After $\frac{1}{2}$ of the swordtail fish and 218 of the guppies were sold, the ratio of the number of swordtail fish to the number of guppies left became 4 : 5. How many swordtail fish were sold?

Before



After

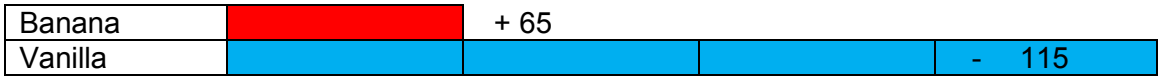
Let 4u = number of swordtail fish at the end

At first
8u + 5u + 218 = 1583
13u = 1583 – 218 = 1365
u = 1365 ÷ 13 = 105

Number of swordtail fish sold = 4u = 4 x 105 = 420

Ans: 420

8. Mrs Hong baked 4 times as many vanilla muffins as banana muffins. She gave 115 vanilla muffins to her neighbours and baked another 65 banana muffins. In the end, she had 36 more banana muffins than vanilla muffins. How many muffins did Mrs Hong baked altogether?



Let 4u = number of vanilla muffins
At the end she had
Number of banana muffins = u + 65
Number of vanilla muffins = 4u – 115

Difference between banana and vanilla muffins
u + 65 - (4u – 115) = 36
3u = 65 + 115 – 36 = 144
u = 144 ÷ 3 = 48

Total muffins she baked = 5u + 65 = 5 x 48 + 65 = 305

Ans: 305

9. In a supermarket, 3 kg of fish cost $45. 1 kg of prawns cost twice as much as 1 kg of fish. Charlotte bought 3 kg of fish and 4 kg of prawns from the supermarket. How much change did she receive when she paid $200 for the fish and prawns?

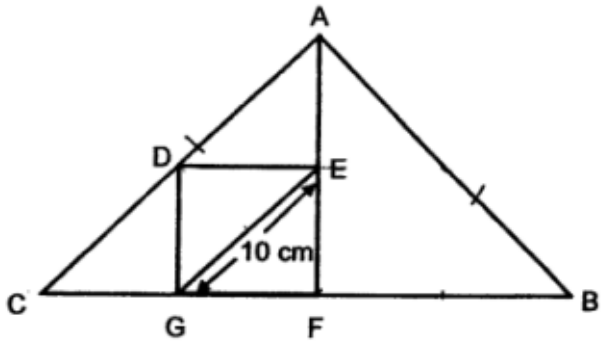
Cost of 1kg of prawns = 2 x 45 ÷ 3 = $30

Cost of 3 kg of fish = $45
Cost of 4 kg of prawns = 4 x 30 = $120
Total cost = 45 + 120 = $165

Change = 200 – 165 = $35

Ans: $35

10. ABC is an isosceles triangle. D and G are mid-point of AC and CF respectively. DEFG is a square and EG = 10 cm. Find the area of triangle ABC.



Area of △EFG = 5 x 10 x $\frac{1}{2}$ = 25 cm^2

Area of △ABC = 8 small △ = 8 x 25 = 200 cm^2

Ans: 200 cm^2

---

11. Alice and Bernard were given a sum of money by their parents. Alice received 35% of the money. After Bernard spent 80% of his money, he had $45.50 left. How much money did Alice receive?

Let u = sum of money
0.2 x 0.65u = 45.50
0.13u = 45.5
u = 45.5 ÷ 0.13 = $350

Amount Alice receive = 0.35 x 350 = $122.50

Ans: $122.50

---

12. Harry had 2 containers, A and B of different capacities. Both the containers were filled with water to the brim. He used 480 mℓ of water from container A and it became $\frac{1}{5}$ full. Then he poured $\frac{5}{8}$ of the water from container B into container A. The amount of water in container A increased to 580mℓ. How much water was in container B at first?

Let u = container A volume

$\frac{4}{5}$ u = 480 mℓ

u = 480 ÷ $\frac{4}{5}$ = 600 mℓ

Water remaining in container A = 600 – 480 = 120 mℓ

Increase in container A volume = 580 – 120 = 460 mℓ

Let v = container B volume

$\frac{5}{8}$ v = 460

v = 460 ÷ $\frac{5}{8}$ = 736 mℓ

Container B volume of water at first = 736 mℓ

Ans: 736 mℓ

13. At 8.30 am., a bus left Town A for Town B travelling at the speed of 54 km/h. One hour later, a car started from Town B and travelled towards Town A. At 11 am., the car covered $\frac{1}{5}$ of the journey while the bus had to travel another 165 km before it reached the mid-point of the two towns. What was the average speed of the car?

Distance travelled by bus = 2.5 x 54 = 135 km
Midpoint distance = 135 + 165 = 300 km
Total distance from A to B = 300 x 2 = 600 km

Distance car travelled = $\frac{1}{5}$ x 600 = 120 km

Time taken = 1.5 hr
Average speed of car = 120 ÷ 1.5 = 80 km/h

Ans: 80 km/h

14. When $\frac{1}{3}$ of a box is filled with flour, its mass is 0.13 kg. When $\frac{3}{4}$ of the box is filled with flour, its mass is 0.23 kg. Find the mass of the box when it is empty.

Let u = total mass of 100% filled flour

$\frac{1}{3}$ u + mass of box = 0.13 kg (1)

$\frac{3}{4}$ u + mass of box = 0.23 kg (2)

$\frac{3}{4}$ u - $\frac{1}{3}$ u = 0.23 – 0.13 (2) – (1)

$\frac{9}{12}$ u - $\frac{4}{12}$ u = 0.1

$\frac{5}{12}$ u = 0.1

u = 0.1 ÷ $\frac{5}{12}$

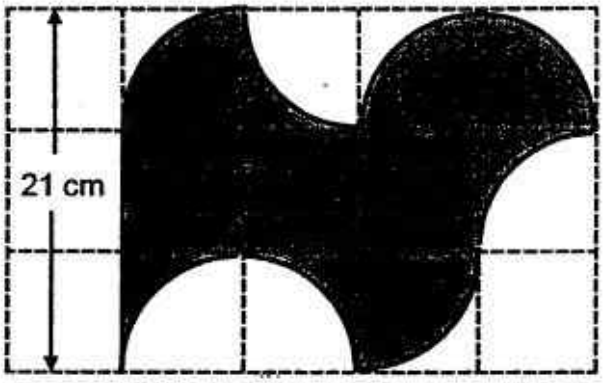
u = 0.24

$\frac{1}{3}$ x 0.24 + mass of box = 0.13

Mass of box = 0.13 – 0.08 = 0.05 kg

Ans: 0.05 kg

15. In the square grid below, the outline of the shaded figure is formed by 8 identical quarter circles and a straight line.



(a) Find the area of the shaded figure.

(b) Find the perimeter of the shaded figure.

(Take $\pi = \frac{22}{7}$)

(a) radius = side of square = 7 cm

Number of complete squares = 3

Number of quarter circles = 4

Number of crescent = 4

4 quarter circles match with 4 crescents to form 4 complete squares

Shaded area = 3 + 4 squares = 7 x 7 x 7 = 343 cm^2

(b) Number of quarter circles = 8

Circumference of 8 quarter circles = 2 full circles

Circumference of 2 circles = $\frac{22}{7}$ x 2 x 7 x 2= 88 cm

Perimeter = 88 + 7 + 7 = 102 cm

Ans: (a) 343 cm^2

(b) 102 cm

16.

On Saturday, 300 more children than adults attended the performance. On Sunday, the number of children decreased by 40% while the number of adults increased by 20%. The concert hall with a capacity of 2700 seats was only 70% full on Sunday. What was the total amount of money collected from the sales of child tickets on both days?

Audience on Sunday = 0.7 x 2700 = 1890
Let u = number of children on Saturday
Number of children on Saturday = 0.6u

Number of adults on Saturday = u – 300
Number of adults on Sunday = 1.2 (u – 300)

Total audience on Sunday = 0.6u + 1.2u – 360 = 1890
1.8u = 1890 + 360 = 2250
u = 2250 ÷ 1.8 = 1250

Total children attendance on both days = u + 0.6u = 1.6 x 1250 = 2000
Children ticket sales on both days = 2000 x 16 = $32000

Ans: $32000

17. Mary had some twenty-cent coins and some fifty-cent coins in a money box. The ratio of the number of twenty-cent coins to the number of fifty-cent coins in the money box was 3 : 4 at first. When 40 fifty-cent coins were taken out and replaced by the same value of twenty-cent coins, the ratio of the number of twenty-cent coins to the number of fifty-cent coins became 4 : 1. What was the total amount of money in the money box at first?

At first
Ratio of number of twenty-cent coins vs number of fifty-cent coins = 3 : 4 → 3u : 4u
Total value in cents 3x20u + 4x50u = 260u

After minusing 40 fifty-cent coins and adding 100 twenty-cents coins
Ratio of number of twenty-cent coins vs number of fifty-cent coins = 4 : 1 → 8u : 2u
Total value in cents 8x20u + 2x50u = 260u

8u – 3u = 100
5u = 100
u = 20

Total money at first in cents = 260u = 260 x 20 = 5200 cents = $52

Ans: $52

18. Aisha and Ismail had $751 and $360 respectively. Aisha saved $45 per week while Ismail saved $68 per week.

(a) How many weeks would it take for both to have the same amount of money?

(b) How much money would Aisha have altogether when Ismail saved $115 more than her?

(a) Difference is initial value = 751 – 360 = $391
Difference in weekly savings = 68 – 45 = $23
Number of weeks to have same amount = 391 ÷ 23 = 17 weeks

(b) Total Aisha had after 17 weeks = 751 + 17 x 45 = $1516
Number of more weeks for Ismail to have $115 more = 115 ÷ 23 = 5 weeks

Total Aisha had after 22 weeks = 1516 + 5 x 45 = $1741

Ans: (a) 17 weeks

(b) $1741

RED SWASTIKA SCHOOL

RED SWASTIKA SCHOOL

2017 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 1

Name : _____ ( )

Class : Primary 6 / _____

Date : 4 May 2017

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 5
   (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 Which of the following is equal to $1\frac{3}{4} + \frac{1}{2}$?

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

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

(3) $\frac{10}{6}$

(4) $\frac{11}{8}$

2 A sum of \$50 was shared between Ali and Ben. Ali received \$20 and Ben received the rest. What percentage of the total sum of money did Ben receive?

(1) 20%

(2) 30%

(3) 40%

(4) 60%

3 Simplify: $8m + 7 - 3m + 2$

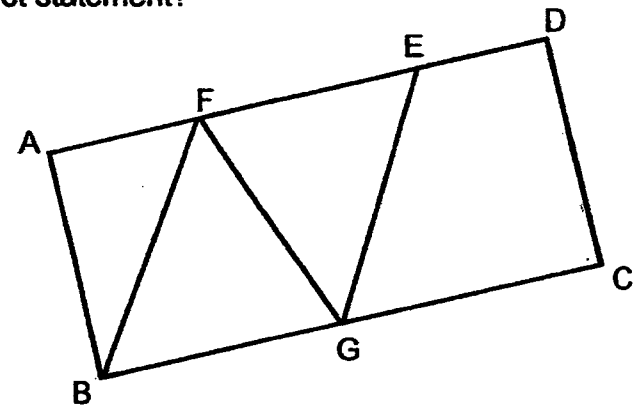
(1) $5m + 9$

(2) $5m + 5$

(3) $11m + 9$

(4) $11m + 5$

4 In the figure, ABCD is a rectangle. E and F are points on AD while G is a point on BC. BF, FG and GE are straight lines. Which of the following is a correct statement?



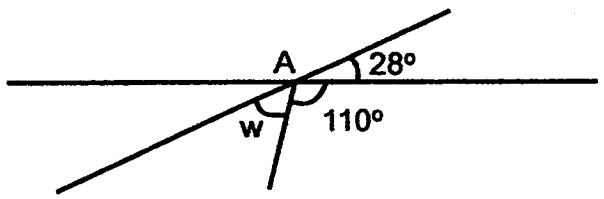
(1) BFG is an isosceles triangle.

(2) ABGE is a parallelogram.

(3) CDFG is a trapezium.

(4) BGEF is a rhombus.

5 In the figure, three straight lines meet each other at A. Find ∠w.



(1) 28°

(2) 42°

(3) 58°

(4) 82°

6 Alice took 20 minutes to complete a 1-km journey. What was her average walking speed?

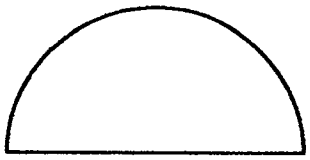
(1) 0.05 m/min

(2) 5 m/min

(3) 50 m/min

(4) 50 km/h

7 The semicircle below has a radius of 10 cm.
Find the area of the semicircle. (Take $\pi = 3.14$)



(1) 31.4 cm^2

(2) 62.8 cm^2

(3) 157 cm^2

(4) 314 cm^2

8 Circle A has a radius of 30 cm.
Circle B has a diameter of 40 cm.
Circle C has a circumference of 50π.

Which circle has the longest circumference and which circle has the shortest circumference?

	longest	shortest
(1)	A	B
(2)	A	C
(3)	B	A
(4)	C	A

9 A car travelled at a speed of 80 km/h from Town A to Town B. It reached Town B at 10 00. The distance between the two towns was 40 Km. At what time did the car leave Town A?

(1) 08 00

(2) 09 30

(3) 10 30

(4) 12 00

10 Tom and Ken shared 240 stamps in the ratio 3 : 5.
Who has more stamps and how many more?

(1) Tom has 60 more stamps.

(2) Ken has 60 more stamps.

(3) Tom has 96 more stamps.

(4) Ken has 96 more stamps.

11 Ken had some red and green marbles in the ratio 3 : 1. Ken exchanged 40 red marbles for 40 green marbles with his friend. After the exchange, there were 240 red and green marbles. What was the ratio of the number of red marbles to the number of green marbles after the exchange?

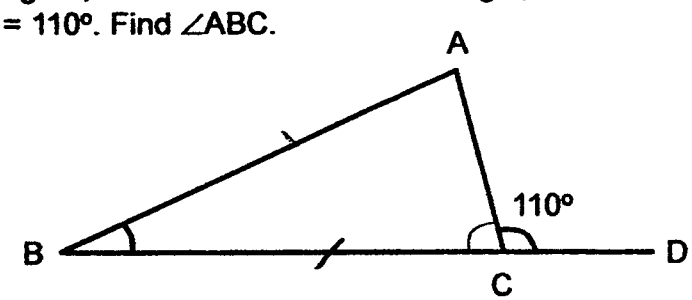
(1) 1 : 2

(2) 2 : 1

(3) 5 : 7

(4) 7 : 5

12 In the figure, ABC is an isosceles triangle, BD is a straight line and $\angle ACD = 110^\circ$. Find $\angle ABC$.



(1) 35°

(2) 40°

(3) 55°

(4) 70°

13 The total mass of 20 bags of sugar is 5 kg. Each bag of sugar has the same mass. What is the mass of each bag of sugar?

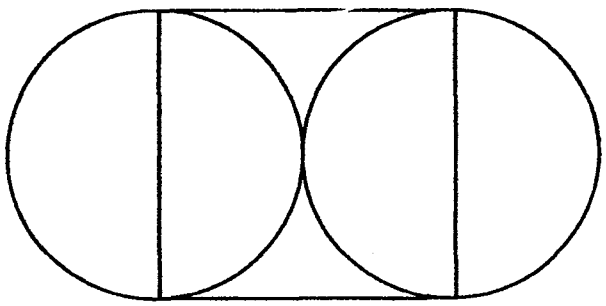
(1) 25 g

(2) 250 g

(3) 2.5 kg

(4) 4 kg

14 The figure is made up of four identical semicircles of diameters 10 cm and a square as shown. Find the perimeter of the figure in terms of π.



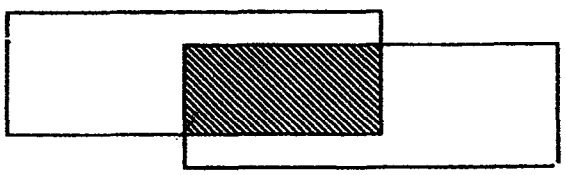
(1) $(100 + 50\pi)$ cm

(2) $(40 + 20\pi)$ cm

(3) $(20 + 20\pi)$ cm

(4) $(20 + 10\pi)$ cm

15 The figure is made up of two identical rectangles overlapping each other as shown. The overlapping parts are shaded. 40% of each rectangle is shaded. What percentage of the figure is shaded?



(1) 16%

(2) 20%

(3) 25%

(4) 40%

RED SWASTIKA SCHOOL

2017 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 1

Name : _____ ( )

Class : Primary 6 / _____

Date : 4 May 2017

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 $29 \div 7$ as a decimal correct to the nearest tenth.

Ans: _____

---

17 Find the value of $24 - 12 \div 3 \times 2 + 2$.

_____

---

18 Mrs Li bought 200 eggs. She used $\frac{1}{4}$ of them for baking.

How many eggs did she use for baking?

Ans: _____

---

19 Find the value of $\frac{8}{15} \div \frac{2}{3}$.

Ans: _____

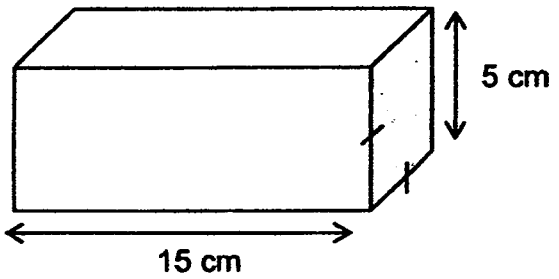
---

20 Find the value of $\frac{5t}{3} - 3$ when $t = 9$.

Ans: _____

---

21 The wooden block has a square face which is shaded.
What is the most number of 2-cm cubes that can be cut from it?



Ans: _____

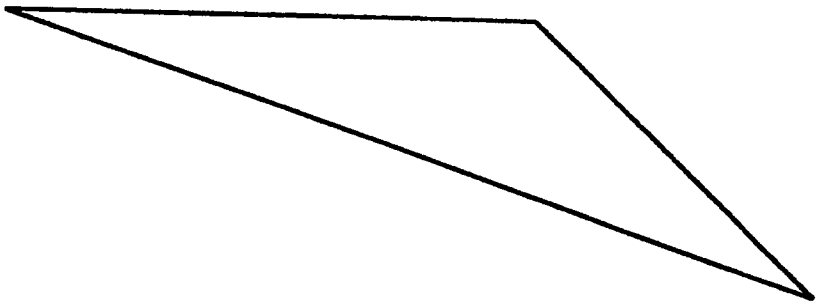
3

22 In a class, the ratio of the number of boys to the number of girls was 3 : 5. When 16 girls left the class, the ratio of the number of boys to the number of girls was 5 : 3. How many boys were there in the class?

Ans: _____

---

23 Study the angles inside the triangle below. Use a protractor to measure the angle which is greater than a right angle and write its value in the answer space provided.



°

Ans: _____

2

24 The sum of two numbers, X and Y, is 50. X is a multiple of 6 and Y is a multiple of 8. List the two possible values of X and Y.

Ans: X = _____ and

Ans: Y = _____

---

25 Some equivalent fractions are listed correctly below:

$$\frac{9}{12} = \frac{24}{32} = \frac{a}{8} = \frac{12}{b}$$

Find the value of a + b.

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)

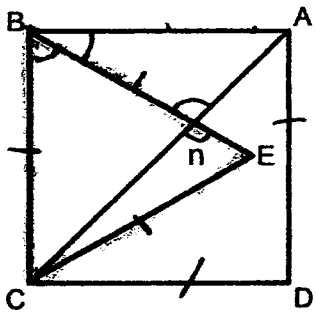
---

26 The price of a table decreased by 30% to $210.
What was the price of the table before the decrease?

Ans: $_____

---

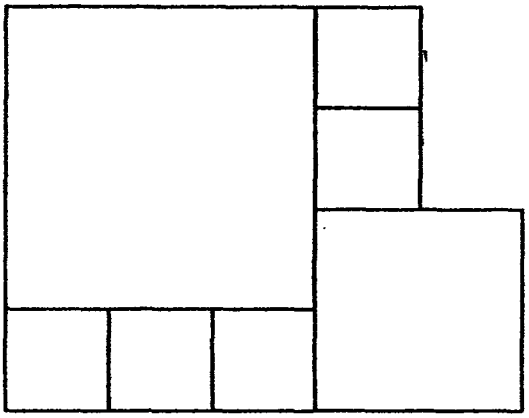
27 In the figure, ABCD is a square and BCE is an equilateral triangle.
Find ∠n.



Ans: _____ °

4

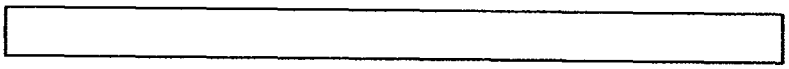
28 The figure below is made up of squares with no overlaps. The perimeter of the figure is 36 cm. What is the area of the biggest square?



Ans: _____ cm^2

---

29 A wooden rod is divided into 2 equal parts as shown below.



1 part was painted blue and the other part was painted yellow.

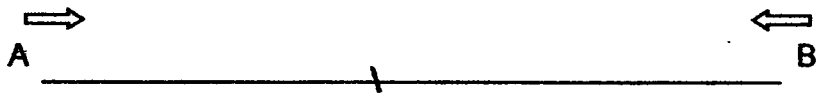
$\frac{5}{6}$ of the blue and $\frac{1}{2}$ of the yellow were then painted black.

What fraction of the rod was painted black? (Leave your answer in the simplest form.)

Ans: _____

4

30 Two toy cars, A and B, start at two opposite ends of a track but move towards each other at the same time as shown below. On average, A moves at 40 m/min and B moves at 50 m/min. After 5 minutes, A meets B. What is the distance of the track?



Ans: _____ m

END OF PAPER 1

2

2017 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 2

Name : .( )

Class : Primary 6 /

Date : 4 May 2017

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 14
   (b) Questions 1 to 18
6. You are allowed to use a calculator.

MARKS

	OBTAINED	POSSIBLE
PAPER 1		40
PAPER 2		60
TOTAL		100

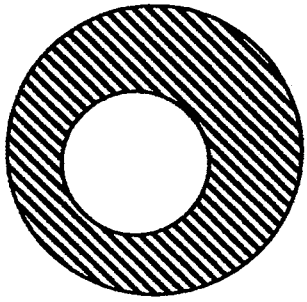
Parent's Signature : _____

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 The figure is made up of two circles of diameters 10 cm and 20 cm as shown. Find the perimeter of the shaded parts in terms of π.



Ans: _____ cm

---

2 Ali, Ben and Cindy had 330 stamps. Ben had $\frac{2}{3}$ as many stamps as Ali. Cindy had thrice as many stamps as Ben. How many stamps did Ali have?

Ans: _____

---

3 The table shows the prices of books and bags at a shop.

Per book	$u
Per bag	$(2u - 1)

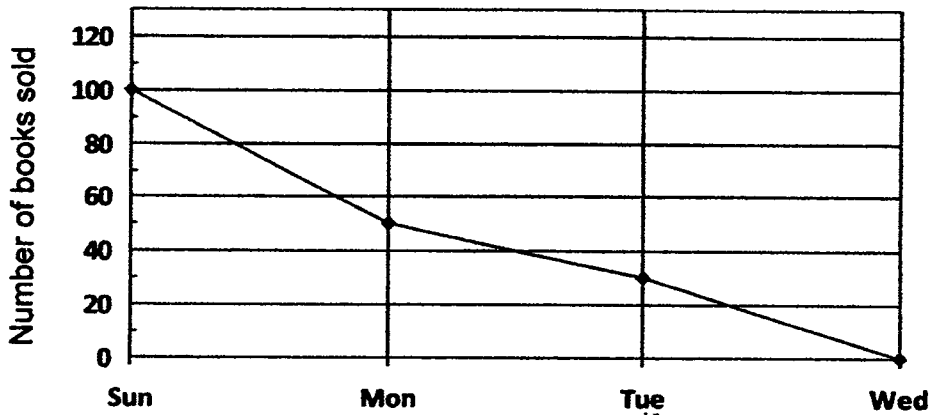
After buying 5 books and 1 bag from the shop, Jim had $3 left.
How much did Jim have at first in terms of u?

Ans: $_____

2

Refer to the graph below to answer questions 4 and 5.

A new shop had a grand opening sale that offered 200 books at 20% discount over 4 days. The line graph below shows the number of books sold at a discount from Sunday to Wednesday.



4. What is the average number of books sold from Sunday to Wednesday?

Ans: _____

---

5 During the sale, the discounted price of each book was $60. What was the total amount of money that the shop had lost due to the discount over the four days?

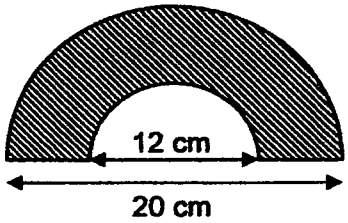
Ans: $_____

4

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 The figure is made up of two semi-circles of diameters 12 cm and 20 cm. Find the area of the shaded part correct to 1 decimal place. (Take $\pi = 3.14$)



Ans: _____ [3]

---

7 Thomas had some 20-cents coins and 50-cents coins in the ratio 2 : 5. The total value of all the coins was $87. How many coins did he have altogether?

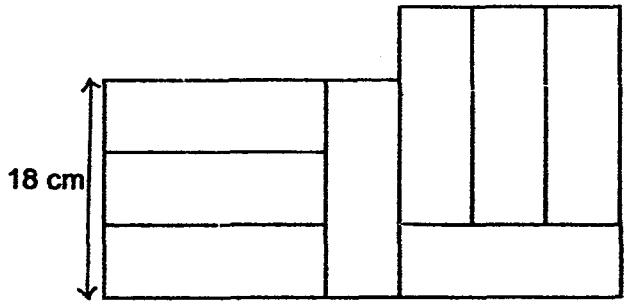
Ans: _____ [3]

6

8 The figure below is made up of identical rectangles.

(a) Find the area of the figure.

(b) Find the perimeter of the figure.

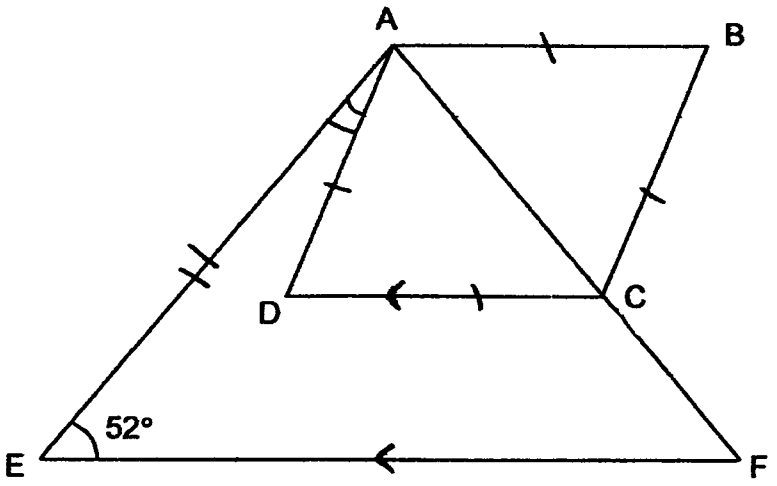


Ans: (a) _____ [1]

(b) _____ [2]

3

9 In the figure below, not drawn to scale, ABCD is a rhombus, AE = AF, CD // FE and ∠AEF = 52°. Find ∠EAD.



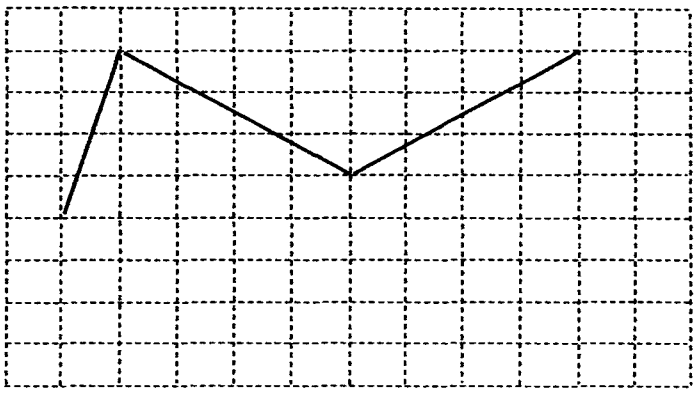
Ans: _____ [3]

3

10 On the grid below, two sides of a parallelogram are drawn.

(a) Draw another two lines to complete the parallelogram. [1]

(b) Draw another parallelogram such the resulting figure is symmetrical. [2]



---

11 After saving 25% of his weekly allowance, Dan spent 45% of the remainder on food and still had $132 left. How much was his weekly allowance?

Ans: _____ [3]

6

12. Ann has a roll of ribbon for decorating some gifts. If she cuts 1.2 m for each gift, there is 0.4 m of ribbon left. If she cuts 1.5 m for each gift instead, she will need another 11 m of ribbon.

(a) How many gifts does she have?

(b) How much ribbon does she have? Give your answer in m.

Ans: (a) _____ [2]

(b) _____ [2]

4

13. John had 275 red and blue marbles at first. John gave away $\frac{2}{5}$ of the red marbles and $\frac{3}{8}$ of the blue marbles. In the end, there were 170 marbles left. How many red marbles did John have at first?

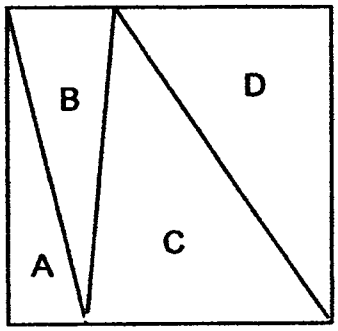
Ans: _____ [4]

4

14. The figure below shows a square that is divided into 4 triangles A, B, C and D. The area of B is $\frac{2}{3}$ the area of C. The area of D is $\frac{3}{4}$ the total area of B and C. The area of A is $\frac{1}{6}$ of the area of the square.

(a) Find the ratio of the area of A to the area of B.

(b) What fraction of the square is D?



Ans: (a) _____ [2]

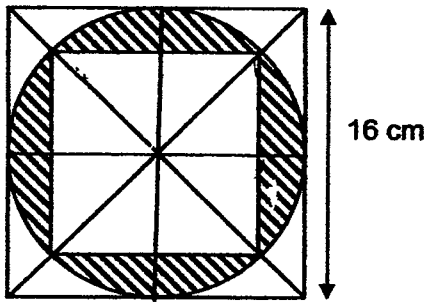
(b) _____ [2]

4

15. The figure below is made up of a circle and two squares. The side of one of the squares is 16 cm as shown.

(a) Find the area of the small square.

(b) Find the area of the shaded parts. (Take $\pi = 3.14$)



Ans: (a) _____ [2]

(b) _____ [3]

5

16 Edmund took 2 hours to travel $\frac{3}{5}$ of a journey at an average speed of 90 km/h. He travelled at an average speed of 100 km/h to complete the remaining journey.

(a) What was distance of the remaining journey?

(b) How many minutes did he take to cover the whole journey?

Ans: (a)_____ [2]

(b)_____ [3]

5

17 Ying used sticks to form figures that follow a pattern. The first four figures are shown below.

Figure 1 Figure 2 Figure 3 Figure 4

(a) The table below shows the number of sticks used for each figure. **Complete the table for Figure 5 and Figure 6.** [1]

Figure Number	Number of rectangles	Number of sticks used
1	2	5
2	4	9
3	6	13
4	8	17
5	10	
6	12	

(b) How many sticks would he use for Figure 40?

(c) Ling had only 300 sticks. At most, how many rectangles can she form?

Ans: (b) _____ [2]

(c) _____ [2]

5

18 At first, Lynn had a sum of money to spend for 3 days. She reserved \$78 for day 1 and 25% of the remainder for day 2. She kept the remaining amount for the third day and it was 36% of the sum of money at first. After planning, she decided to transfer some money from day 1 to day 2 so that the budget for day 2 is the same as day 3. How much is the transfer?

Ans: _____ [5]

END OF PAPER 2

5

YEAR : 2017
LEVEL : PRIMARY 6
SCHOOL : RED SWASTIKA SCHOOL
SUBJECT : MATHEMATICS PAPER 1
TREM : SEMESTRAL ASSEMENT (1)

BOOKLET A

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

BOOKLET B

Q16. $4.14 \approx 4.1$
Ans: 4.1

Q17. $24 - 12 \div 3 \times 2 + 2$
$= 24 - 4 \times 2 + 2$
$= 24 - 8 + 2$
$= 16 + 2$
$= 18$
Ans: 18

Q18. 1u $\longrightarrow$ $200 \div 4 = 50$
Ans : 50

Q19. $\frac{8}{15} \div \frac{2}{3}$
$= \frac{8}{15} \times \frac{3}{2}$
$= \frac{24}{30}$
$= \frac{8}{10}$
$= \frac{4}{5}$
Ans : $\frac{4}{5}$

Q20. $5 \times 9 = 45$
$\frac{45}{3} - 3$
$= 15 - 3$
$= 12$
Ans : 12

Q21. $15 \div 2 \approx 7$
$5 \div 2 \approx 2$
$5 \div 2 \approx 2$
No. cubes $\rightarrow 7 \times 2 \times 2 = 28$
Ans : 28

Q22. <u>Before</u>
B $\rightarrow$ $3u \times 5 = 15u$
G $\rightarrow$ $5u \times 5 = 25u$

$(25 - 9)u \rightarrow 16$
$1u \rightarrow 16 \div 16 = 1$
$15u \rightarrow 15 \times 1 = 15$

<u>After</u>
B $\rightarrow$ $5u \times 3 = 15u$
G $\rightarrow$ $3u \times 3 = 9u$

Ans : 15

Q23. Ans : 136^0

Q24. X $\rightarrow$ 6, 12, <u>18</u>, 24, 30, 36
Y $\rightarrow$ 8, 16, 24, <u>32</u>, 40

Ans : X = 18 and
Ans : Y = 32

Q25. $\frac{24}{32} = \frac{6}{8} = \frac{12}{16}$
$24 \div 4 = 6$
$8 \times 2 = 16$
$6 + 16 = 22$

Ans : 22

Q26. 70% = 210
1% = $210 \div 30 = 7$
100% = $3 \times 100 = 300$

Ans : 300

Q27. Angle CBE $\rightarrow$ 60
Angle ABE $\rightarrow$ $90 - 60 = 30$
Angle BAC $\rightarrow$ 45
$180 - 30 - 45 = 105$
Angle n $\rightarrow$ 105

Ans : 105°

Q28. $18u \rightarrow 36$

$1u \rightarrow 36 \div 18 = 2$

$3u \rightarrow 2 \times 3 = 6$

$A \rightarrow 6 \times 6 = 36$

Ans : $36cm^2$

Q29. $\frac{5}{6} \times \frac{1}{2} = \frac{5}{12}$

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

Total $\rightarrow \frac{5}{12} + \frac{1}{4} = \frac{5}{12} + \frac{3}{12} = \frac{8}{12} = \frac{2}{3}$

Ans : $\frac{2}{3}$

Q30. $\rightarrow$ $\leftarrow$

A ——————————|—————————— B

S → 40m/min meet S → 50m/min

$50 + 40 = 90$

$D \rightarrow 90 \times 5 = 450$

Ans : 450m

End of Paper

YEAR	:	2017
LEVEL	:	PRIMARY 6
SCHOOL	:	RED SWASTIKA SCHOOL
SUBJECT	:	MATHEMATICS PAPER 2
TREM	:	SEMESTRAL ASSEMENT (1)

PAPER 2

Q1. C(big)→ π X 20 = 20π
C(small)→ π X 10 = 10π
Total→ 30π

Ans : 30π

Q2. B → 2u
A → 3u
C → 2 X 3
= 6u
} 330

11u → 330
1u → 330 ÷ 11 = 30
A/3u → 30 X 3 = 90

Ans : 90

Q3. 5 books → u X 5 = 5u
1 bag → 2u – 1
Total → 5u + 2u – 1 + 3 = 7u + 2

Ans : $(7u + 2)

Q4. Total → 100 + 50 + 30 + 0
= 180
Ave → 180 ÷ 4 = 45

Ans : 45

Q5. 80% → $60
1% → 60 ÷ 80 = 0.75
20% → 0.75 X 20 = $15 (discount)
Cost → 15 X 180 = $2700

Ans : $2700

Q6. Big semi → $\frac{1}{2}$ X 3.14 X 10 X 10 = 157
Small semi → $\frac{1}{2}$ X 3.14 X 6 X 6 = 56.52
Shaded → 157 – 56.52 = 100.48
100.48 ≈ 100.5

Ans : 100.5cm^2

Q7.

	Amt	
20¢ → 2u	X 0.20 = 0.4u	87
50¢ → 5u	X 0.50 =2.5u	

87 → 2.9u

1u → 87 ÷ 2.9 = 30

2u + 5u = 7u

7u → 30 X 7 = 210

Ans : 210

Q8. a) 1L → 18

1B → 18 ÷ 3 = 6

1 rectangle → 18 X 6 = 108

8 rectangles → 108 X 8 = 864

b) P → 18 X 6 + 6 X 4 = 132cm

Ans : a) $864cm^2$

b) 132cm

Q9. Angle DCF → 180 – 52 = 128

Angle DCA → 180 – 128 = 52

Angle DAC → 52

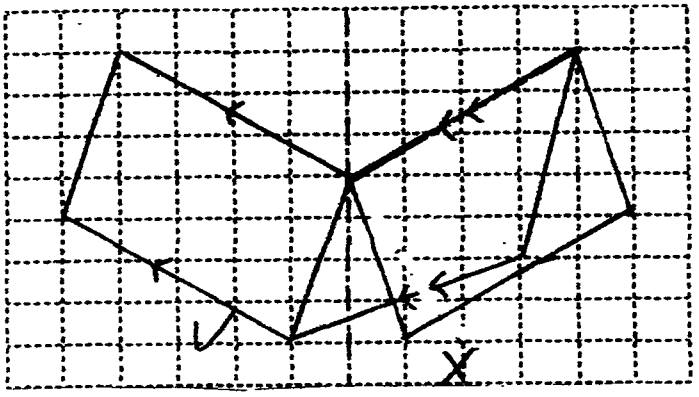
Angle EFC → 52

Angle EAF → 182 – 52 -52 = 76

Angle EAD → 76 – 52 = 24

Ans : 24^0

Q10.



Q11. Remainder → 100% - 25% = 75%

Food → $\frac{45}{100}$ X 75% = 33.75%

$132 → (100 – 25 – 33.75) % = 41.25%

1% → $\frac{132}{41.25}$ = 3.2

100% → 3.2 X 100 = 320

Ans : $320

Q12. Let number of gifts be y

a) 1.2y + 0.4 = 1.5y – 11

0.4 + 11 = 1.5y – 1.2y

11.4 = 0.3y

y = 11.4 ÷ 0.3 = 38

b) Amt ribbon → 1.2y + 0.4

= 1.2 X 38 + 0.4

= 46

Ans : a) 38

b) 46m

Q13. Let the number of red and blue marbles be R and B respectively.

X5 (5u (R) + 8u (B) = 275)

25u (R) + 40u (B) = 1375

X8 (3u (R) + 5u (B) = 170)

= (24u (R) + 5u (B) = 1360)

1u (R) = 15

5u (R) = 15 X 5

= 75

Ans : 75

Q14. a)

B	:	C	:	B + C	:	D	
(2	:	3	:	5	:		) X 4
				(4	:	3	) X 5
= 8	:	12	:	20	:	15	

B + C + D = 8 + 12 + 15 = 35u

$\frac{5}{6} \rightarrow 35u$

$A(\frac{1}{6}) \rightarrow 35 \div 5 = 7u$

So A : B = 7 : 8

b) Sq → 35 + 7 = 42u

Fraction → $\frac{15}{42} = \frac{5}{14}$

Ans : a) 7 : 8

b) $\frac{5}{14}$

Q15. a) Area A → $\frac{1}{2}$ X 8 X 8 = $32cm^2$

Area small sq → 4 X 32 = $128cm^2$

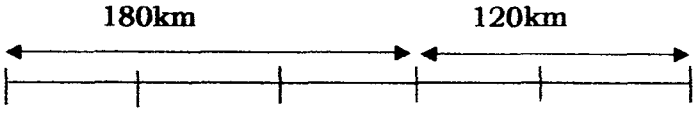
b) Area C → 3.14 X 8 X 8 = $200.96cm^2$

Shaded area → 200.96 – 128 = $72.96cm^2$

Ans : a) $128cm^2$

b) $72.96cm^2$

Q16.



<u>Edmund</u>

T → 2h

S → 90km/h

<u>Edmund</u>

S → 100km/h

a) D 1st → 90 X 2 = 180km/h

3u → 180km

1u → 180 ÷ 3 = 60km

2u → 60 X 2 = 120km

b) T 2nd → 120 ÷ 100 = $1\frac{1}{5}$h

Total T → $1\frac{1}{5}$ + 2 = $3\frac{1}{5}$h

$3\frac{1}{5}$h ↔ 192min

Ans : a) 120km

b) 192min

16 + 11 = 21

Q17. a) 12 + 13 = 25

b) no. sticks → 40 X 4 + 1 = 161

c) 300 – (Fig) X 4 + 1

300 – 1 = Fig X 4

299 = Fig X 4

Fig → 299 ÷ 4 = 74R3

So at most Fig 74 + 1 rec.

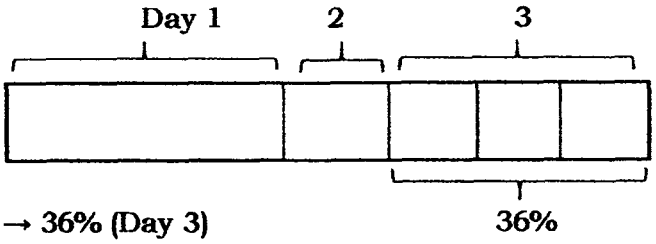
No. rectangles = (74 X 2) + 1 = 149

Ans : a) 25

b) 161

c) 149

Q18.



3u → 36% (Day 3)

1u → 36 ÷ 3 = 12% (Day 2)

Day 1 → 100% - 36% - 12% = 52%

Day 1 → 52% → $78

1% → 78 ÷ 52 = $1.50

Day 3 → 36% → 36 X 1.5 = $54

Day 2 → 12 X 1.5 = $18

Transfer → 54 – 18 = $36

Ans : $36

End of Paper

Rosyth School
Semestral Assessment 1 2017
Primary 6 Mathematics

Name: _____ Register No. _____

Class: Pr 6 -_____

Date: 8 May 2017 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.

(20 marks)

---

1. A shop sold \$413 098 of goods in June. Express this number to the nearest thousand.

   (1) \$400 000

   (2) \$410 000

   (3) \$413 000

   (4) \$414 000

2. What is the value of $20 \div 5000$?

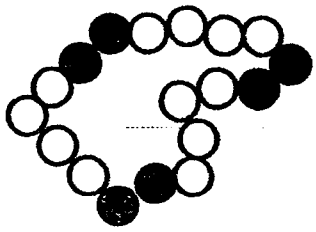
   (1) 0.004

   (2) 0.04

   (3) 0.25

   (4) 250

3. Felicia used black and white beads to make a chain as shown below. What fraction of the beads used are black?



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

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

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

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

4. Express $1\frac{5}{25}$ as a decimal.

(1) 1.15

(2) 1.2

(3) 1.25

(4) 1.525

5. There are 78 canned drinks in a carton. 24 are mango flavoured and the rest are lychee flavoured. What is the ratio of the mango flavoured drinks to the number of lychee flavoured drinks?

(1) 4 : 9

(2) 9 : 4

(3) 4 : 13

(4) 9 : 13

6. Nora had \$30*y*. She bought a dress for \$5*y*. She also bought a skirt that cost \$2y more than the dress. How much had she left? Express your answer in terms of y.

(1) \$7*y*

(2) \$12*y*

(3) \$18*y*

(4) \$ 23*y*

7. Express 3 kg 30 g in g.

(1) 303 g

(2) 330 g

(3) 3 030 g

(4) 3 300 g

8. Adeline started reading at 10.50 am. She read for 2 hours 25 minutes. At what time did she stop reading?

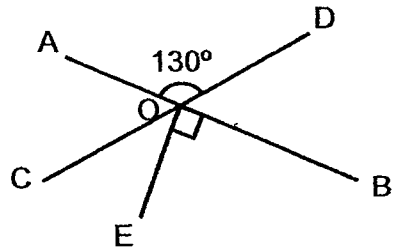
(1) 12.15 p.m.

(2) 12.25 p.m.

(3) 12.50 p.m.

(4) 1.15 p.m.

9. In the figure, AB and CD are straight lines. Which of the following angles is equal to 130°?



(1) ∠EOA

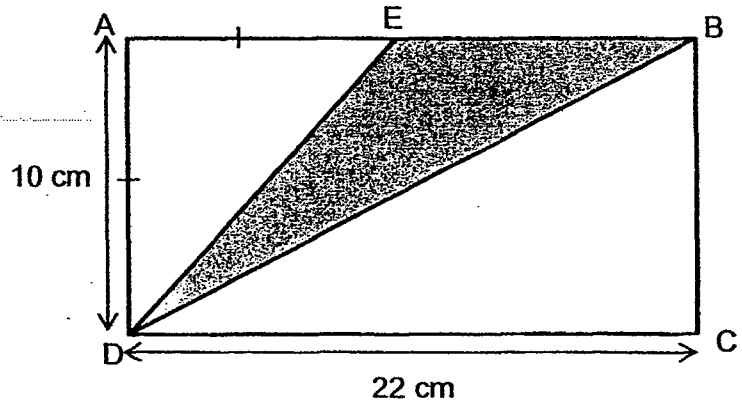
(2) ∠EOD

(3) ∠DOB

(4) ∠COB

(Go on to the next page)

10. The figure is made up of rectangle ABCD and triangle EBD. DC is 22 cm, AD is 10 cm and AE = AD. Find the area triangle EBD.



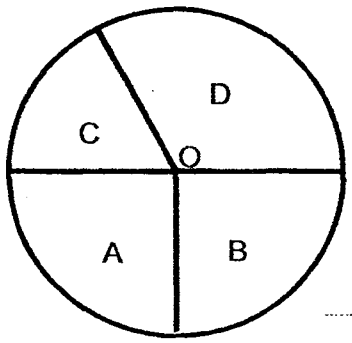
(1) 50 cm^2

(2) 60 cm^2

(3) 110 cm^2

(4) 120 cm^2

11. The figure below is a circle made up of 4 parts, A, B, C, and D. O is the centre of the circle. Part A has the same area as Part B. The ratio of the area of Part A to the area of part C is 3 : 2. Which of the following fractions cannot be represented by the sum of at least two of the parts?



(1) $\frac{7}{12}$

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

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

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

12. Carmen spent $60 of her allowance each month and saved the rest. When she increased her spending by 20%, her savings decreased by 25%. How much was Carmen's allowance?

(1) $72

(2) $96

(3) $108

(4) $117

13. The 2 solids below are made up of 1-cm cubes.

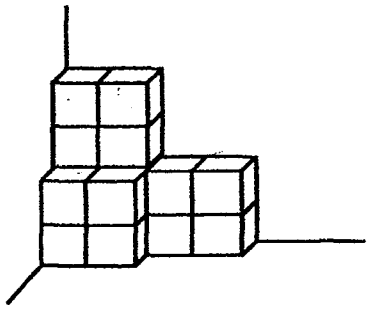


Figure A

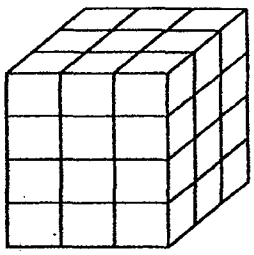


Figure B

How many 1-cm cubes are needed to be added to Figure A so that it has the same volume as Figure B?

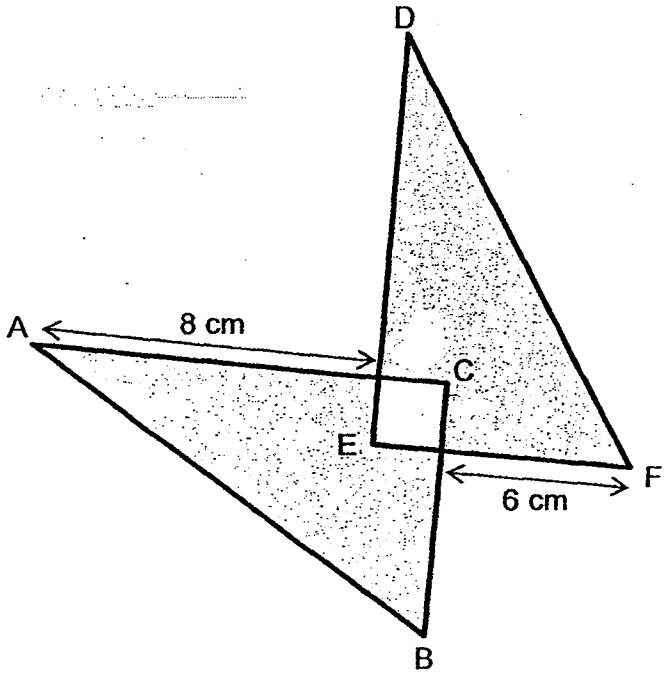
(1) 11

(2) 16

(3) 20

(4) 36

14. In the figure, ABC and DEF are identical right-angled triangles which overlapped each other to form a square of side 2 cm. Find the area of the shaded part.



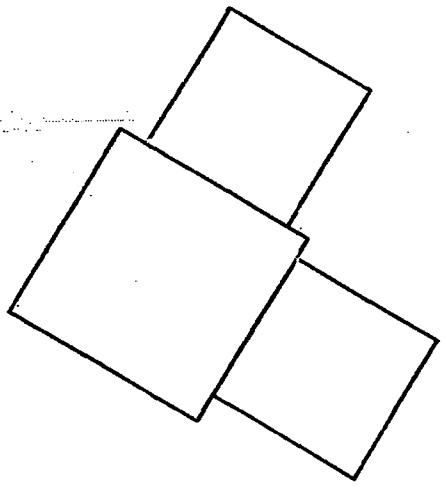
(1) 40 cm^2

(2) 72 cm^2

(3) 76 cm^2

(4) 80 cm^2

15. The figure below is made up of a big square with an area of 64 cm^2 and two identical smaller squares of area 36 cm^2 each. Find the perimeter of the figure.



(1) 52 cm

(2) 56 cm

(3) 68 cm

(4) 80 cm

(Go on to Booklet B)

Semestral Assessment 1 2017
Primary 6 Mathematics

Name: _____ Register No. _____

Class: Pr 6 - _____

Date: 8 May 2017 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 8 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. Write down all the common multiples of 6 and 8 that are smaller than 60.

Ans: _____

17. 12 : 45 is the same as ____ : 30.
The missing number in the blank is ____.

Ans: _____

18. The average of 4 numbers is 38. When one of the numbers is removed, the sum of the remaining numbers becomes 108. What is the number that was removed?

Ans: _____

(Go on to the next page)

Do not write in this space

19. Alicia had $\frac{4}{5}$ kg of sugar in a container. She used $\frac{1}{3}$ of the sugar to bake a cake. How much sugar was left in the container? Leave your answer as a fraction in the simplest form.

Ans: _____ kg

20. Amina had 12 kg of sugar and Sally had 8 kg of sugar. After both girls used the same amount of sugar, Amina had 3 times as much sugar as Sally. How many kilogrammes of sugar had Sally left?

Ans: _____ kg

21. The table below shows the parking charges at a carpark.

1st hour	\$2
Every additional $\frac{1}{2}$ hour or part thereof	\$1

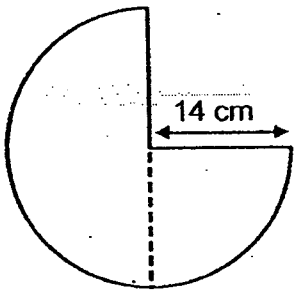
Mr Wong parked his car from 3.30 p.m. to 5.15 p.m. How much did he have to pay?

Ans: \$_____

(Go on to the next page)

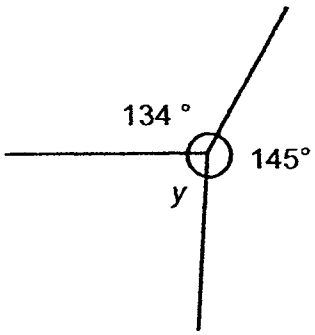
22. The figure is made up of a semicircle and a quadrant. Find the area of the figure. (Take $\pi = \frac{22}{7}$)

Do not write in this space



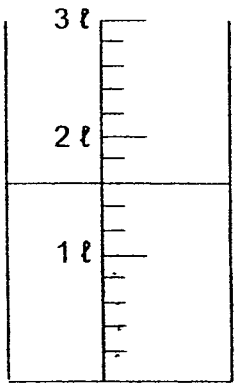
Ans: _____ cm^2

23. Find the value of $\angle y$.



Ans: _____ °

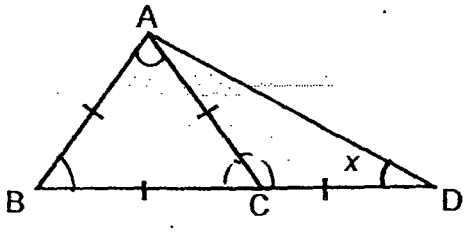
24. The container below is partially filled with water. How much more water is needed to fill the container completely?



Ans: _____ ℓ

(Go on to the next page)

25. In the figure, ABC is an equilateral triangle and AC = CD. Find the value of $\angle x$.



Ans: _____ °

Do not write in this space

(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)

Do not write in this space

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

26. Chee Kong takes 2 hours to drive from Town A to Town B. He takes another 3 hours to drive from Town B to Town C. The distance between Town A and Town B is 90 km while the distance between Town B and Town C is 180 km. What is Chee Kong's average speed for the whole journey?

Ans: _____

27. Kelly spent \$18 on some pens and markers. She bought 5 more pens than markers. Each marker cost \$1.80 and each pen cost \$1.20. How many markers did Kelly buy?

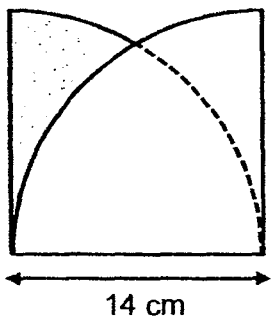
Ans: _____

28. There are 3 types of fruits in a box.
The ratio of the number of apples to the number of pears is 3 : 5.
The ratio of the number of oranges to the total number of apples and pears is 1 : 6.
What fraction of the fruits in the box is pears? Leave your answer in the simplest form.

Do not write in this space

Ans: _____ ~~cm~~

29. The figure below is made up of 2 identical quadrants of radius 14 cm. Find the perimeter of the shaded part. (Take $\pi = \frac{22}{7}$)

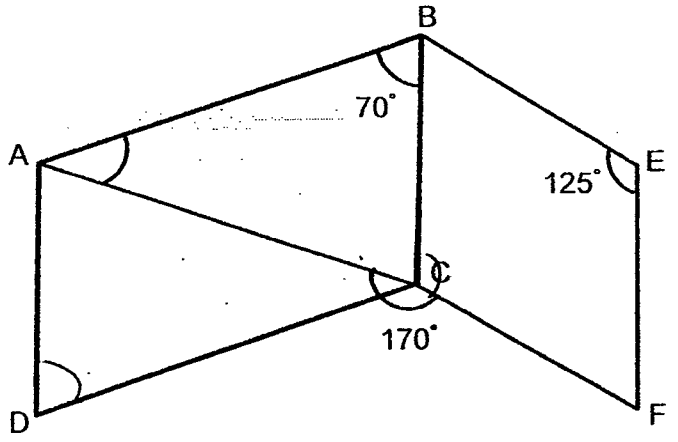


Ans: _____ cm ~~km/h~~

(Go on to the next page)

30. In the figure below, ABCD is a parallelogram and BEFC is a rhombus. $\angle$ ABC is 70°, $\angle$ ACF is 170° and $\angle$ BEF is 125°. Find $\angle$ BAC.

Do not write in this space



Ans : _____ °

End of paper 1. Have you checked your work?

Semestral Assessment 1 2017
Primary 6 Mathematics

Name: _____ Register No. _____

Class: Pr 6 -_____

Date: 8 May 2017 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 18 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)

Do not write in this space

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

1. Debra and Giselle have some playing cards. After Giselle gives 21 playing cards to Debra, Debra has 40 more playing cards than Giselle.

   (a) Who had more playing cards at first?
   (b) How many more?

Ans: _____

Ans: _____

2. Carol had some money. She spent $\frac{2}{5}$ of it to buy a ring and $\frac{1}{7}$ of it to buy a wallet. The ring and the wallet cost \$136.80 altogether.
How much money had she left?

Ans: \$_____

(Go on to the next page)

3. Vani mounted 2 similar-sized photographs with a space of 3 cm all around each photograph onto a frame as shown in the diagram. Find the area of the frame that is not covered by the 2 photographs.

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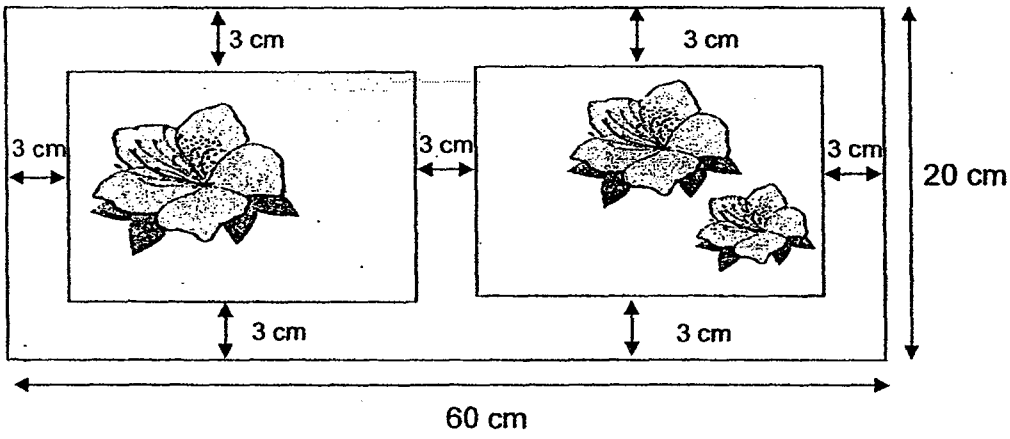
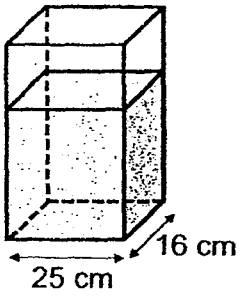


Ans: _____ cm^2

4. The rectangular tank shown below contains 16 ℓ of water. Find the height of the water level in the tank.

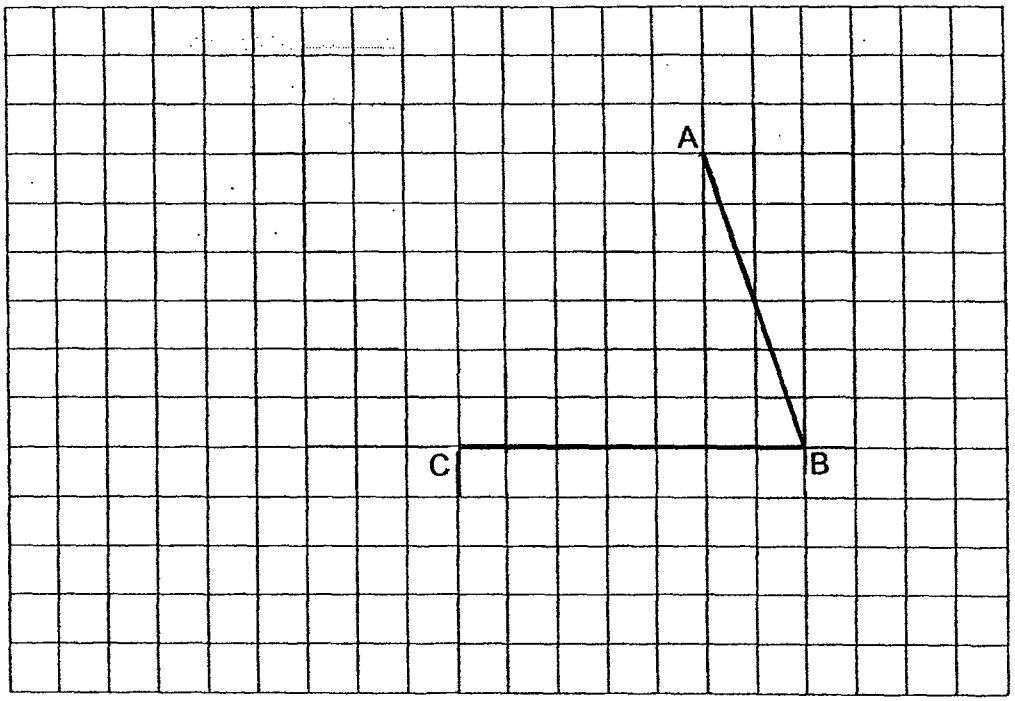


Ans: _____ cm

(Go on to the next page)

5. In the square grid, two sides of a parallelogram ABCD have been drawn. Complete the drawing of the parallelogram ABCD.

Label your drawing.



Do not write in this space

(Go on to the next page)

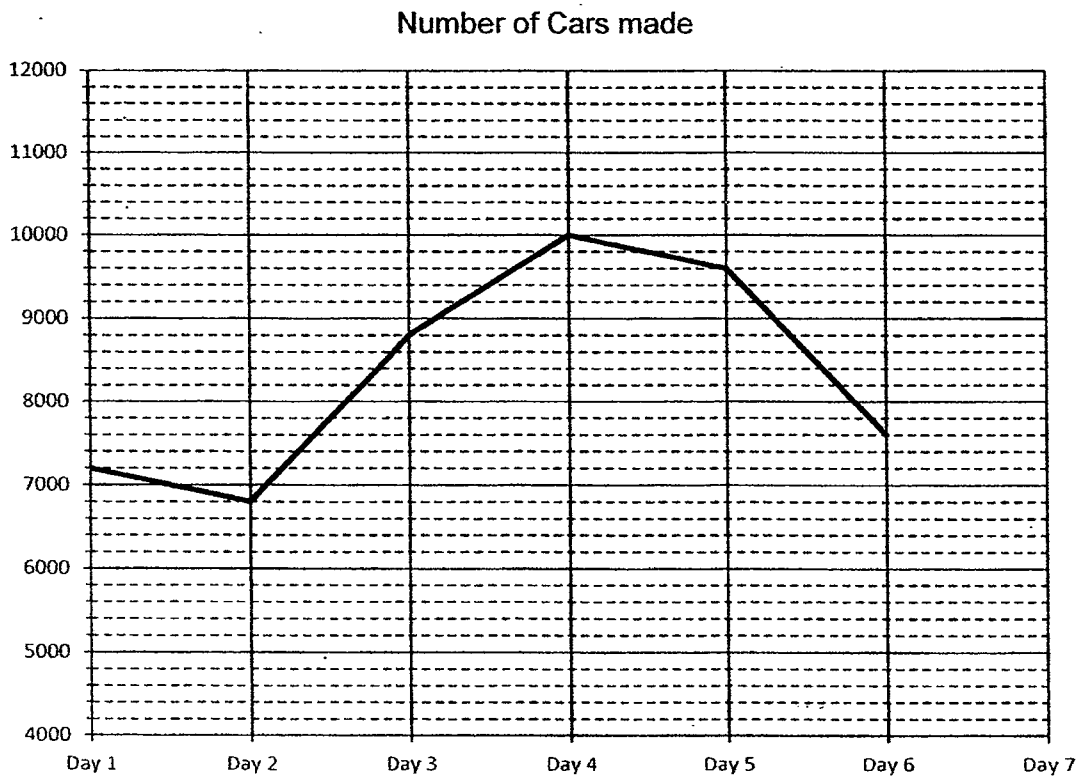
For Questions **6** to **18**, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. For questions which require units, give your answers in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

Do not write in this space

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

(50 marks)

6. A factory produced 60 000 cars over 7 days. The line graph shows the number of cars made in the factory over 6 days.



(a) What is the ratio of the number of cars produced on the 4th day to the total number of cars produced over the seven days? Express your answer in the simplest form.

(b) How many cars were made in the factory on day 7?

Ans: (a) _____ [1]

(b) _____ [2]

(Go on to the next page)

7. The outline of the figure below is formed by 2 identical large quarter circles, 2 identical small quarter circles and 3 straight lines. The length of AB = BD. The length of AC is 42 cm. Find the area of the shaded figure. Use the calculator value of π and correct your answer to 2 decimal places.

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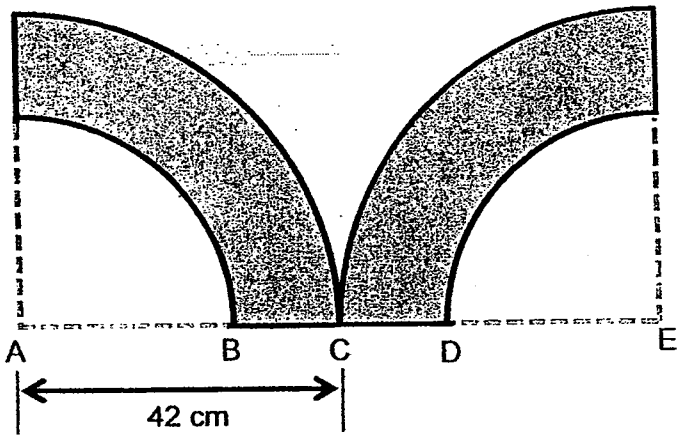


Ans: _____ [3]

8. Deo has 840 green beads. Ian has 960 red beads. Deo places 70% of his green beads into a box. Ian also places 70% of his red beads into the same box. What percentage of the beads in the box are red? Express your answer correct to 2 decimal places.

Do not write in this space

Ans: _____ [3]

(Go on to the next page)

9. At first, Alynna had a total of 86 toy cars and toy dolls. She gave away 38 toy cars and increased the number of toy dolls by 25%. After that, Alynna had a total of 60 toy cars and toy dolls. How many toy dolls did she have at first?

Do not write in this space

Ans: _____ [3]

(Go on to the next page)

10. Shi Yao had a total of 868 red pens and blue pens. After selling an equal number of both types of pen, she had $\frac{1}{4}$ of the red pens and $\frac{1}{5}$ of the blue pens left. What was the total number of blue and red pens left?

Do not write in this space

Ans: _____ [3]

(Go on to the next page)

11. During the annual Prize Giving ceremony, the ratio of the number of gift cards to the number of cash vouchers the school prepared was 5 : 3. Each class received 4 gift cards and 5 cash vouchers. After all the classes had received their gift cards and cash vouchers, there were no more cash vouchers left but there were 78 gift cards left. How many cash vouchers were given out to all the classes?

Do not write in this space

Ans: _____ [3]

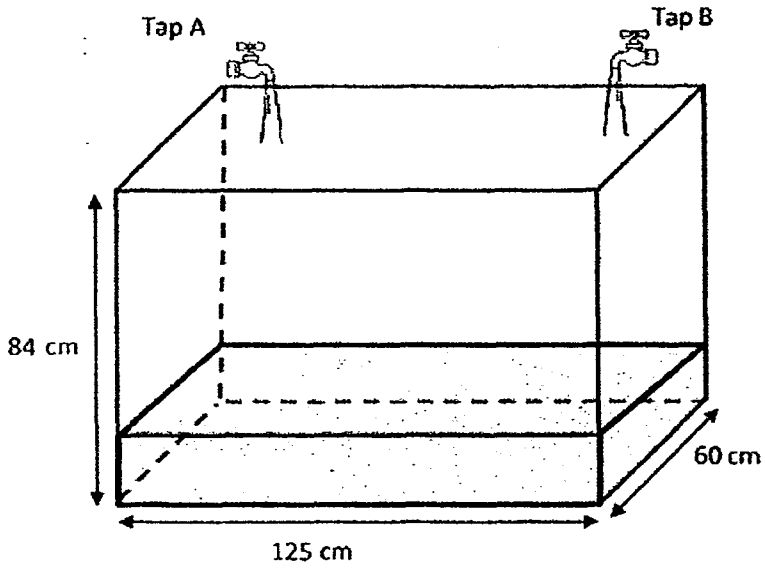
(Go on to the next page)

Do not write in this space

12. At first a tank was $\frac{1}{5}$ filled with water. Two taps, A and B were used to fill up the tank. For the first 20 minutes, only tap A was turned on. The tank was half-filled with water after 20 minutes.

(a) How many litres of water were added to the tank by tap A in the first 20 minute?

(b) Tap B was also turned on after 20 minutes. The tank was completely filled with water from tap A and tap B 15 minutes later. How many litres of water flowed out from Tap B in 1 minute?



Ans (a): _____ [2]

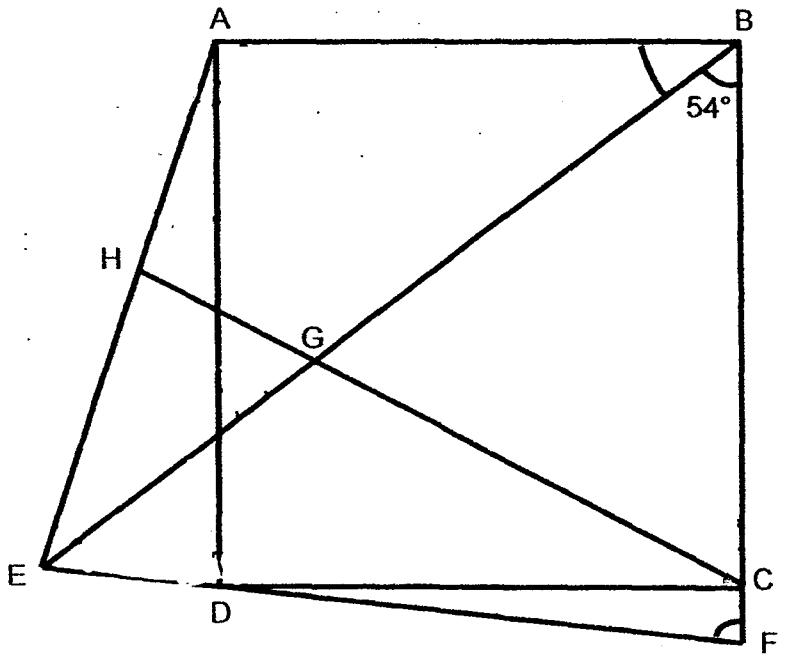
(b): _____ [2]

(Go on to the next page)

13. The figure ABCD is a square. 4 straight lines BCF, BGE, CGH and EDF are drawn to complete the figure shown below. AED is an isosceles triangle and BG = BC. ∠CBG is 54°.

(a) Find ∠ABG.

(b) Find ∠CFD.



Do not write in this space

Ans (a): _____ [1]

(b): _____ [3]

(Go on to the next page)

14. Box A contains only red pens and Box B contains only blue pens. There were twice as many red pens as blue pens. $\frac{1}{2}$ of the red pens were transferred into box B . At the same time, $\frac{2}{3}$ of the blue pens were transferred into box A.

(a) What fraction of the pens in box A after the transfer are red?

(b) After the transfer, 8 blue pens and 5 red pens were moved from Box A to Box B. The 2 boxes then had the same number of pens. How many blue pens were there?

Do not write in this space

Ans (a): _____ [1]

(b): _____ [3]

(Go on to the next page)

15. Michelle and her classmates made identical paper stars to sell for charity. They made 4 paper stars from each piece of the coloured paper. 3 paper stars were damaged for every 16 pieces of coloured paper that were used. Each paper star that was not damaged was sold for 40 cents. They collected a total of $317.20.

(a) How many paper stars were sold?

(b) How many pieces of the coloured paper did they use altogether?

Do not write in this space

Ans (a): _____ [1]

(b): _____ [4]

(Go on to the next page)

16. Yilin bought a dress for \$117 after a 35% discount.

(a) What was the price of the dress before the discount?

(b) Yilin paid \$147.60 for a blouse. The total discount for the dress and the blouse was \$95.40. What was the percentage discount given for the blouse?

Do not write in this space

Ans: (a) _____ [2]

(b) _____ [3]

(Go on to the next page)

17. Bryan designed a computer game where the enemy ships appeared in a fixed pattern over time as shown below.

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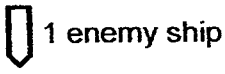
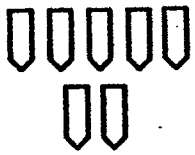
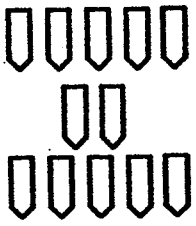
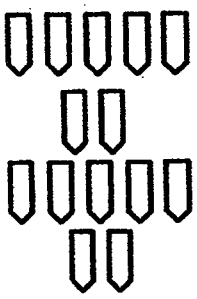


Start of Game	1st Second	2nd Second	3rd Second
			
4th Second	**5th Second**	**6th Second**	**7th Second**

(a) How many enemy ships will appear in the 5th second?

(b) How many seconds after the game start would 124 enemy ships appear?

(c) How many enemy ships will appear at the 1 minute mark?

Please use the next page for your answer

(Go on to the next page)

Do not write in this space

Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

(Go on to the next page)

18. Mrs Teo bought 5 bags of rice and 5 bags of flour.
15 bags of rice weigh as much as 27 bags of flour. Each bag of rice weigh 2.6 kg more than each bag of flour.

(a) What was the mass of each bag of rice?

(b) What was the total mass of all the bags of rice and flour Mrs Teo bought?

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Ans: (a) _____ [3]

(b) _____ [2]

End of Paper

EXAM PAPER 2017 9 May 2017
LEVEL : PRIMARY 6
SCHOOL : Rosyth PRIMARY SCHOOL
SUBJECT : MATHEMATICS
TERM : SEMESTRAL ASSESSMENT 1

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

Q16. 24 and 48 Q17. 8 Q18. 44 Q19. 8/15 Q20. 2 Q21. 4

Q22. 462 Q23. 81 Q24. 1.4 Q25. 30 Q26. 54km/h

Q27. 4 Q28. 15/28 Q29. 36 Q30. 45

PAPER 2

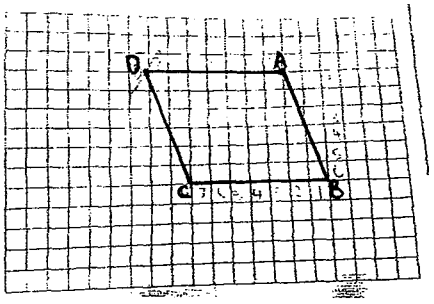
Q1. 21 X 2 = 42
42 – 40 = 2 Answer: a) Giselle b) 2

Q2. 2/5 = 14/35 1/7 = 5/35
14u + 5u = 19u
19u → 136.80
1u → 7.2
16u → 115.2 Answer: 115.20

Q3. 20 – 6 = 14
25.5 X 14 = 357
357 X 2 = 714
1200 – 714 = 486 Answer: 486

Q4. 16000/16/25 = 40 Answer: 40

Q5.



Q6. Answer: a) 1:6 b) 10000

Q7. 42/3 = 14
1u → 14
3u → 42
2u → 28
28 X 28 X ¼ X π = 196π
42 X 42 X ¼ X π = 441π
441π X 2 = 882π
196π X 2 = 392 π
882 – 392π = 490π
490π → 1539.3804 ≈ 1539.38 Answer: 159.38cm^2

Q8. 840/100 = 8.4
814 X 20 = 588
960/100 = 9.6
9.6 X 20 = 672
red → 672
green → 588
588 + 672 = 1260
672/1260 X 100 ≈ 53.33 Answer: 53.33%

Q9. 86 – 60 = 26
38 – 26 = 12
25% → 12
100% → 48 Answer: 48

Q10. 12/36R = 12/15B
868/31 = 28
1u → 28
4u + 3u = 7u
7u → 196 Answer: 196

Q11. 15/5 = 3
3 X 4 = 12
25 – 12 = 13
78/13 = 6
6 X 15 = 90

Q12. 84 X 125 = 630000
630000ml = 630L
630L/5 = 126L
315L/2 = 315
315L – 126L = 189L
189L/20 = 9.45L
189000/20 = 9450
9450 X 15 = 141750

315000 – 141750 = 173250
173250/15 = 11550L = 11.55ml Answer: a) 189L b) 11.5L

Q13. 90 – 54 = 36
180 – 90 – 54 = 36
(180-110)/2 = 35
110 – 90 = 20
360 – 64 – 35 – 90 – 36 – 54 = 81 Answer: a) 36° b) 81°

Q14. Red B: Blue B = 6:2 Red A:Blue A = 2:1 – 6:3 – 5:4
3 + 2 = 5
8 + 5 = 13
1u → 13
6u → 78 Answer: a) 3/5 b) 78

Q15. 317.20/0.4 = 793
16 X 4.3 = 61
793/61 = 15
13 X 16 = 208 Answer: a) 793 b) 208

Q16. 100 – 35 = 65
117/64 = 1.8
1.8 X 100 = 180
1.8 X 35 = 63
95.40 – 63 = 32.40
147.60 + 32.4 = 180
180/100 = 1.8
32.4/1.8 = 18 Answer: a) $180 b) 18%

Q17. 5 + 2= 7
5 + 2 + 5 + 2 + 5 + 2 = 21
124/7 = 17R5
(17 X 7) /5 = 124
(5+ 2 + 5 + 2+ 5 ....+ 2 + 5) X 61 = 215 Answer: a) 21 b) 34th c) 215

Q18. 2.6 X 15 = 39
39/12 = 3.25
3.25 + 2.6 = 5.85
R → 5.85
F → 3.25
3.25 X 5 = 16.25
5.85 X 5 = 29.25
29.25 + 16.25 = 45.5 Answer: a) 5.85 b) 45.5kg

END.

Word Problem Worksheet

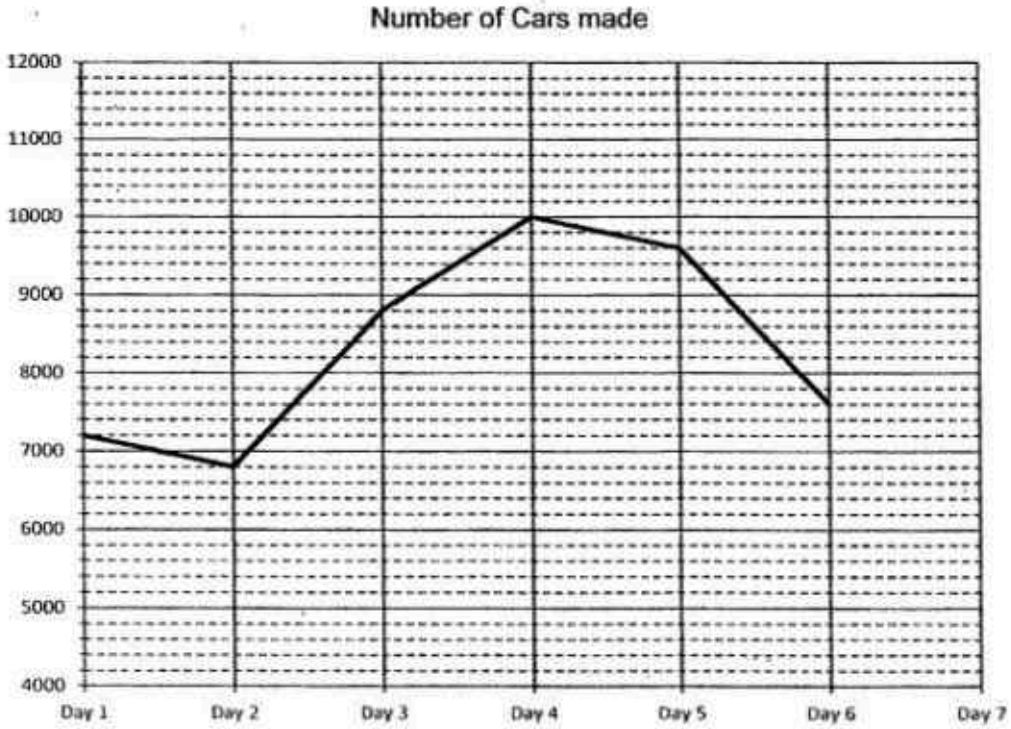
& Solutions

Rosyth Paper

P6 Mathematics SA1 2017

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. A factory produced 60 000 cars over 7 days. The line graph shows the number of cars made in the factory over 6 days.



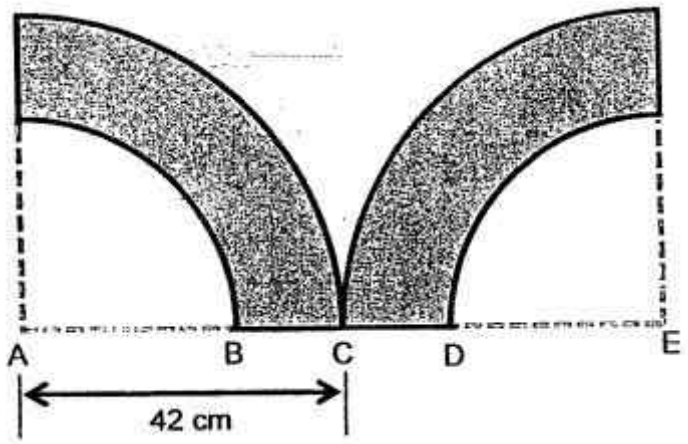
(a) What is the ratio of the number of cars produced on the 4th day to the total number of cars produced over the seven days? Express your answer in the simplest form.

(b) How many cars were made in the factory on day 7?

Ans: (a) _____

(b) _____

7. The outline of the figure below is formed by 2 identical large quarter circles, 2 identical small quarter circles and 3 straight lines. The length of AB = BD. The length of AC is 42 cm. Find the area of the shaded figure. Use the calculator value of π and correct your answer to 2 decimal places.



Ans: _____

8. Deo has 840 green heads. Ian has 960 red beads. Deo places 70% of his green beads into a box. Ian also places 70% of his red beads into the same box. What percentage of the beads in the box is red? Express your answer correct to 2 decimal places.

Ans: _____

9. At first, Alynna had a total of 86 toy cars and toy dolls. She gave away 38 toy cars and increased the number of toy dolls by 25%. After that, Alynna had a total of 60 toy cars and toy dolls. How many toy dolls did she have at first?

Ans: _____

10. Shi Yao had a total of 868 red pens and blue pens. After selling an equal number of both types of pen, she had $\frac{1}{4}$ of the red pens and $\frac{1}{5}$ of the blue pens left. What was the total number of blue and red pens left?

Ans: _____

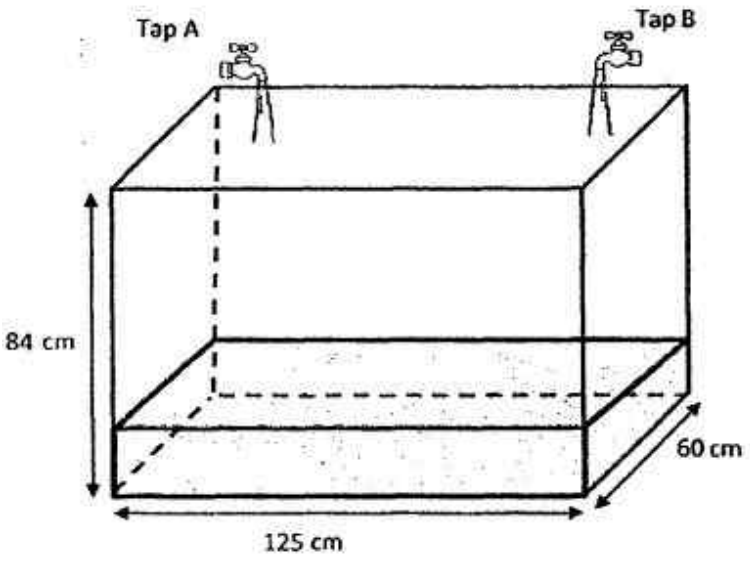
11. During the annual Prize Giving ceremony, the ratio of the number of gift cards to the number of cash vouchers the school prepared was 5 : 3. Each class received 4 gift cards and 5 cash vouchers. After all the classes had received their gift cards and cash vouchers, there were no more cash vouchers left but there were 78 gift cards left. How many cash vouchers were given out to all the classes?

Ans: _____

12. At first a tanks was $\frac{1}{5}$ filled with water. Two taps, A and B were used to fill up the tank. For the first 20 minutes, only tap A was turned on. The tank was half-filled with water after 20 minutes.

(a) How many litres of water were added to the tank by tap A in the first 20 minutes?

(b) Tap B was also turned on after 20 minutes. The tank was completely filled with water from tap A and tap B 15 minutes later. How many litres of water flowed out from Tap B in 1 minute?



Ans: (a) _____

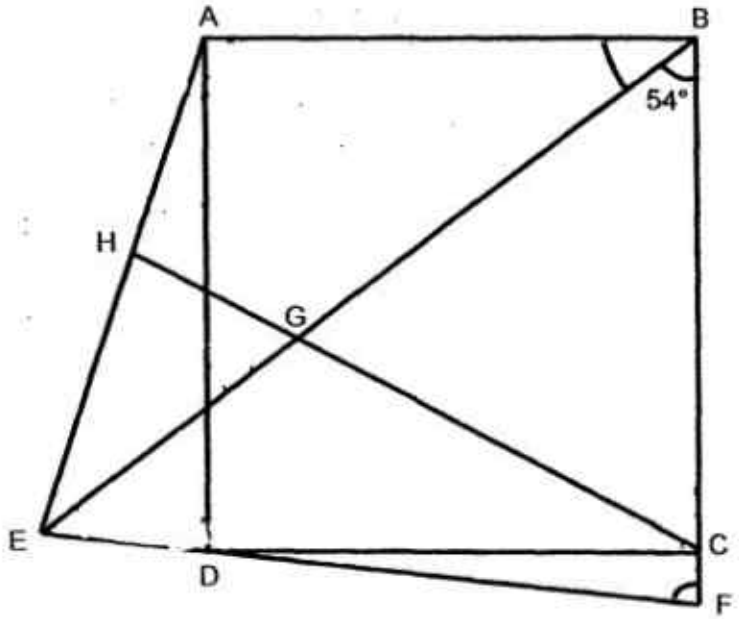
(b) _____

13. **KILLER QUESTION**

The figure ABCD is a square. 4 straight lines BCF, BGE, CGH and EDF are drawn to complete the figure shown below. AED is an isosceles triangle and BG = BC. ∠CBG is 54°.

(a) Find ∠ABG.

(b) Find ∠CFD



Ans: (a) _____

(b) _____

14. **KILLER QUESTION**

Box A contains only red pens and Box B contains only blue pens. There were twice as many red pens as blue pens. $\frac{1}{2}$ of the red pens were transferred into box B. At the same time, $\frac{2}{3}$ of the blue pens were transferred into box A.

(a) What fraction of the pens in box A after the transfer is red?

(b) After the transfer, 8 blue pens and 5 red pens were moved from Box A to Box B, the 2 boxes then had the same number of pens. How many blue pens were there?

Ans: (a) _____

(b) _____

15. Michelle and her classmates made identical paper stars to sell for charity. They made 4 paper stars from each piece of the coloured paper. 3 papers stars were damaged for every 16 pieces of coloured paper that were used. Each paper star that was not damaged was sold for 40 cents. They collected a total of $317.20.

(a) How many paper stars were sold?
(b) How many pieces of the coloured paper did they use altogether?

Ans: (a) _____

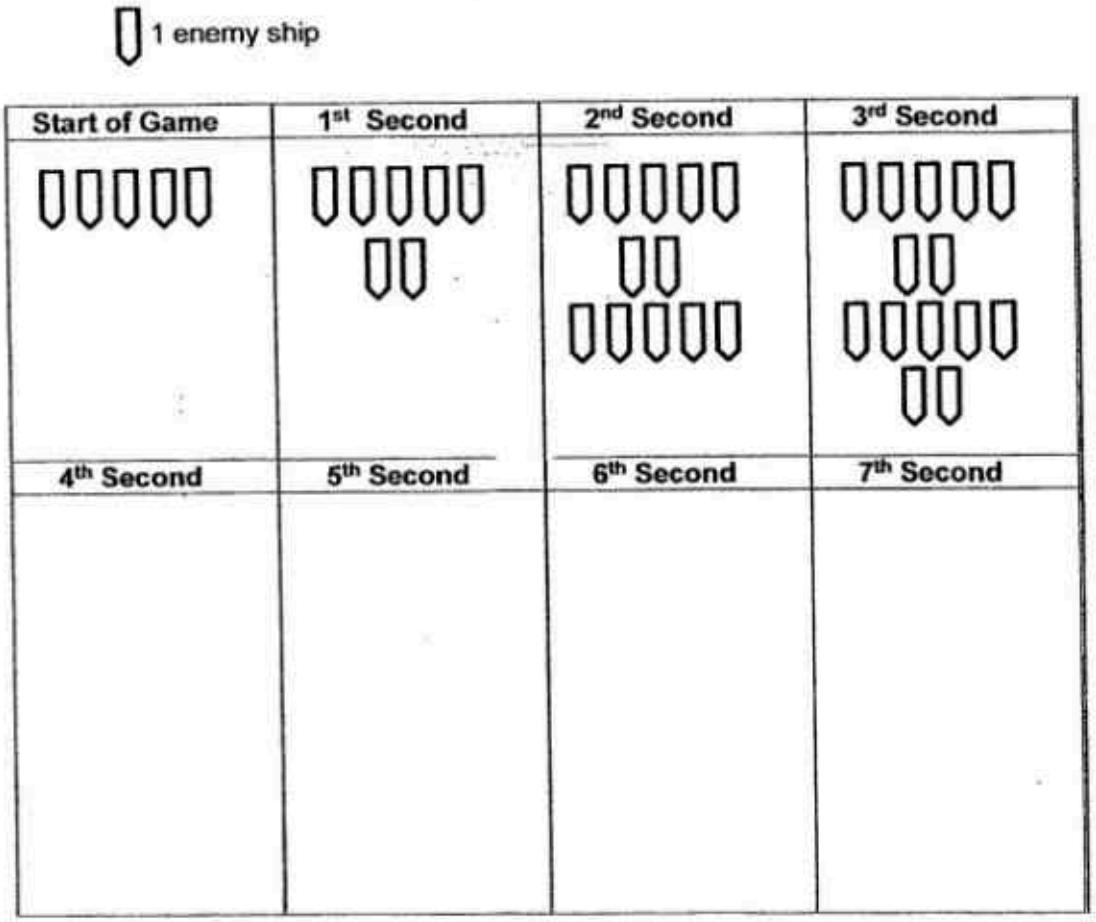
(b) _____

16. Yilin bought a dress for $117 after a 35% discount.
    (a) What was the price of the dress before the discount?
    (b) Yilin paid $147.60 for a blouse. The total discount for the dress and the blouse was $95.40. What was the percentage discount given for the blouse?

Ans: (a) _____

(b) _____

17. Bryan designed a computer game where the enemy ships appeared in a fixed pattern over time as shown below.
    (a) How many enemy ships will appear in the 5th second?
    (b) How many seconds after the game start would 124 enemy ships appear?
    (c) How many enemy ships will appear at the 1 minute mark?



Ans: (a) _____
(b) _____
(c) _____

18. Mrs Teo bought 5 bags of rice and 5 bags of flour. 15 bags of rice weigh as much as 27 bags of flour. Each bag of rice weighs 2.6 kg more than each bag of flour.
    (a) What was the mass of each bag of rice?
    (b) What was the total mass of all the bags of rice and flour Mrs Teo bought?

Ans: (a) _____

(b) _____

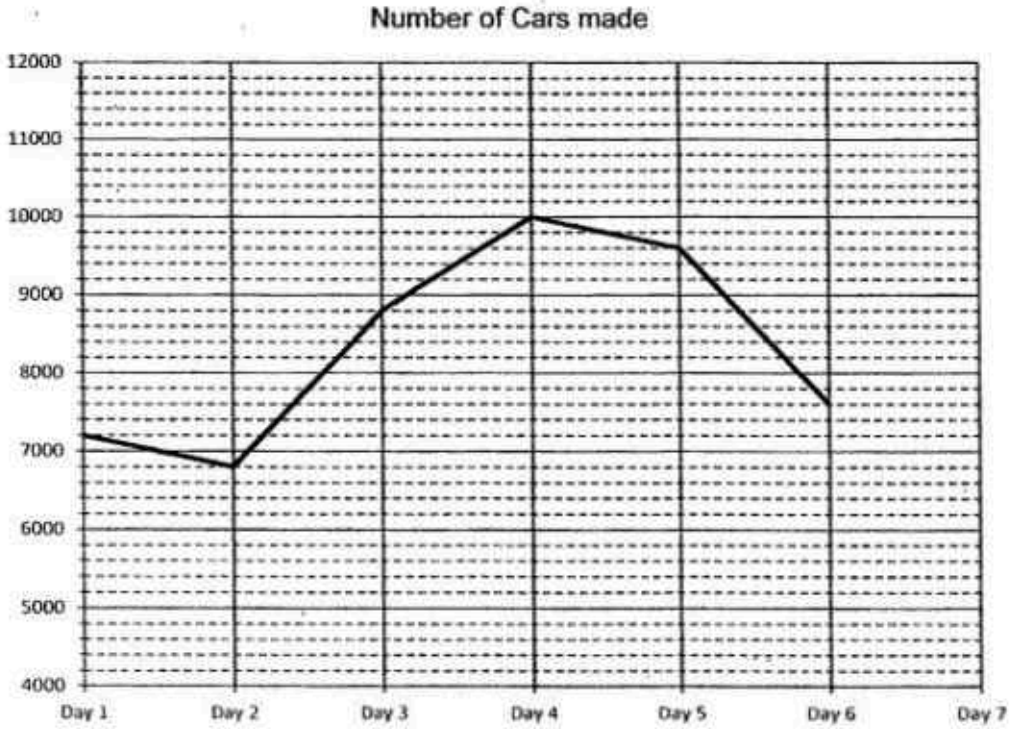
Answer Key

Subject: Primary 6 Maths – Word Problem Solutions
Paper: SA1 2017 Rosyth

6.	a)	1 : 6	b)	10 000		
7.	1539.38 cm^2					
8.	53.33%					
9.	48					
10.	196					
11.	90					
12.	a)	189 ℓ	b)	11.55 ℓ per min		
13.	a)	36°	b)	81 °		
14.	a)	$\frac{3}{5}$	b)	78		
15.	a)	793	b)	208		
16.	a)	$180	b)	18%		
17.	a)	21	b)	34 seconds	c)	215
18.	a)	5.85 kg	b)	45.5 kg		

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. A factory produced 60 000 cars over 7 days. The line graph shows the number of cars made in the factory over 6 days.



(a) What is the ratio of the number of cars produced on the 4th day to the total number of cars produced over the seven days? Express your answer in the simplest form.

(b) How many cars were made in the factory on day 7?

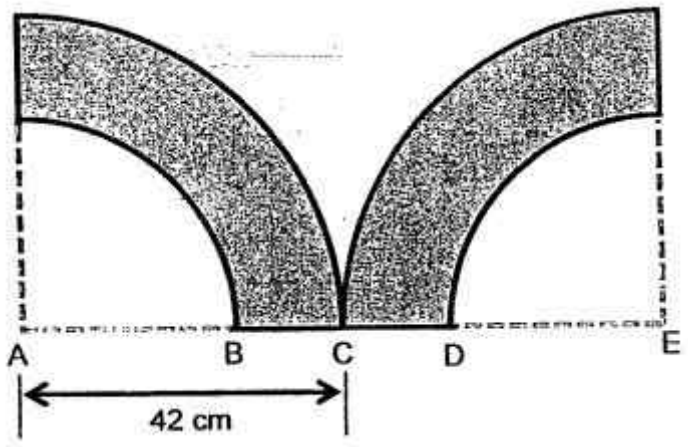
(a) Number of cars on 4th day = 10 000
Ratio of 4th day cars to total cars → 10 000 : 60 000 → 1 : 6

(b) Number of cars on 1st to 6th day = 7200 + 6800 + 8800 + 10000 + 9600 + 7600 = 50 000
Number of cars on 7th day = 60 000 – 50 000 = 10 000

Ans: (a) 1 : 6

(b) 10 000

7. The outline of the figure below is formed by 2 identical large quarter circles, 2 identical small quarter circles and 3 straight lines. The length of AB = BD. The length of AC is 42 cm. Find the area of the shaded figure. Use the calculator value of π and correct your answer to 2 decimal places.



Radius of large quarter circle = 42 cm
Let BC = u
AB = 2u
3u = 42 cm
Radius of small quarter circle = AB = 2u = 42 ÷ 3 x 2 = 28 cm
Area of 2 larger quarter circles = π x 42 x 42 ÷ 2 = 882 π
Area of 2 small quarter circles = π x 28 x 28 ÷ 2 = 392 π

Shaded area = 882 π - 392 π = 490 π = 490 x 3.142 = 1539.38 cm^2

Ans: 1539.38 cm^2

8. Deo has 840 green heads. Ian has 960 red beads. Deo places 70% of his green beads into a box. Ian also places 70% of his red beads into the same box. What percentage of the beads in the box is red? Express your answer correct to 2 decimal places.

70% of Deo's green beads = 0.7 x 840 = 588
70% of Ian's red beads = 0.7 x 960 = 672
Total in box = 588 + 672 = 1260

Percentage of red beads in box = 672 ÷ 1260 = 53.33%

Ans: 53.33%

9. At first, Alynna had a total of 86 toy cars and toy dolls. She gave away 38 toy cars and increased the number of toy dolls by 25%. After that, Alynna had a total of 60 toy cars and toy dolls. How many toy dolls did she have at first?

25% of toy dolls → 60 – (86 – 38) → 12

100% of toy dolls = 100 ÷ 25 x 12 = 48

Ans: 48

10. Shi Yao had a total of 868 red pens and blue pens. After selling an equal number of both types of pen, she had $\frac{1}{4}$ of the red pens and $\frac{1}{5}$ of the blue pens left. What was the total number of blue and red pens left?

Let r = number of red pens at first
b = number of blue pens at first

$\frac{3}{4}r = \frac{4}{5}b$ (1)
15r = 16b (1) x 20
r vs b ratio → 16 : 15 → 16u : 15u

16u + 15u = 868
31u = 868
u = 868 ÷ 31 = 28

Red pens left = $\frac{1}{4}$ x 16u = 4u
Blue pens left = $\frac{1}{5}$ x 15u = 3u
Total number of blue and red pens left = 4u + 3u = 7u = 7 x 28 = 196

Ans: 196

11. During the annual Prize Giving ceremony, the ratio of the number of gift cards to the number of cash vouchers the school prepared was 5 : 3. Each class received 4 gift cards and 5 cash vouchers. After all the classes had received their gift cards and cash vouchers, there were no more cash vouchers left but there were 78 gift cards left. How many cash vouchers were given out to all the classes?

Ratio of gifts cards to cash vouchers → 5 : 3 → 25u : 15u
Each class receive 5 cash vouchers
Number of classes = 15u ÷ 5 = 3u

Number of gift cards distributed = 4 x 3u = 12u
Number of gift cards left = 25u – 12u = 13u

13u → 78
u = 78 ÷ 13 = 6

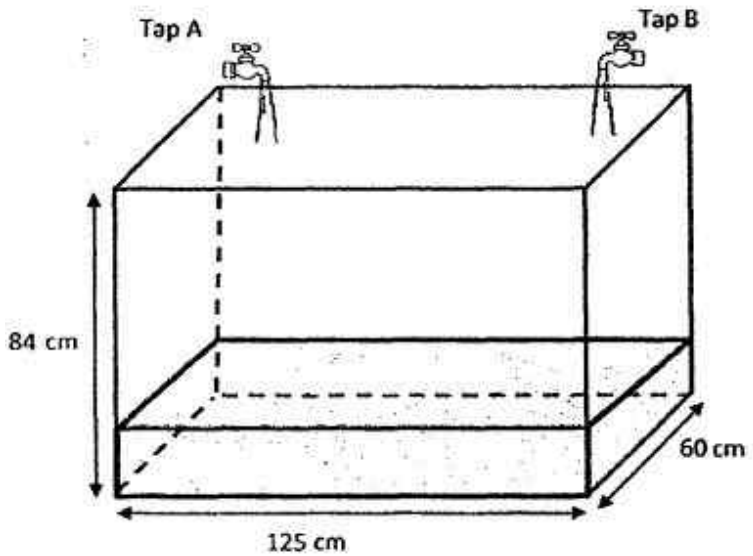
Cash vouchers given out = 15u = 15 x 6 = 90

Ans: 90

12. At first a tanks was $\frac{1}{5}$ filled with water. Two taps, A and B were used to fill up the tank. For the first 20 minutes, only tap A was turned on. The tank was half-filled with water after 20 minutes.

(a) How many litres of water were added to the tank by tap A in the first 20 minutes?

(b) Tap B was also turned on after 20 minutes. The tank was completely filled with water from tap A and tap B 15 minutes later. How many litres of water flowed out from Tap B in 1 minute?



(a) Let u = volume of tank = 125 x 60 x 84 = 630 000 cm^3 = 630 ℓ

$\frac{1}{2}u - \frac{1}{5}u = \frac{5}{10}u - \frac{2}{10}u = \frac{3}{10}u = \frac{3}{10} \times 630 = 189$ ℓ

(b) Rate of tap A flow = 189 ÷ 20 = 9.45 ℓ per min

Volume of water of tap A and B for 15 min = 630 x $\frac{1}{2}$ = 315 ℓ

Flow rate of tap A and B = 315 ÷ 15 = 21 ℓ per min

Flow rate of tap B = 21 – 9.45 = 11.55 ℓ per min

Ans: (a) 189 ℓ

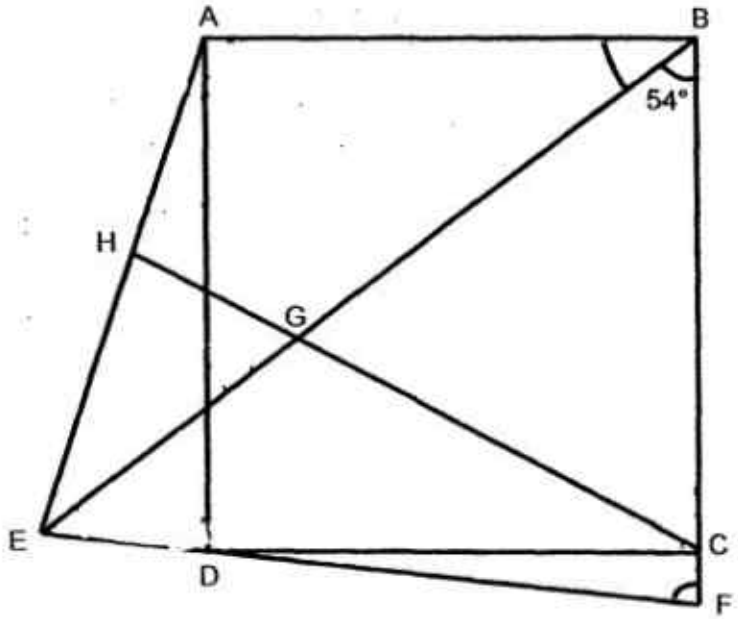
(b) 11.55 ℓ per min

13. **KILLER QUESTION**

The figure ABCD is a square. 4 straight lines BCF, BGE, CGH and EDF are drawn to complete the figure shown below. AED is an isosceles triangle and BG = BC. ∠CBG is 54°.

(a) Find ∠ABG.

(b) Find ∠CFD



(a) ∠ABG = 90 – 54 = 36°

(b) AD = AE, AE = AB, △ABE is an isosceles triangle

BAE = 180 – 36 – 36 = 108

Let u = ∠CFD = ∠AED

Total of 4 internal angles of figure = 360

90 + 108 + u + u = 360

2u = 162

∠CFD = u= 81 °

Ans: (a) 36°

(b) 81 °

14. **KILLER QUESTION**

Box A contains only red pens and Box B contains only blue pens. There were twice as many red pens as blue pens. $\frac{1}{2}$ of the red pens were transferred into box B. At the same time, $\frac{2}{3}$ of the blue pens were transferred into box A.

(a) What fraction of the pens in box A after the transfer is red?

(b) After the transfer, 8 blue pens and 5 red pens were moved from Box A to Box B, the 2 boxes then had the same number of pens. How many blue pens were there?

At first, ratio of red pens in box A vs blue pens in box B→ 2 : 1 → 2u : u → 6u : 3u

After that

Box A	Box B
Red (6u – 3u) Blue(+ 2u)	Blue (3u – 2u) Red (+ 3u)
Red (3u) Blue (2u)	Blue (1u) Red (3u)
X2	
Red (6u) Blue (4u)	Blue (2u) Red (6u)

Fraction of red in box A = 3 ÷ 5 = $\frac{3}{5}$

Moving 1u from Box A to Box B makes Box A equal to Box B
1u = 8 + 5 = 13
Total number of blue pens = 4u + 2u = 6u = 6 x 13 = 78

Ans: (a) $\frac{3}{5}$

(b) _____

15. Michelle and her classmates made identical paper stars to sell for charity. They made 4 paper stars from each piece of the coloured paper. 3 papers stars were damaged for every 16 pieces of coloured paper that were used. Each paper star that was not damaged was sold for 40 cents. They collected a total of $317.20.

(a) How many paper stars were sold?
(b) How many pieces of the coloured paper did they use altogether?

(a)
Number of stars for 1 set of 16 pieces of coloured paper = 16 x 4 – 3 = 61
Amount for 1 set of 16 pieces of coloured paper = 61 x .40 = $24.4

Number of sets sold = 317.20 ÷ 24.4 = 13
Number of stars sold = 13 x 61 = 793

(b)
Number of coloured paper used = 13 x 16 = 208

Ans: (a) 793

(b) 208

16. Yilin bought a dress for $117 after a 35% discount.
    (a) What was the price of the dress before the discount?
    (b) Yilin paid $147.60 for a blouse. The total discount for the dress and the blouse was $95.40. What was the percentage discount given for the blouse?

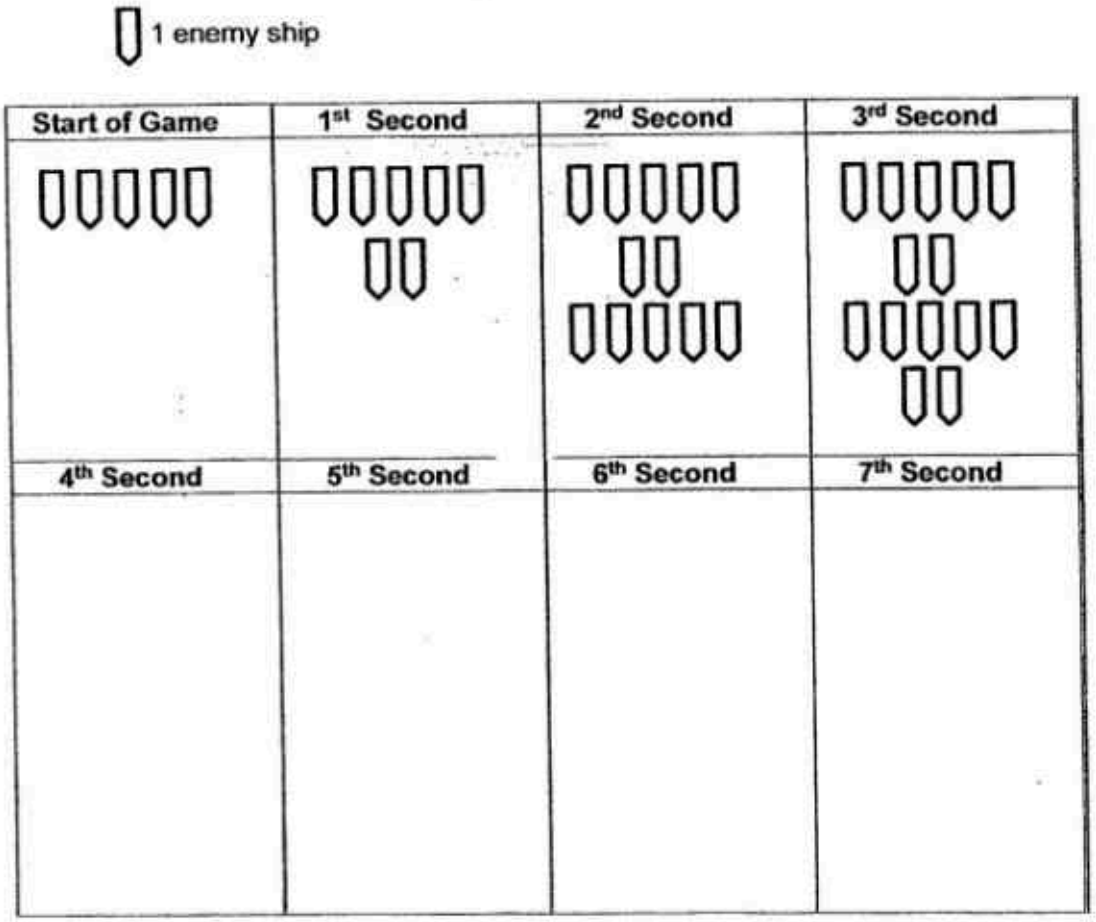
(a) price of dress before discount = 117 ÷ 65 x 100 = $180
Discount for dress = 180 – 117 = 63

(b) Discount for blouse = 95.40 – 63 = $32.40
Price of blouse before discount = 147.60 + 32.40 = $180
Percentage discount for blouse = 32.40 ÷ 180 x 100 = 18%

Ans: (a) $180

(b) 18%

17. Bryan designed a computer game where the enemy ships appeared in a fixed pattern over time as shown below.
    (a) How many enemy ships will appear in the 5th second?
    (b) How many seconds after the game start would 124 enemy ships appear?
    (c) How many enemy ships will appear at the 1 minute mark?



Seconds : 0, 1, 2, 3
Enemy ships : 5, 7, 12, 14
(a)
Additional ship every 2 seconds = 7
Number of enemy ships on 5th second = 14 + 7 = 21
(b)
Number of 2 second intervals to reach 124 ships = (124 – 5) ÷ 7 = 17
Number of seconds = 17 x 2 = 34 seconds
(c)
Number of ships after 60 seconds = 5 + 7 x 60 ÷ 2 = 215

Ans: (a) 21
(b) 34 seconds
(c) 215

18. Mrs Teo bought 5 bags of rice and 5 bags of flour. 15 bags of rice weigh as much as 27 bags of flour. Each bag of rice weighs 2.6 kg more than each bag of flour.
    (a) What was the mass of each bag of rice?
    (b) What was the total mass of all the bags of rice and flour Mrs Teo bought?

15 bags of rice = 27 bags of flour
Ratio of mass of rice bag vs mass of flour bags
27 : 15 → 9 : 5 → 9u : 5u

Bag of rice minus bag of flour = 9u – 5u = 4u = 2.6kg
u = 2.6 ÷ 4 = 0.65
(a)
Mass of each bag of rice = 9u = 9 x 0.65 = 5.85 kg
(b)
Mass of each bag of flour = 5u = 5 x 0.65 = 3.25 kg

Total mass of all bags of rice and flour = 5 x 5.85 + 5 x 3.25 = 45.5 kg

Ans: (a) 5.85 kg

(b) _____

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2017

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET A

Name : ( )

Class : Primary 6 SY

		Marks attained	Max Mark
Paper 1	Booklet A		20
	Booklet B		20
Paper 2			60
Total Marks			100

Parent's Signature

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 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)**

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1. Round off 459 490 to the nearest thousands.

(1) 450 000

(2) 459 000

(3) 459 500

(4) 460 000

2. Which of the following fraction is closest to 3?

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

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

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

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

3. What is the missing number?

6 : 10 = _____ : 15

(1) 3

(2) 9

(3) 11

(4) 15

4. Express $2\frac{3}{8}$ as a decimal.

(1) 2.125

(2) 2.3

(3) 2.375

(4) 2.38

5. Simplify $13a + 10 + 2a - 4$.

(1) $15a + 6$

(2) $15a - 14$

(3) $11a + 6$

(4) $11a - 14$

6. Find the average of the following numbers:

12, 15, 18, 3

(1) 12

(2) 15

(3) 16

(4) 48

7. Ahmad had \$3w. He spent \$15 on a book and donated half of the remainder. How much did he donate?

(1) $\$(3w - 15)$

(2) $\$(3w - 7.50)$

(3) $\$(\frac{3w}{2} - 15)$

(4) $\$(\frac{3w - 15}{2})$

8. At a carnival, 40% of the people were adults. There were 240 children. How many people were at the carnival?

(1) 400

(2) 480

(3) 600

(4) 1200

9. $\frac{3}{8}$ of the cost of a wallet is the same as $\frac{7}{16}$ of the cost of a bag. What is the ratio of the cost of the wallet to the cost of the bag?

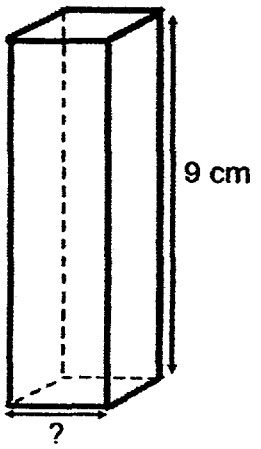
(1) 1 : 2

(2) 3 : 7

(3) 6 : 7

(4) 7 : 6

10. The figure shows a cuboid with a square base. The volume of the cuboid is 144 cm^3. What is the length of the base?



(1) 16 cm

(2) 12 cm

(3) 8 cm

(4) 4 cm

11. Elizabeth has $\frac{5}{13}$ as many stamps as Daisy. When Daisy gave 104 stamps to Elizabeth, both of them had the same number of stamps. How many stamps did Elizabeth have at first?

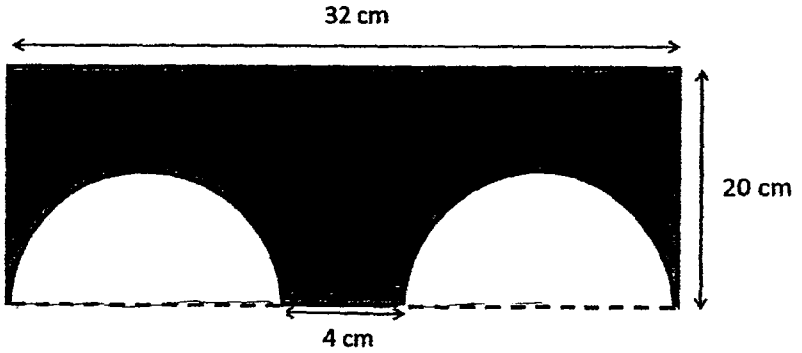
(1) 40
(2) 65
(3) 130
(4) 234

12. Aishah had 6 kg of flour. She used $\frac{1}{3}$ of it to bake a cake and $\frac{1}{2}$ kg to bake some cookies. How much flour does she have left?

(1) 1 kg
(2) 2 kg
(3) $3\frac{1}{2}$ kg
(4) $5\frac{1}{6}$ kg

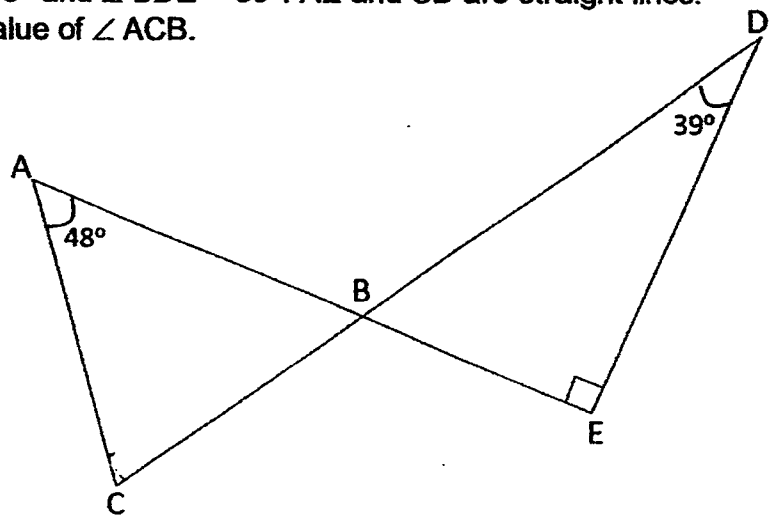
13. The figure below not drawn to scale shows a rectangular piece of paper with two cut out identical semicircles. Calculate the area of the shaded part.

(Take $\pi = \frac{22}{7}$)



(1) 120 cm^2
(2) 332 cm^2
(3) 486 cm^2
(4) 596 cm^2

14. In the figure below, not drawn to scale, there are two triangles ABC and DBE. $\angle$ CAB = 48° and $\angle$ BDE = 39°. AE and CD are straight lines. Find the value of $\angle$ ACB.



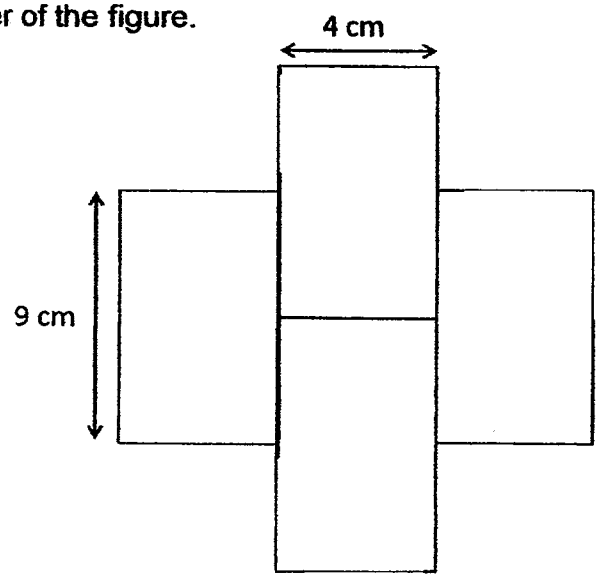
(1) 39°

(2) 51°

(3) 66°

(4) 81°

15. The figure below, not drawn to scale, is made up of 4 identical rectangles. Find the perimeter of the figure.



(1)

(2)

(3)

(4)

End of Booklet A

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2017

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET B

Name : _____( )

Class : Primary 6 SY

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

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 column

16. Find the value of $\frac{2}{9} \div \frac{5}{12}$

Ans: _____

17. What is the missing number in the box?

$15 \times 4 + 8 \times 15 = \square \times 15$

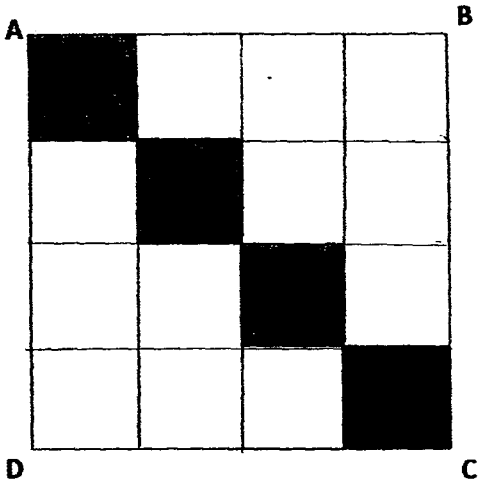
Ans: _____

18. Express $\frac{3}{7}$ as a decimal. Leave your answer to the nearest 2 decimal places.

Ans: _____

3

19. In the figure below, ABCD is a square. The shaded part is made up of 4 identical squares. What percentage of ABCD is shaded?



Ans: _____ %

Do not write in this column

20. The table shows the number of audience for a musical each night.

Find the percentage decrease in number of audience on Sunday.

Saturday	125
Sunday	100

Ans: _____ %

21. Marina paid $1680 for a laptop after she was given a discount of 20%.

What was the price of the laptop before the discount?

Ans: $ _____

3

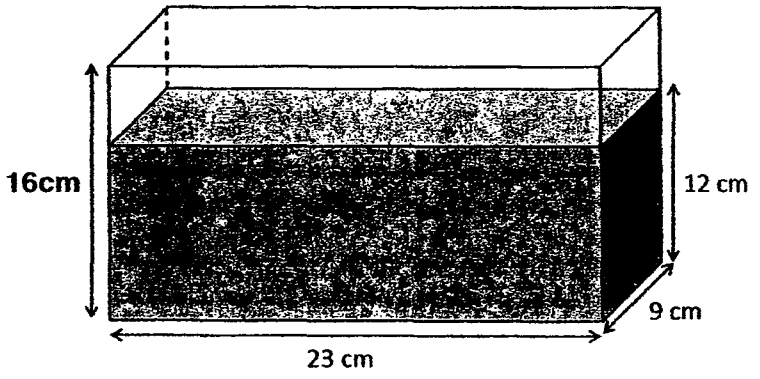
22. The ratio of the number of stamps Peter collected to the number of stamps Siva collected is 4: 5. After Peter gave away 12 stamps, the ratio became 8:15. How many stamps did Peter have at first?

Do not write in this column

Ans: _____

23. What fraction of the container is filled with water?

Give your answer in the simplest form.



Ans: _____

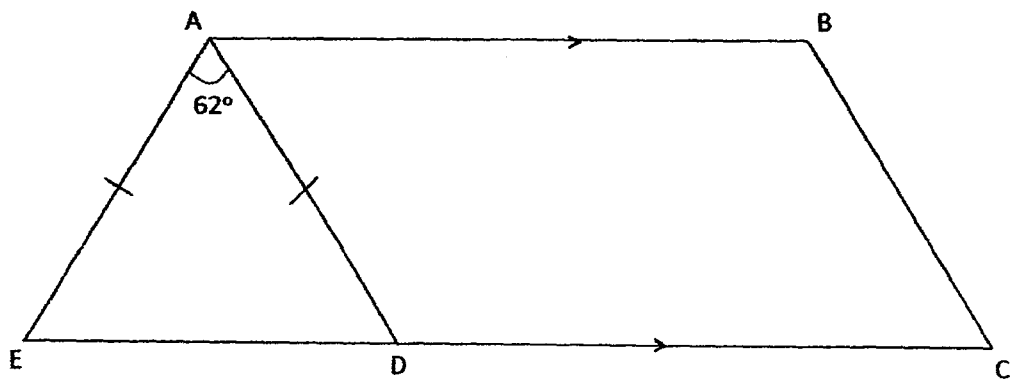
2

24. At a game stall, 2 points are awarded for every blue token collected and 5 points are awarded for every red token collected. Melvin collected an equal number of blue and red tokens. He won a total of 560 points. How many blue tokens did he collect?

Do not write in this column

Ans: _____

25. In the figure below, ABCD is a parallelogram. AB and EC are straight lines. Find ∠ DAB.



Ans: _____ °

2

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)

Do not write in this column

26. Cherries were sold at $0.50 per 100 g. How much does Mr Lim have to pay if he bought 2.5 kg of cherries?

Ans: $ _____

27. The table shows the prices of a muffin and a cup of ice tea sold at a café.

Item	Price
Muffin	$ $(r + 2)$
Ice Tea	$ r

Ramesh went to the café to buy a cup of ice tea and a muffin. If $r = 3$, how much does he need to pay altogether?

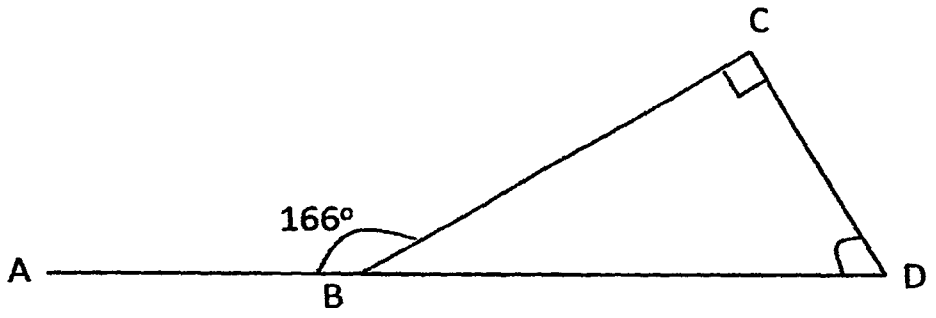
Ans: $_____

4

28. A bus can only carry either 20 adults or 45 children. If there are already 8 adults and 11 children, how many more children can the bus carry?

Ans: _____

29. In the figure below, ABD is a straight line. Find ∠BDC.



Ans: _____ °

Do not write in this column

4

30. The average of nine numbers is 6. Two numbers are removed. The average of the remaining seven numbers is also 6. The bigger of the 2 numbers removed is three times the smaller number. What is the smaller number?

Do not write in this column

Ans: _____

End of Booklet B

2

SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2017

PRIMARY 6

MATHEMATICS

PAPER 2

Name : _____ **( )**

Class : Primary 6 SY

	Mark	Max Mark
Paper 2		**60**

Parent's Signature

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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)

Do not write in this column

1. Alvin and Daniel spent $250 altogether. Benjamin and Daniel spent $130 altogether. Given that Alvin spent four times as much money as Benjamin, how much did Daniel spend?

Ans: $_____

2. In Primary 6A, when 5 girls and 3 boys were absent, there were 32 pupils in the class. What percentage of the class was present?

Ans: _____ %

/ 4

Do not write in this column

3. John aims to do the same number of questions for a week from Monday to Sunday. If he decides to take a break on Friday, he will have to do an additional 3 questions each day. How many questions does he have to do altogether?

Ans: _____

4. The price of an admission ticket for a movie is $2y. Children below the age of 10 will be given a 50% discount. Siva brought his wife, two parents and two children of ages 8 and 15 to watch a movie. How much did he have to pay altogether? Leave your answer in terms of y.

Ans: $ _____

/ 4

5. Construct an isosceles triangle ABC where AC = 5 cm and $\angle BAC = \angle BCA = 55^{\circ}$.

Do not write in this column

2

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)

Do not write in this column

6. Farmer Tan harvested some apples, pears and oranges for sale at the market. $\frac{1}{10}$ of the fruits were apples. The number of pears was twice the number of oranges. There were 85 more pears than apples. How many fruits were there altogether?

Ans: _____ [3]

7. Beatrice spent $800 of her monthly salary and saved the rest. In March, she increased her spending by 40% and her savings decreased by 25%. How much is her monthly salary?

Ans : _____ [4]

7

8. A tank was 40% filled with water. Another 24 ℓ of water was needed to fill the tank to its brim. The length and breadth of the tank were 50 cm and 40 cm respectively. Find the height of the tank.

Ans : _____ [3]

9. Mr Teh recorded the earnings by every stall during a school carnival. He wrongly recorded one of the stall's earnings as $370 instead of $220. As a result, the average earnings was recorded as $329 instead of $324. How many stalls were there at the carnival?

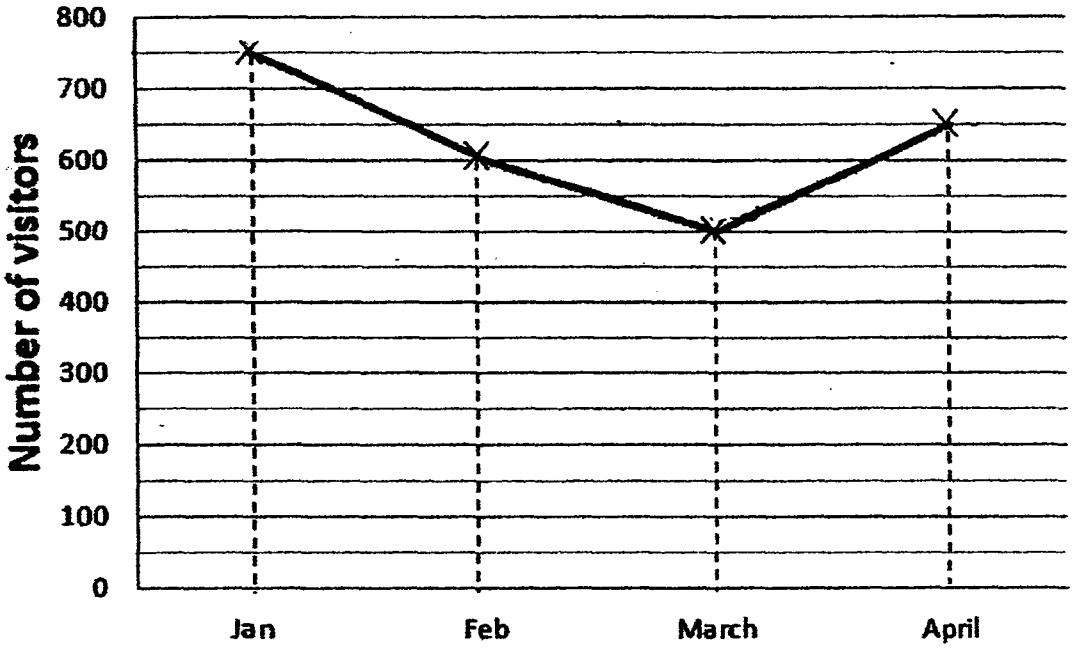
Ans: _____ [3]

Do not write in this column

/6

10. The graph shows the number of visitors to the aquarium in the first 4 months of the year.

Do not write in this column



The aquarium was closed in May for renovation works. It reopened in June and the number of visitors was 60% more than the number of visitors in March. Find the average number of visitors per month from January to June.

Ans : _____ [3]

3

11. Allan, Bernice, Candice and Derrick shared the cost of a present. The amount Allan paid is $\frac{1}{14}$ of the total amount Bernice and Candice paid. The amount Bernice paid is $\frac{1}{4}$ of the total amount Candice and Derrick paid. The amount Derrick paid is twice the amount Candice paid. Given that Candice paid \$63 more than Allan, how much was the cost of the present?

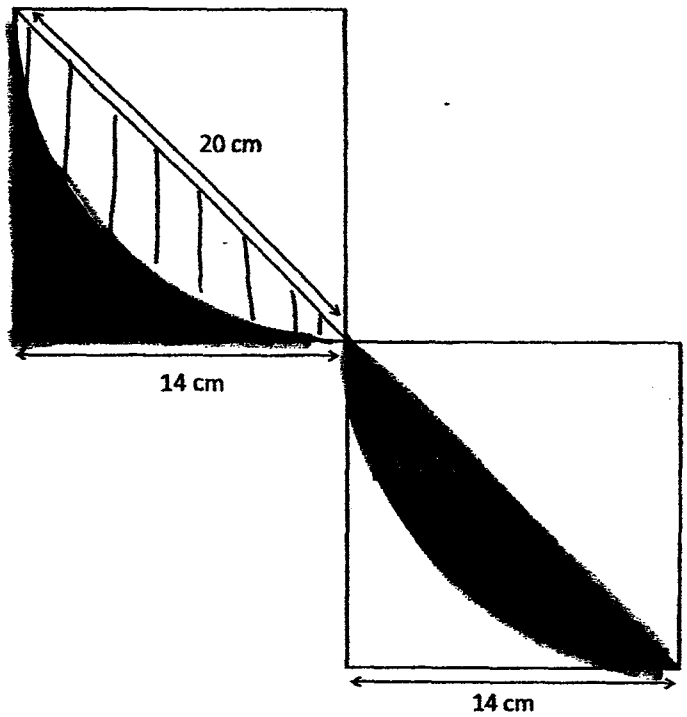
Do not write in this column

Ans : _____ [4]

4

12. The diagram below, not drawn to scale, shows 2 squares and 2 quadrants. Find the perimeter of the shaded figure.

(Take $\pi = \frac{22}{7}$)



Ans: _____ [3]

Do not write in this column

3

13. Mrs Tan bought a 10-kg bag of rice. The family consumed $\frac{3}{5}$ kg of rice daily.

(a) How many days can they have $\frac{3}{5}$ kg of rice daily?

(b) How much rice was there left?

Do not write in this column

Ans: (a) _____ [2]

(b) _____ [2]

4

14. Simone prepared blue and red balloons for a party. The ratio of the number of blue to red balloons is 4 : 1 After 25% of the blue balloons and 40% of the red balloons burst, Simone had a total of 54 balloons left. How many balloons burst?

Do not write in this column

Ans : _____ . [4]

4

Do not write in this column

15. Some passengers boarded an empty train at Station A. At Station B, $\frac{1}{3}$ of them got off and 60 passengers boarded the train. At Station C, 220 passengers got off and 60 boarded the train. The train now had $\frac{5}{9}$ of the number of passengers when it left Station B.

a) How many passengers were on the train when it left Station C?

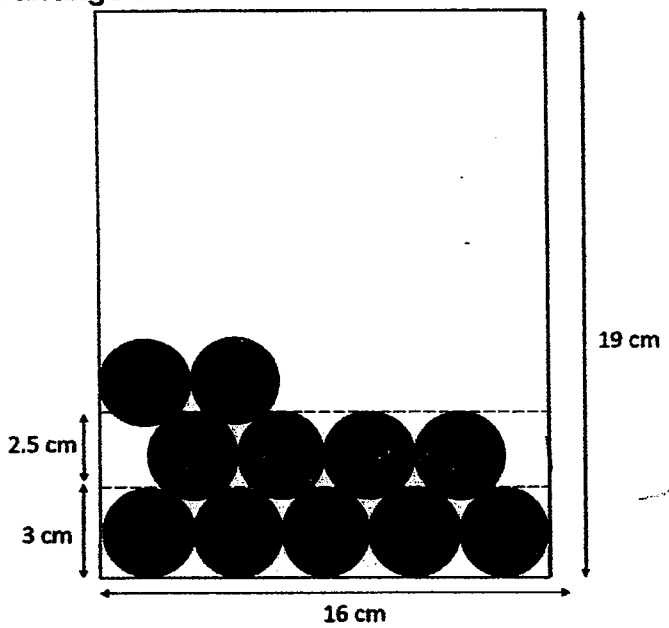
b) How many passengers were on the train when it left Station A?

Ans: (a) _____ [2]

Ans: (b) _____ [3]

5

16. In an arcade game, John had to fit as many circular discs as possible onto a rectangular mat measuring 16 cm by 19 cm. The diagram below shows how he chose to arrange the circles.



(a) Given that he continues to arrange the circular discs in this manner, how many similar discs can he fit onto the mat?

(b) What is the area left on the mat after all the possible circular discs have filled the mat? (Take $\pi = 3.14$)

Ans: (a) _____ [2]

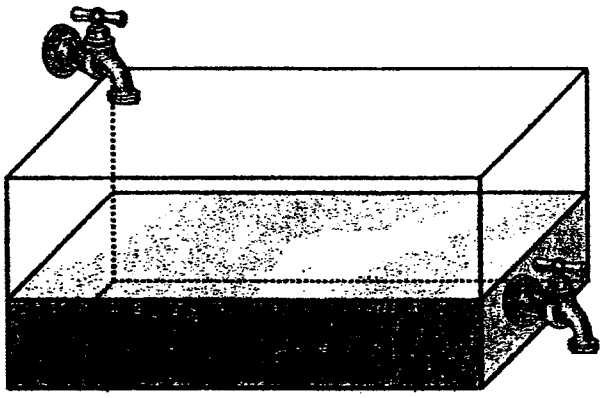
(b) _____ [3]

Do not write in this column

5

17. An empty rectangular tank of capacity 25600 cm^3 has 2 taps. Water from tap A starts to fill the tank at a rate of 2 ℓ per minute. After 8 minutes, both taps are turned on to fill the tank to the brim. Tap B allows water to flow out from the base of the tank at 0.4 ℓ per minute. Find the total amount of time taken from the start to fill the tank to the brim.

(1 ℓ = 1000 cm^3)



Ans: _____ [5]

Do not write in this column

5

18. A group of students were at a birthday party. Each person shook hands once with everyone else. Ben shook hands with five times as many boys as girls. Justina shook hands with seven times as many boys as girls. How many children were there at the birthday party?

Do not write in this column

Ans: _____ [4]

4

End of Paper 2

EXAM PAPER 2017

LEVEL : PRIMARY 6

SCHOOL : SINGAPORE CHINESE GIRLS' PRIMARY SCHOOL

SUBJECT : MATHEMATICS (PAPER 1)

TERM : SA1

PAPER 1

SECTION A

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

SECTION B

Q16. $\frac{2}{9} \div \frac{5}{12} = \frac{2}{9} \times \frac{12}{5} = \frac{8}{15}$

Q17. 15 X 4 + 8 X 15 = _____ X 15

4 sets X 15	8 sets X 15

Ans : 4 + 8 = 12

Q18. $\frac{3}{7} = 3 \div 7 = 0.428$

Ans: 0.43

Q19. 4 X 4 = 16

$\frac{4}{16} = \frac{1}{4} = 25$

Ans: 25%

Q20. $\frac{25}{125}$ X 100% = 20%

Ans: 20%

Q21. 80% - $1680

10% - $1680 ÷ 8 = $210

100% - $210 X 10 = $2100

Ans : $2100

Q22. P : S P : S

4 : 5 8 : 15

12 : 15

12 – 8 = 4

4U – 12

1U – 12 ÷ 4 = 3

12U – 3 X 16 = 36

Ans : 36 stamps

Q23. Capacity of container ⟶ 16 X 23 X 9 = 3092

Volume of water ⟶ 12 X 23 X 9 = 2824

Fraction ⟶ $\frac{2824}{3092} = \frac{3}{4}$

Ans: $\frac{3}{4}$

Q24. 2 + 5 =7

560 ÷ 7 = 80

Ans : 80

Q25. $(180^0 - 62^0) \div 2 = 59^0$

$180^0 - 59^0 = 121^0$

$121^0 - 62^0 = 59^0$

Ans : 59^0

Q26. 2.5 X 1000 = 2500

2500 ÷ 100 = 25

25 x 0.50 = 12.50

Ans: $12.50

Q27. Muffin – 3 + 2 = 5

5 + 3 = 8

Ans: $8

Q28. A : C

20 : 45

4 : 9

8 : 18

45 – 18 -11 = 16

Ans : 16 children

Q29. $180^0 - 166^0 = 14^0$

$90^0 + 14^0 = 104^0$

$180^0 - 104^0 = 76^0$

Ans: 76^0

Q30. B : S : T

3 : 1 : 4

6 X 9 = 54

6 x 7 = 42

54 – 42 = 12

4U – 12

1U – 12 ÷ 4 = 3

Ans : 3

PAPER 2

Q1. 3U ——— 250 – 130 = 120

1U ——— 120 ÷ 3 = 40

130 – 40 = 90

Ans: $90

Q2. 32 + 5 + 3 = 40

$\frac{32}{40}$ X 100% = 80

Ans: 80%

Q3.

Mon	Tue	Wed	Thur	Sat	Sun
+3	+3	+3	+3	+3	+3

Per day – 3 X 6 = 18

Altogether – 18 X 6 = 108

108 + 18 = 126

Ans : 126 questions

Q4. 1 ticket = 2y

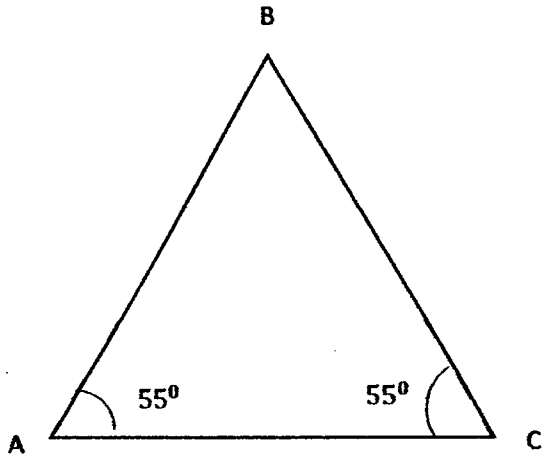
5A = 2y X 5 = 10y

C = $\frac{2y}{2}$ = y

Total = 10y + y = 11y

Ans: $11y

Q5.



Q6. 6 – 1 = 5

5U ~ 85

1U ~ 85 ÷ 5 = 17

10U ~ 17 X 10 = 170

Ans : 170 fruits

Q7. 40% spent - $\frac{40}{100}$ X 800 = 320

25% saving – 320

100% ~ 320 X 40 = 1280

1280 + 800 = Ans: $2080

Q8. 60% ~ 24L

10% ~ 24 ÷ 60 = 4

100% ~ 4 X 10 = 40

40 X 1000 = 40000

40000 ÷ 50 ÷ 40 = 20

Ans : 20cm

Q9. 370 – 220 = 150

329 – 324 = 5

150 ÷ 5 = 30

Ans : 30 stalls

Q10. $\frac{160}{100}$ X 500 = 800

0 + 750 + 600 + 650 + 650 +800 = 3300

3300 ÷ 6 = 550

Ans: 550 visitors

Q11.

A	:	B	:	C	:	D	:	T
1	:	6	:	8	:	16	:	31

8 – 1 = 7

7U ~ 63

1U ~ 63 ÷ 7 = 9

31U ~ 9 X 31 = 279

Ans : $279

Q12. $\frac{1}{2} \times \pi \times d = \frac{1}{2} \times \frac{22}{7} \times 28 = 44$

44 + 20 + 14 + 14 = 92

Ans: 92cm

Q13. a) $10 \div \frac{3}{5} = 16.67$

≈ 16

Ans: 16 days

b) Left ~ $\frac{2}{3} \times \frac{3}{5} = \frac{2}{5}$

Ans: $\frac{2}{5}$kg

14. $20 - 5 = 15$

$5 - 2 = 3$

$15 + 3 = 18$

18U ~ 54

1U ~ $54 \div 18 = 3$

$5 + 2 = 7$

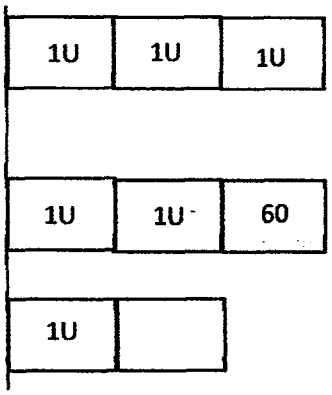
7U ~ $3 \times 7 = 21$

Ans : 21 balloons.

Q15. a) When the train left the station A

When the train left the station B

When the train left the station C



2U + 60 = 9p

10U + 300 = 45P

2U – 100 = 5P

18U – 900 = 45p

10U + 300 = 18U – 900

18U – 10U = 900 + 300

8U = 1200

1U = $1200 \div 8 = 150$

Number of passengers after station C ~ 2U – 100

= (2 X 150) – 100 = 200

Ans : 200 passengers

b) number of passengers after station A ~ 3U

= 3 X 150 = 450

Ans : 450 passengers

Q16. a) $19 - 3 = 16$

$16 \div 2.5 = 6.4 \approx 6$

Number of discs ~ $(3 \times 5) + (3 \times 4) + 5$

$= 15 + 12 + 5 = 32$

b) area of 1 circle ~ $3.14 \times 1.5 \times .5 = 7.065$

$7.065 \times 32 = 236.08$

$16 \times 19 = 304$

$304 - 226.08 = 77.92$

Ans : $77.92cm^2$

Q17. $2L = 2000cm^2$

$2000 \times 8 = 16000$

$0.4L = 400cm^2$

$25600 - 16000 = 9600$

$2000 - 400 = 1600$

$9600 \div 1600 = 6$

$6 + 8 = 14$

Ans : 14mins

Q18.

Ben	Justina
B : G : T	B : G : T
5 : 1 : 6	7 : 1 : 8
20 : 4 : 24	21 : 3 : 24

$21 + 4 = 25$

$24 + 1 = 25$

Ans : 25 children

END.

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2017 Semestral Assessment One

Paper 1

Booklet A

5 May 2017

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.
SHADE YOUR ANSWERS IN THE OPTICAL ANSWER SHEET (OAS) PROVIDED.
THE USE OF CALCULATORS IS NOT ALLOWED.

This booklet consists of 9 printed pages including 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 correct oval (1, 2, 3, 4) on the Optical Answer Sheet. (20 marks)

---

1) In the numeral 824 031, the value of the digit 4 is _____.

(1) 40

(2) 400

(3) 4000

(4) 40 000

2) Which of the following is correct?

(1) $\frac{7}{10} = 7\%$

(2) $0.37 = 3.7\%$

(3) $3\% = 0.3$

(4) $75\% = \frac{3}{4}$

3) A rectangular field had a length of $8j$ metres and a breadth of 40 metres. Edson ran round the field once. Express the total distance Edson ran in terms of j.

(1) $(8j + 40)$ m

(2) $(16j + 40)$ m

(3) $(16j + 80)$ m

(4) $(32j + 80)$ m

4) $\frac{21}{49} = \frac{12}{\boxed{?}}$

What is the missing number in the box?

(1) 7

(2) 24

(3) 28

(4) 40

5) Mrs Ngiam baked $9w$ cookies and gave 13 cookies to each of her pupils. She had $6w$ cookies left. How many pupils did she have?

(1) $\frac{3w}{13}$

(2) $\frac{15w}{13}$

(3) $\frac{9w-13}{6w}$

(4) $\frac{6w}{9w+13}$

6) In a class of 39 pupils, 18 of them are boys. What is the ratio of the number of girls to the number of boys?

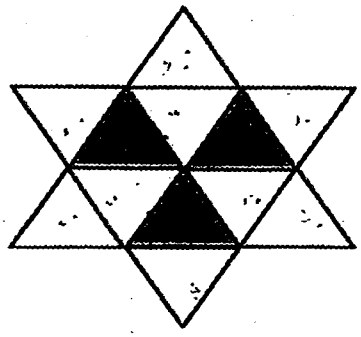
(1) 6 : 7

(2) 7 : 6

(3) 13 : 6

(4) 13 : 7

7) The figure below is made up of identical triangles. How many more triangles must be shaded so that the ratio of the number of unshaded triangles to the total number of triangles is 10 : 24?



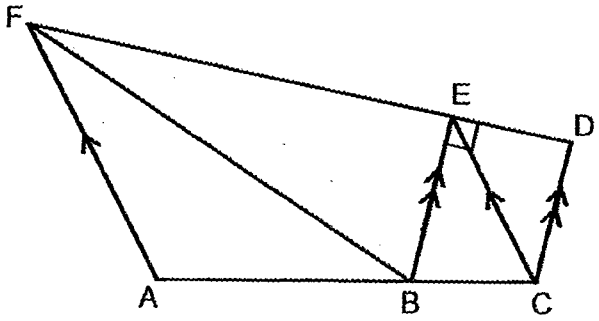
(1) 7

(2) 2

(3) 10

(4) 4

8) In the figure below, ABC and DEF are straight lines. Which figure is the trapezium?



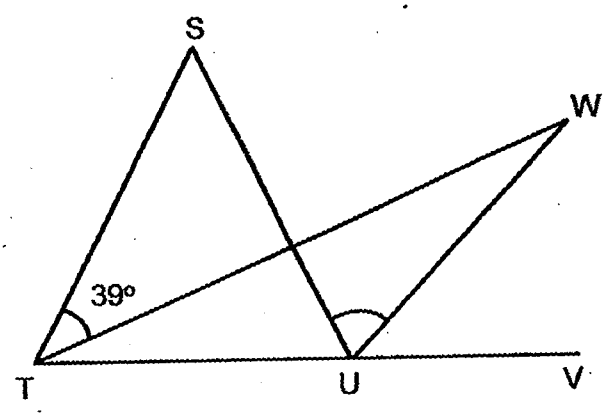
(1) ABEF

(2) ACEF

(3) BCDF

(4) BCEF

9) In the figure below, STU is an equilateral triangle. TUV is a straight line and TUW is an isosceles triangle where TU = UW. $\angle STW = 39^\circ$. Find $\angle SUW$.



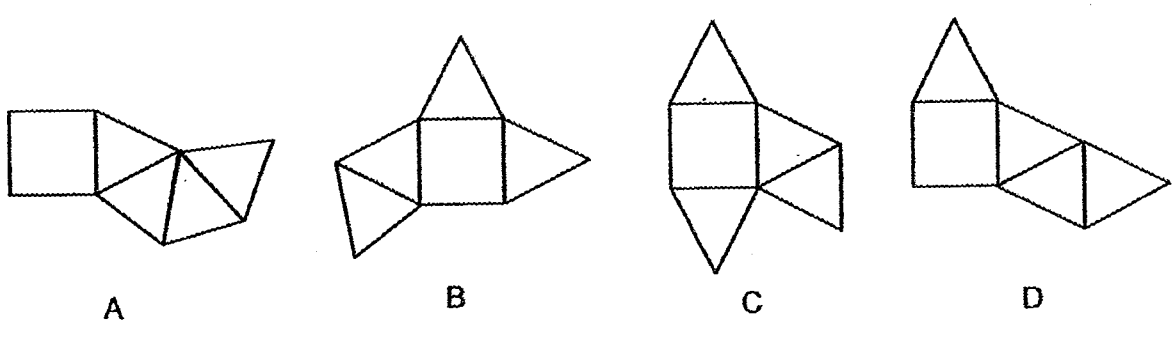
(1) 78°

(2) 81°

(3) 99°

(4) 138°

10) Which of the following nets can be folded to form a pyramid?



(1) A and B only

(2) B and D only

(3) A, B and C only

(4) A, B and D only

11) Jeanna had 27 more stickers than Tabitha. Tabitha gave 12 of her stickers to Jeanna. Now, Jeanna has 4 times as many stickers as Tabitha. How many stickers did Tabitha have at first?

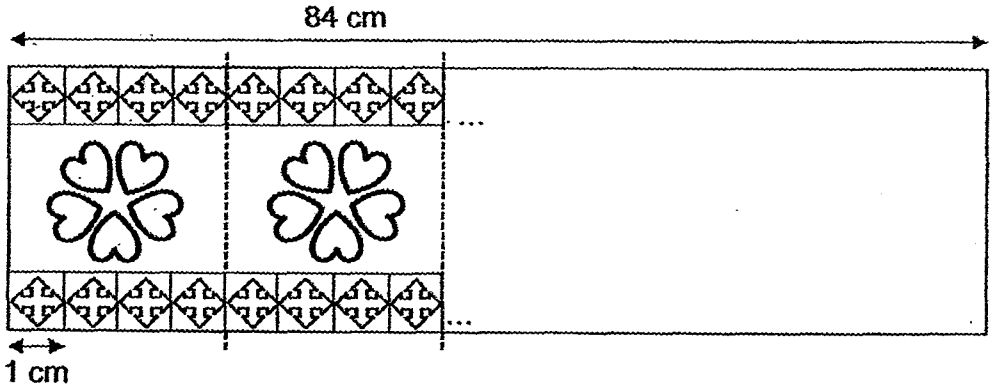
(1) 13

(2) 17

(3) 25

(4) 29

12) A piece of ribbon 84 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.



How many are there in the piece of ribbon?

(1) 105

(2) 112

(3) 140

(4) 168

13) Maverick had a total of 60 peach tarts and blueberry tarts for sale. After selling $\frac{1}{3}$ of the peach tarts and $\frac{2}{3}$ of the blueberry tarts, he had twice as many blueberry tarts left as peach tarts. How many blueberry tarts did Maverick sell?

(1) 15

(2) 32

(3) 48

(4) 50

14) Ivan spent $\frac{1}{4}$ of his money on a school bag and $\frac{1}{6}$ of the remainder on a pair of sneakers. He spent $240 altogether. How much money had he left?

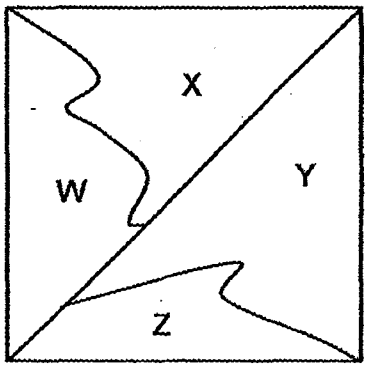
(1) $150

(2) $336

(3) $400

(4) $576

15) The square below is divided into four parts W, X, Y and Z.



The ratio of Area W to Area X is 2 : 3. Area Z is 50% of Area X.
Express Area Y as a percentage of the area of the square.

(1) 60%

(2) 35%

(3) 30%

(4) 15%

End of Booklet A

Name : _____ ( )

Class : Primary 6 _____

Primary 6 Mathematics

2017 Semestral Assessment One

Paper 1

Booklet B

5 May 2017

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 9 printed pages including the cover page.

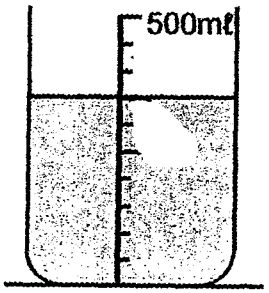
Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space.

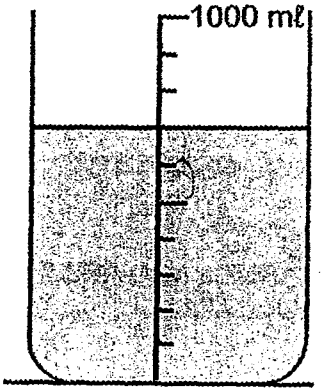
16. The sum of two numbers is 3989. Their difference is 1759. What is the smaller number?

Ans : _____

17. What is the total volume of water in the 2 beakers as shown below?



Beaker A



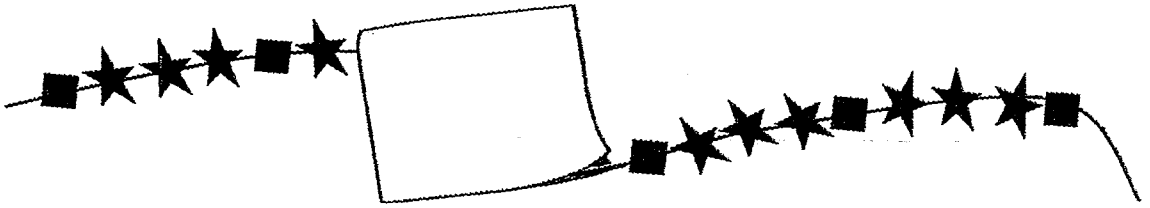
Beaker B

Ans : _____ ℓ

18. Five years ago, Freda was k years old. She is 3 years older than Richelle. How old is Richelle now?

Ans : _____

19. A string of beads is partly covered by a piece of paper as shown below. There are 2 squares between every 3 stars. There are 9 squares that are covered by the paper. How many stars are covered by the paper?



Ans : _____

Do not write in this space.

20. $\frac{3}{4}$ of a bag of jelly beans was given to some children. Each child received $\frac{1}{8}$ of the jelly beans in the bag. How many children were there?

Ans : _____

21. The total cost of a piece of brownie and a cup of coffee is \$7.50. The cost of the brownie is $\frac{2}{3}$ of the cost of the cup of coffee. What is the cost of a piece of brownie?

Ans : \$ _____

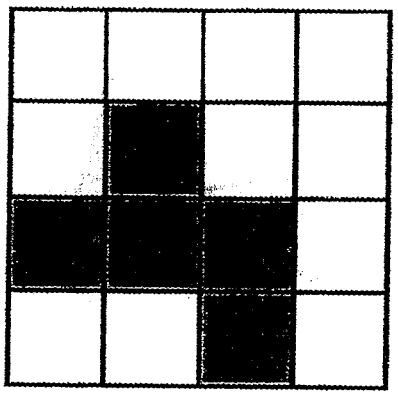
Do not write in this space.

22. Janette gave 30% of her crystals to Ally. Janette had 420 crystals left. Ally had a total of 300 crystals after receiving from Janette. How many crystals did Ally have at first?

Do not write in this space.

Ans : _____

23. The figure below shows part of the net of a cube. Shade one more square to complete the net.

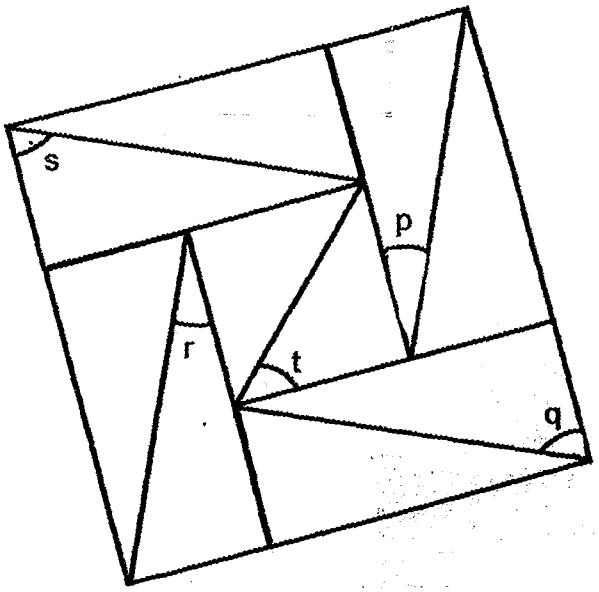


24. Claudia bought 3 pens and 4 highlighters. Each pen cost \$$g$. She gave the cashier \$5 and received a change of \$1.40. How much did the 4 highlighters cost? Leave your answers in terms of g.

Do not write in this space.

Ans : \$ _____

25. The figure below is made up of 4 identical rectangles with a square in the middle. Find the sum of $\angle p$, $\angle q$, $\angle r$, $\angle s$, and $\angle t$.

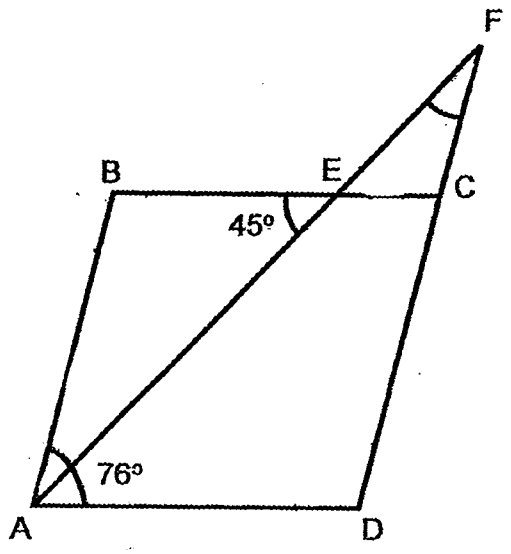


Ans : _____ °

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. In the figure below, ABCD is a rhombus. AEF and DCF are straight lines. $\angle BAD = 76^\circ$ and $\angle AEB = 45^\circ$. Find $\angle CFE$.



Ans : _____ °

27. $\frac{2}{3}$ of Elyssa's money is equal to $\frac{5}{7}$ of Gisela's money. Elyssa has \$2 more than Gisela. How much money do they have altogether?

Ans : \$_ _____

28. 6 identical cups of detergent can fill $\frac{3}{8}$ of a pail. Every cup is filled to the brim. What is the ratio of the capacity of a cup to the capacity of the pail?

Ans : _____

29. The table below shows the number of goals scored by each player of a soccer club. 60% of the players scored less than 3 goals. How many players scored only 3 goals?

Number of goals scored by each player	Number of players
0	7
1	16
2	10
3	?
4	5

Ans : _____

Do not write in this space.

30. A machine can peel 3 kg of potatoes in 5 minutes. At this rate, how many kilograms of potatoes can 4 such machines peel in 45 minutes?

Do not write in this space

Ans : _____ kg

END OF PAPER 1

Name : _____ ( )

Class : Primary 6 _____

Primary 6 Mathematics

2017 Semestral Assessment One

Paper 2

5 May 2017

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.

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)

Do not write in this space.

1. The table below shows the number of sticks of satay a stall sold last week.

Day	Number of sticks of satay sold
Monday to Friday	$7m$ per day
Saturday	$3m + 50$
Sunday	$9m - 20$

(a) How many sticks of satay did the stall sell altogether last week? Express your answer in terms of m in the simplest form.

(b) If $m = 40$, find the number of sticks of satay the stall sold last week.

Ans : (a) _____

(b) _____

2. The ratio of the number of girls to the number of boys in a sports club was 7 : 2 at first. When 63 new members joined the club, the total number of members in the sports club became 1440. How many girls were in the sports club at first?

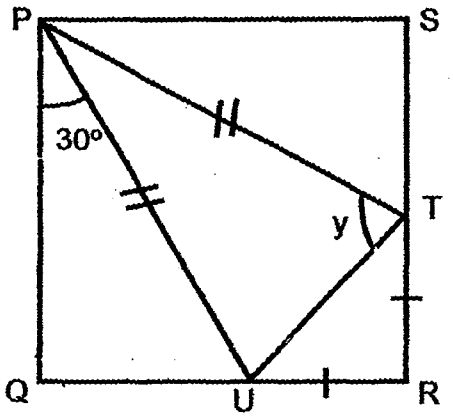
Ans : _____

3. The usual price of a pair of leather shoes was $180. Spencer bought the shoes at a discount of 25%. In addition, he paid 7% GST on the discounted price. How much was the GST?

Ans : $ _____

Do not write in this space.

4. In the figure below, PQRS is a square. TR = RU, PU = PT and $\angle QPU = 30^\circ$. Find $\angle y$.



Ans : _____ °

5. The number of participants taking part in a marathon was 15 660 this year. This was a 35% increase from the number of participants taking part last year. How many participants were there last year?

Ans : _____

Do not write in this space.

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. Mrs Deepa planned to buy some durians at the market. If she bought 12 kg of durians, she would need another $17. If she bought 8 kg of durians, she would have $9 left. How much money did she bring to the market?

Ans : _____ [3]

7. The points, A, B, C and D lie on a straight line. The ratio of the length of AB to the length of BC is 5 : 2 and the ratio of the length of AC to the length of CD is 3 : 1. Find the ratio of the length of AB to the length of AD.
Leave your answer in the simplest form.

Ans : _____ [3]

8. Christelle had some buttons. She sewed $\frac{1}{6}$ of them on some cushion covers and $\frac{1}{9}$ of the remaining buttons on some dresses. After buying 378 more buttons, she had as many buttons as she had at first. How many buttons did she sew on the dresses?

Ans : _____ [3]

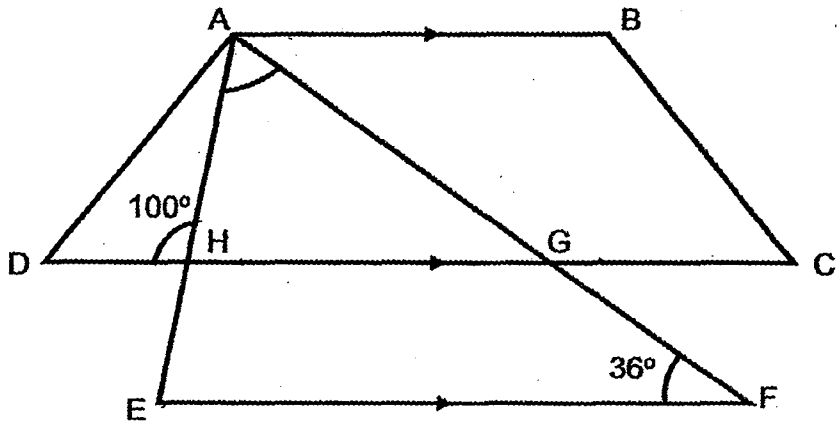
9. 60% of the members in Dance Club and 70% of the members in Media Club are girls. Both the Dance Club and Media Club have the same number of boys. There are 30 fewer girls in Dance Club than in Media Club. How many members are there in Dance Club?

Ans : _____ [3]

Do not write in this space.

10. The figure below is made up of a trapezium ABCD and a triangle AEF. $\angle AFE = 36^\circ$ and $\angle AHD = 100^\circ$. Find $\angle EAF$.

Do not write in this space.



Ans : _____ [3]

11. Emerlin bought some cups and plates. She bought 2 more plates than cups. However, she paid \$25.20 less for the plates than for the cups. Each cup cost \$2 more than each plate. Each plate cost \$2.40.

(a) How many cups did Emerlin buy?

(b) What was the total cost of the cups?

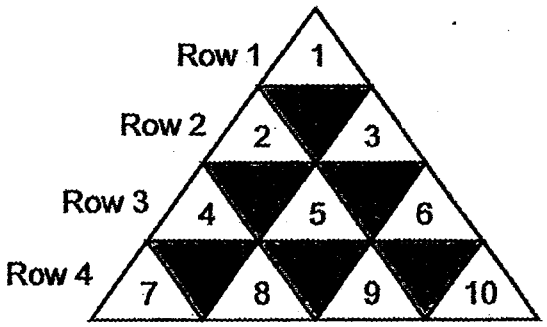
Do not write in this space.

Ans : (a) _____ [3]

(b) _____ [1]

12. Kenneth uses identical white and grey triangles to form the figure that follows a pattern as shown below.

Do not write in this space.



(a) In the whole figure, what is the total number of triangles in Row 10?

(b) There are 299 white and grey triangles altogether in a particular row. What is the total number of white triangles in that row?

(c) In which row will the number 24 be?

Ans : (a) _____ [1]

(b) _____ [2]

(c) Row _____ [1]

13. At a shop, the price of a printer is 40% of a ~~laptop~~ computer. Mrs Tan bought one printer and one computer each at a discount of 15%. She paid a total of $1904. How much money did Mrs Tan save on the two items because of the discount?

Do not write in this space.

Ans : _____ [4]

14. Petra, Nicolette and Viviana shared a packet of pearls. Petra received $\frac{3}{5}$ of the pearls and another 18 pearls. Nicolette received $\frac{1}{2}$ of the remaining pearls and another 10 pearls. Viviana received the remaining 6 pearls. How many more pearls did Petra receive than Nicolette?

Do not write in this space.

Ans : _____ [4]

15. Averine, Brayden and Catrina shared a container of cookies. Averine received $\frac{1}{4}$ of the total share of Brayden and Catrina. Brayden received $\frac{1}{3}$ of the total share of Averine and Catrina. Catrina received 42 more cookies than Brayden. How many cookies did the three children share altogether?

Do not write in this space.

Ans : _____ [4]

16. Sherrie and Lea went shopping together with a total sum of $324. Sherrie spent twice as much as Lea. The amount Lea had left was $27 more than what she had spent. She had twice as much money left as Sherrie.

Do not write in this space.

(a) How much money did Lea spend?

(b) How much money did Sherrie have at first?

Ans : (a) _____ [3]

(b) _____ [2]

17. Jillian, Kayson and Seth had the same number of mangoes for sale. Jillian sold $\frac{1}{4}$ of her mangoes and Kayson sold $\frac{1}{3}$ of his mangoes. Seth did not manage to sell any mangoes and the three of them had a total of 638 mangoes left. How many mangoes did Jillian and Kayson sell altogether?

Do not write in this space.

Ans : _____ [5]

18 Mrs Hiromi wanted 80 kg of mixed nuts. She then mixed 3 types of nuts as shown below.

Do not write in this space.

Types of nuts	Mass of 1 packet of nuts
Hazelnuts	520 g
Cashew nuts	450 g
Macadamia nuts	1.2 kg

The ratio of the number of packets of hazelnuts to the number of packets of cashew nuts to the number of packets of macadamia nuts used was 5 : 4 : 3. How many packets of nuts did she use altogether?

Ans : _____ [5]

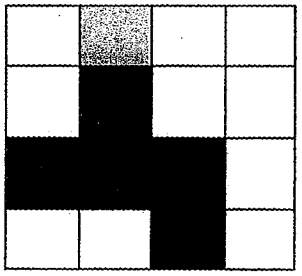
End of Paper

EXAM PAPER 2017 5 May 2017
LEVEL : PRIMARY 6
SCHOOL : CHIJ ST NICHOLAS GIRL'S SCHOOL (PRIMARY)
SUBJECT : MATHEMATICS
TERM : SEMESTRAL ASSESSMENT 1

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

Q16. 1115 **Q17. 1.05** **Q18. k + 2** **Q19. 29 stars** **Q20. 6 children**

Q21. 3 **Q22. 120** **Q23.**



Q24. (3.60 – 3g)

Q25. 225 **Q26. 31** **Q27. 58** **Q28. 1:16** **Q29. 17 players** **Q30. 108**

PAPER 2

Q1. 3n + 50 + 9m – 20 + 35m = 47m + 30
47 X 40 = 1880
1880 + 30 = 1910 Answer: a) 47m + 30 b) 1910 satay sticks

Q2. 1440 – 63 = 1377
1377 ÷ 9 = 153
153 X 7 = 1071 Answer: 1071 girls

Q3. 100 – 25 = 75
180 X 7.5 = 135
135 X 0.07 = 9.45 Answer: $9.45

Q4. (180 – 90)/2 = 45
180 – 90 – 30 = 60
180 – 60 – 45 = 75 Answer: 75

Q5. 135/100 = 27/20
27/20 → 15660
1/20 → 580
20/20 → 11600 Answer:11600 participants

Q6. 4kg → 9 + 17 = 26
1 kg → 6.50
8kg → 52
52 + 9 = 61 **Answer: $61**

Q7. 5 + 2 = 7
7 X 3 = 21
3 X 5 = 15
3 X 2 = 6
15 + 6 + 7 = 28 **Answer: 15:28**

Q8. 1 – 1/6 = 5/6
1/9 X 5/6 = 5/54
1/6 + 5/54 = 7/27
7/27 → 378
1/27 → 378/7 = 54
1/54 → 27
5/54 = 135 **Answer: 135 buttons**

Q9. 70% = 7/10
60% = 3/5
1 – 3/5 = 2/5 = 6/15
1 – 7/10 = 3/10
5u → 30
1u → 6
15u → 90 **Answer: 90 members**

Q10. 180 – 80 = 100
180 – 36 – 80 = 64 **Answer: 64°**

Q11. 2 + 2.40 = 4.40
2.4 X 2 = 4.80
25.2 – 2.8 = 20.4
20.4 X 2 = 40.8
40.8 ÷ 2.4 = 17
17 - 2 = 15
15 X 4.4 = $66 **Answer: a) 15 cups b) $66**

Q12. 10 + 9 = 19
299 – 149 = 150 **Answer: a) 19 triangles b) 150 c) Row 7**

Q13. 40% X 0.15 = 6%
15/100 = 0.15
40 – 6 = 34
100 – 15 = 85
34 + 85 = 119
1% → 1904/119 = 16
100 + 40 =140
140 X 16 = 2240
2240 – 1904 = 330 Answer: $336

Q14. 10 + 6 = 16
16 X 2 = 32
16 + 10 = 26
32 + 18 = 50
50/2 = 25
25 X 3 = 75
75 + 18 = 93
93 – 26 = 67 Answer: 67 pearls

Q15. 1:4 = 4:16 1:3 = 5:15
16 – 5 = 11
11 – 5 = 6
42/6 = 7
16 + 4 = 20
20 X 7 = 140 Answer: 140 cookies

Q16. 27/2 = 13.50
324 – 27 – 13.50 = 283.50
283.50/9 = 31.50
31.50 X 2 = 63
31.50 X 5 = 157.50
157.50 + 13.50 = 171 Answer: a) $63 b) $171

Q17. 3 X 4 = 12
12 X 3 = 36
36 – 3 – 4 = 29
638/29 = 22
22 X 7 = 154 Answer: 154 mangoes

Q18. 50 X 0.52 = 26
40 X 0.45
36 + 18 + 26 = 80
50 + 40 + 30 = 120 Answer: 120 packets of nuts

END

Anglo-Chinese School (Junior)/
Anglo-Chinese School (Primary)

2017 PRELIMINARY EXAMINATION
MATHEMATICS
PAPER 1 (BOOKLET A)
PRIMARY SIX

Name: _____ ( ) Class: Primary 6 ___

Date: 23 August 2017 Duration of Booklets A & B: 50 minutes

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of **10** printed pages, including the cover page.
2. Do not turn this page until you are told to do so.
3. Follow all instructions carefully.
4. Shade your answers on the Optical Answer Sheet (OAS) provided.
5. 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 (OAS). (20 marks)

1. Mrs Lim bought a car for $119 815.

   What is this amount when rounded off to the nearest $1000?

   1) $119 000
   2) $119 800
   3) $119 900
   4) $120 000

2. What is the missing number in the box?

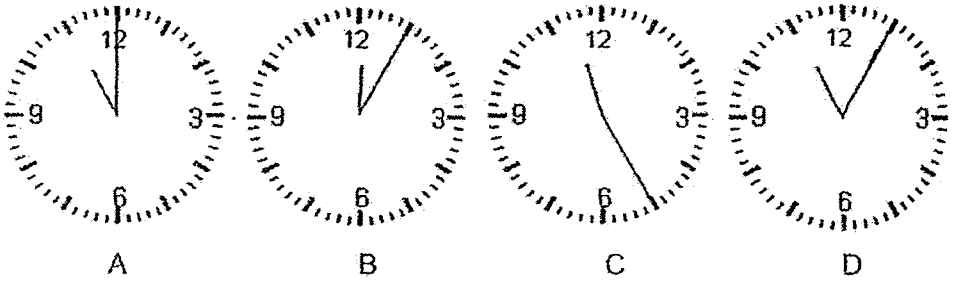
$$\frac{3}{11} \div \frac{2}{11} + \frac{2}{11} = \boxed{} \times \frac{1}{11} \div \frac{1}{11}$$

   1) 5
   2) 6
   3) 7
   4) 8

3. Find the value of $\frac{3w}{2} - w + 4$ when $w = 18$.

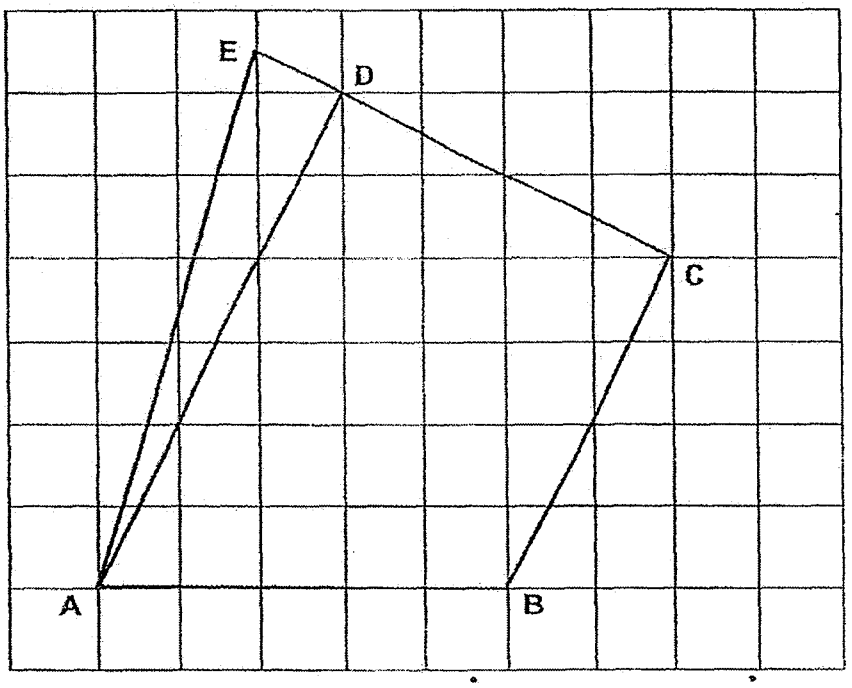
1) 5
2) 9
3) 13
4) 45

4. In the 4 clocks below, labelled A, B, C and D, which two clocks have a time difference of 20 minutes?



1) B and D
2) B and C
3) A and C
4) C and D

5. Which two lines in the square grid below are perpendicular to each other?



1) AE and EC
2) AE and BC
3) AD and BC
4) AD and EC

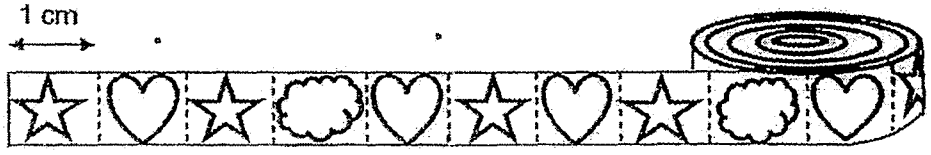
6. A cube has 4 of its faces painted in blue. The total area painted in blue is 64 cm^2. What is the volume of the cube?

1) 4 cm^3
2) 64 cm^3
3) 256 cm^3
4) 512 cm^3

7. Mrs Yeo has 110 gummies to be packed in gift bags. Each gift bag can hold a maximum of 6 gummies. What is the smallest number of gift bags she needs?

1) 16
2) 17
3) 18
4) 19

8. A roll of stickers is made up of stickers of star, heart and cloud shapes. The shapes are repeated in the pattern as shown below. Each shape sticker takes up about 1 cm of the roll of stickers.

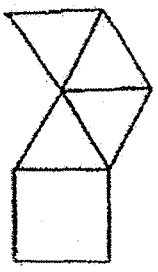


Geoff gave away 1 m of the roll of stickers. How many heart shaped stickers would he have given away?

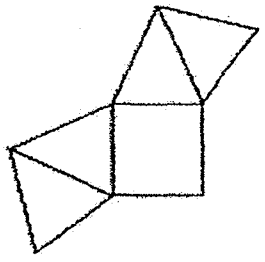
1) 20
2) 25
3) 40
4) 50

9. Which of the following is not a net of a pyramid?

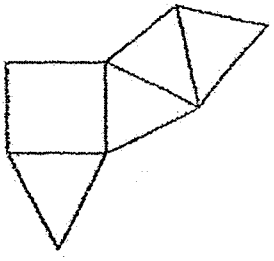
1)



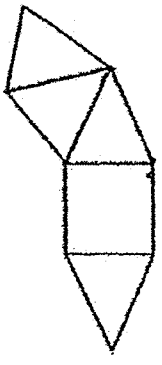
2)



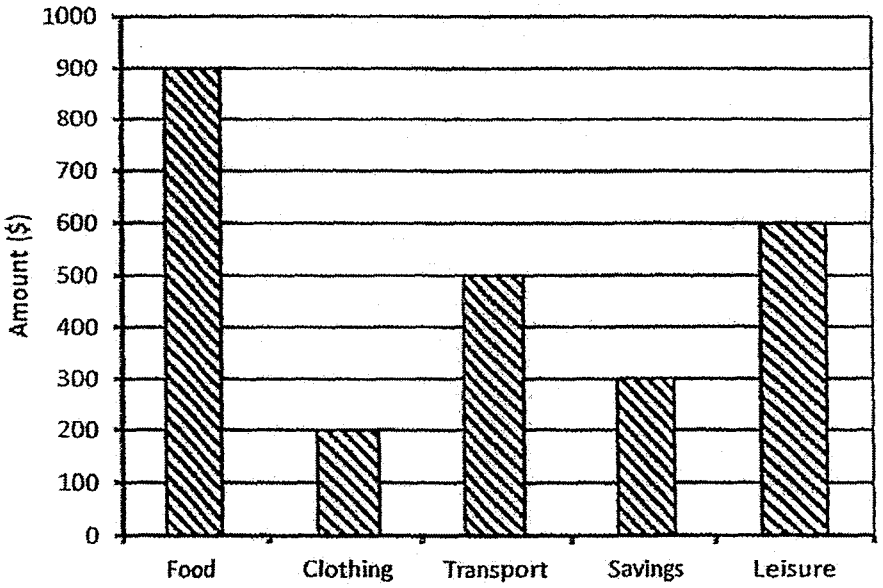
3)



4)



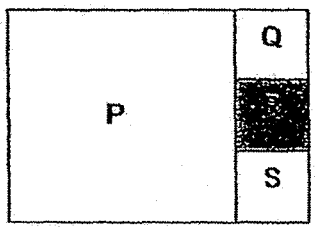
10. The bar graph below shows the expenditure of Mr Lee.



On which item does he spend $\frac{2}{3}$ as much as the amount he spends on food?

1) Clothing
2) Transport
3) Savings
4) Leisure

11. The figure is made up of 4 squares, P, Q, R and S. What fraction of the figure is square R?



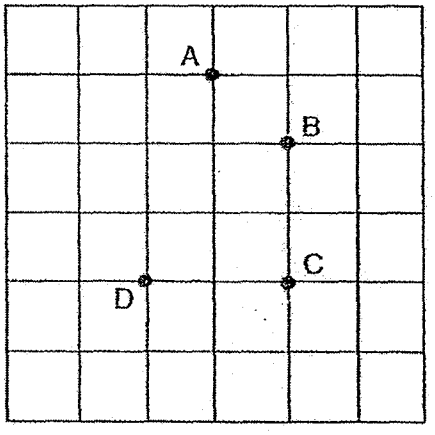
1) $\frac{1}{3}$

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

3) $\frac{1}{9}$

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

12.



Refer to the square grid above, which of the following statements is true?

1) Point B is south of Point A.
2) Point C is north of Point B.
3) Point A is north-east of Point D.
4) Point D is south-west of Point B.

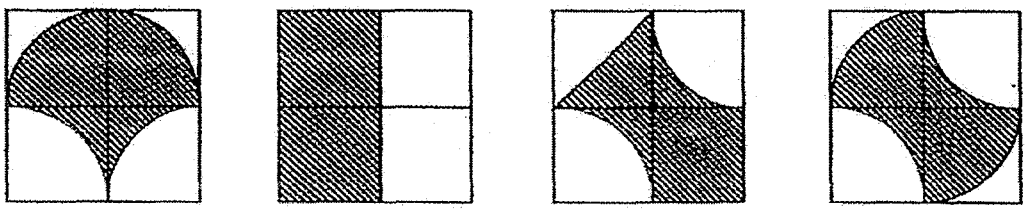
13. The average height of 3 children, Aaron, Benjamin and Coen, was 150 cm. Aaron was 9 cm taller than Benjamin and Benjamin was 12 cm shorter than Coen. Find the height of Benjamin.

1) 143 cm
2) 152 cm
3) 155 cm
4) 164 cm

14. A sum of money was shared among Jonathan, Benny and Samuel in the ratio 4 : 8 : 5. If Jonathan and Benny received $252 more than Samuel, how much money did Samuel receive?

1) $105
2) $180
3) $240
4) $315

15. In the 4 diagrams below, labelled A, B, C and D, which 3 of them have the same shaded area?



A B C D

1) A, B, C

2) A, B, D

3) B, C, D

4) A, C, D

PRELIMINARY EXAMINATION 2017
MATHEMATICS
PAPER 1 (BOOKLET B)
PRIMARY SIX

Name: _____ ( ) Class: Primary 6 _____

Date: 23 August 2017 Duration of Paper Booklets A & B: 50 minutes

_____
Parent's/Guardian's signature

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 8 printed pages, including the cover page.
2. Do not turn this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. You are not allowed to use a calculator.

Section	Maximum marks	Marks Obtained
Paper 1 Booklet A. Multiple-Choice Questions	20	
Paper 1 Booklet B. Short Answers: Part 1	10	
Paper 1 Booklet B. Short Answers: Part 2	10	
Total Marks	40	

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. Find the value of $80 - 56 \div 8 \times 6$.

Ans : _____

17. Express $6\frac{3}{8}$ as a decimal.

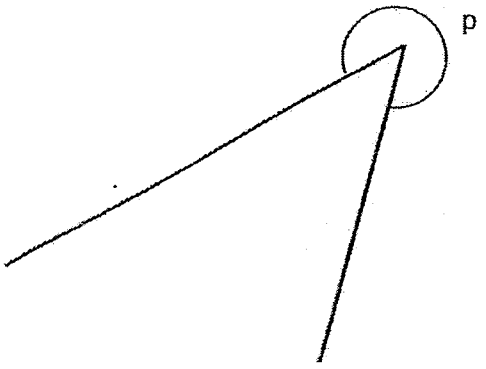
Ans : _____

18. 3 girls share 2 identical butter cakes equally.
5 boys share 4 identical butter cakes equally.
What is the difference between each boy's and each girl's share?

Ans : _____

Sub-Total : [ ]

19. Measure and write down the size of $\angle p$ in the figure.



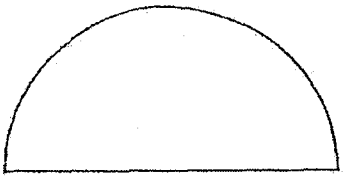
Ans : _____ °

20. At a class gathering, $\frac{1}{5}$ of the girls is equal to $\frac{2}{7}$ of the boys. Express the total number of boys as a fraction of the total number of girls.

Ans :

Sub-Total :

21. What is the perimeter of a semicircle of diameter 7 cm?
(Take $\pi = \frac{22}{7}$)

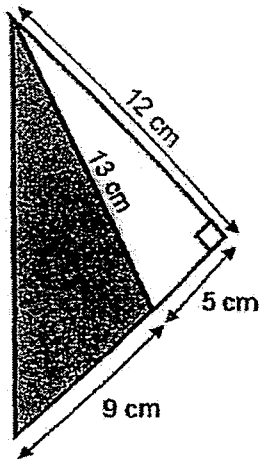


Ans : _____ cm

22. 7 machines can produce k cupcakes. How many cupcakes will 3 such machines produce?

Ans : _____

23. Find the area of the shaded part.



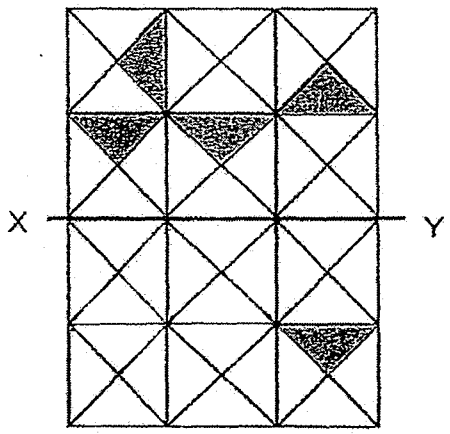
Ans : _____ cm^2

Sub-Total : [ ]

24. Find the area of a circle of diameter 20 cm. (Take $\pi = 3.14$)

Ans : _____ cm^2

25. The figure below is made up of identical triangles. Five of them are shaded. Shade three more triangles so that XY is the line of symmetry for the figure.



Sub-Total :

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. Mr Wong has some bookmarks. If he gives each of his pupils 4 bookmarks, he will have 8 bookmarks left. If he gives each of his pupils 6 bookmarks instead, he will be short of 10 bookmarks. How many bookmarks did Mr Wong have?

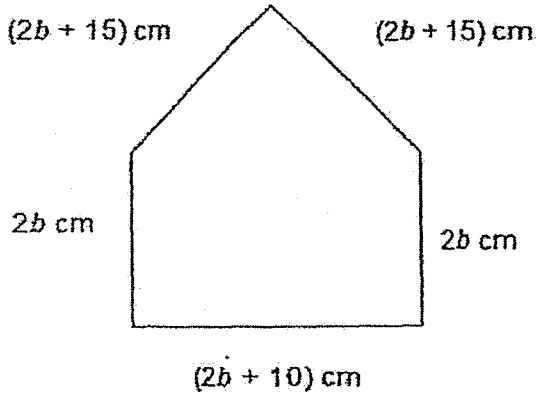
Ans : _____

27. A school has 1 500 pupils. 40% of them are girls. 60% of the boys go to school by school bus. How many boys go to school by school bus?

Ans : _____

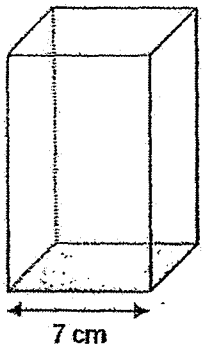
Sub-Total : [ ]

28. John had 1.5 m of wire. He used some of it to form a shape as shown below. If $b = 5$, how much of the wire was **not** used to make the shape?



Ans : _____ cm

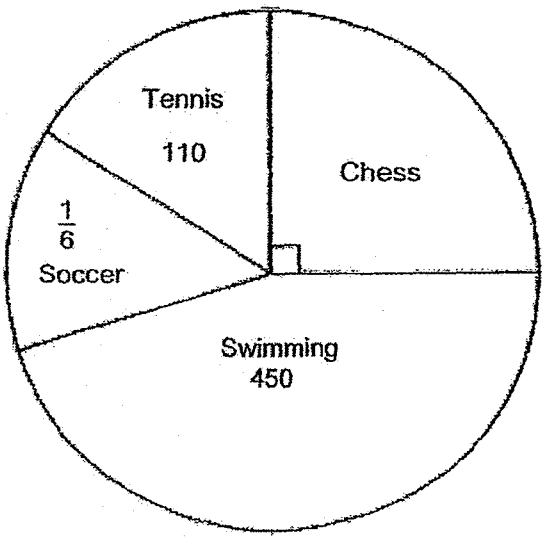
29. A rectangular vase has a square base. The height of the vase is twice the length of the square. Find the volume of the vase.



Ans : _____ cm^3

Sub-Total : [ ]

30. The pie chart below shows the results of a survey carried out among Primary 5 and Primary 6 pupils in a school to find out the favourite sport among the pupils.



How many pupils chose Chess as their favourite sport?

Ans : _____

Sub-Total :

2017 PRELIMINARY EXAMINATION
MATHEMATICS
PAPER 2
PRIMARY SIX

Name: _____ ( ) Class: Primary 6 ____

Date: 23 August 2017 Duration of Paper 2: 1 hour 40 minutes

_____
Parent's/Guardian's signature

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 16 printed pages, including the cover page.
2. Do not turn this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. You are allowed to use a calculator.

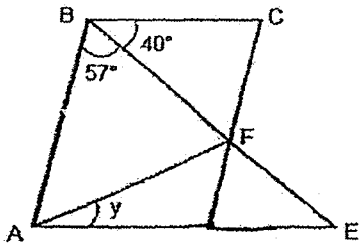
Section	Maximum Marks	Marks Obtained
Paper 2 Section A. Short Answers	10	
Paper 2 Section B. Problem Sums	50	
Total Marks	60	

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. A restaurant is having a promotion on buffet. The price of the buffet is \$38 per customer. For every 3 paying customers, the 4th customer will dine for free. What is the greatest number of customers who dined at the buffet if \$608 was spent?

Ans : _____

2. In the diagram, ABCD is a parallelogram. ADE and BFE are straight lines. AF = BF, ∠ABF = 57° and ∠CBF = 40°. Find ∠y.



Ans : _____ °

Sub-Total :

3. A rectangular container with a base of 30 cm by 20 cm and height 10 cm was partially filled with water. After another 1500 cm^3 of water was poured in, the container was completely filled. What was the height of the water level at first?

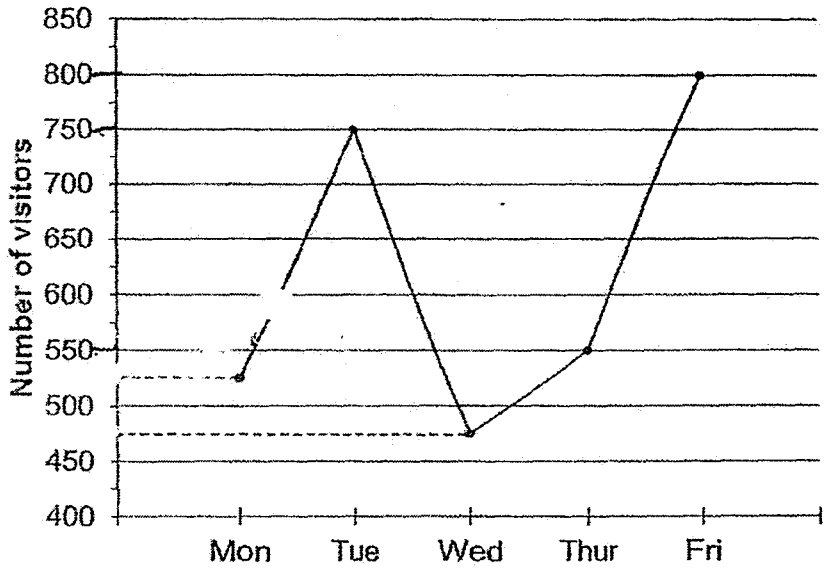
Ans : _____ cm

4. Jim was at the Airport in country A. At 2.15 p.m., he flew off to country B and arrived there 2 hours later and saw that the clock in country B showed 3.15 p.m. If the time in country A is 10 p.m., what time is it in country B?

Ans : _____ p.m.

Sub-Total :

5. The line graph shows the number of visitors to the museum over five days.



What is the percentage of the total number of visitors who visited the museum on Monday? Round off your answer to the nearest 1 decimal place.

Ans : _____ %

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. Mrs Amin spent an equal amount of money on 4 apple pies and 7 curry puffs at a bakery. Each apple pie costs 90 cents more than each curry puff. How much did Mrs Amin spend altogether?

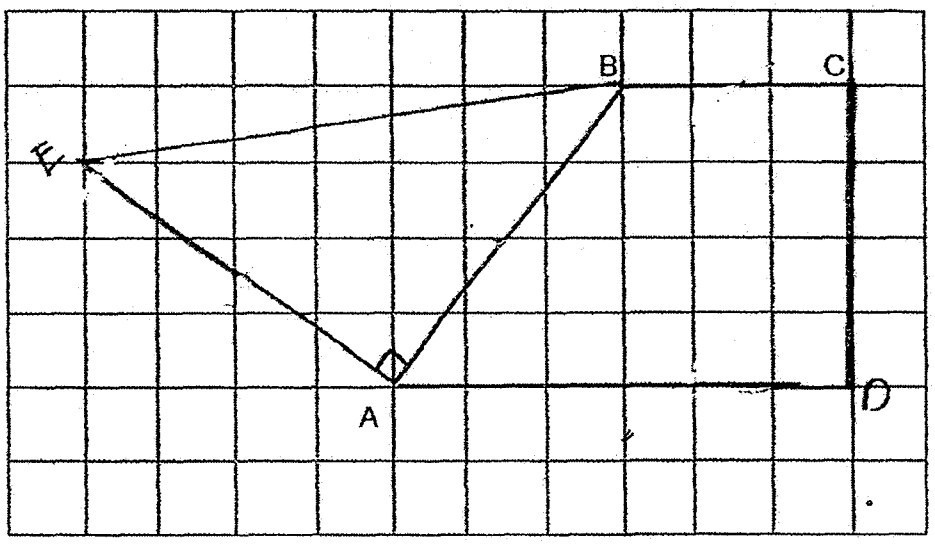
Ans : _____ [3]

Sub-Total :

7. In the square grid below, two sides of a trapezium ABCD have been drawn.

a) Complete the drawing of the trapezium within the grid such that BC is parallel to AD and AD is twice the length of BC. [1]

b) AB also forms one side of a triangle ABE in which AB = AE and ∠BAE is a right angle. [2]

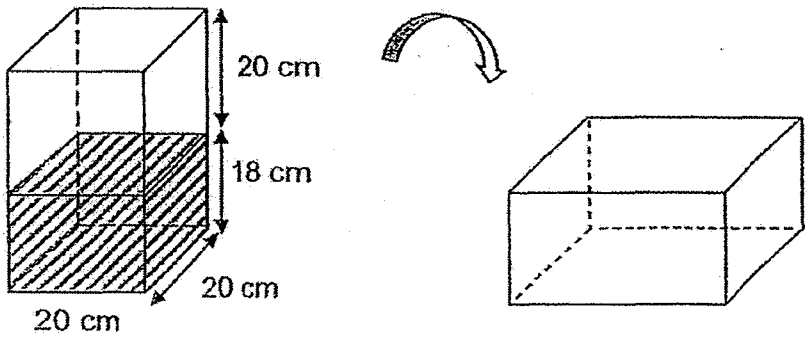


8. Caleb bought a camera with 40% of his money and a radio which costs $83 less than the camera. If he spent $265 altogether, how much money did he have at first?

Ans : _____ [3]

Sub-Total :

9. A rectangular container measuring 20 cm by 20 cm by 38 cm is completely sealed so that the water cannot be removed. The height of the water level is 18 cm. When it is turned to the side as shown below, what would the height of the water level be? Give your answer correct to 2 decimal places.



Ans : _____ [3]

Sub-Total :

10. The table below shows the number books read by each pupil in a class of 40 pupils. One of the numbers in the table is covered by an ink blot.

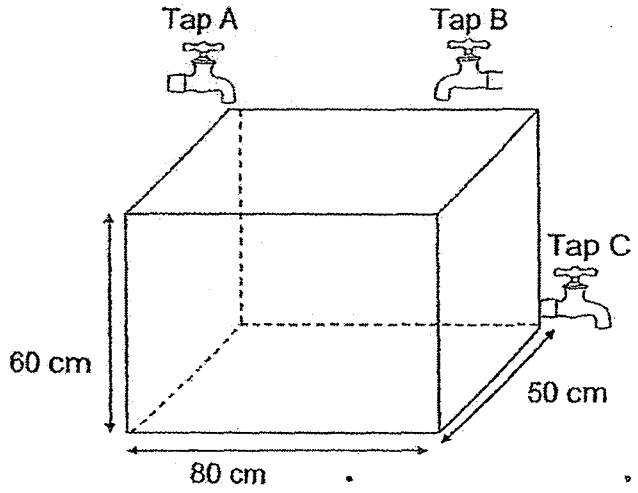
Number of books read by each pupil	0	14	
Number of pupils	4	20	16

The average number of books read by the pupils in the class is 9.
What is the number covered by the ink blot?

Ans : _____ [3]

Sub-Total :

11. The figure below shows an empty rectangular tank measuring 80 cm by 50 cm by 60 cm.
Water flows from Tap A into the tank at a rate of 8 litres per minute and from Tap B at a rate of 6 litres per minute. Tap C drains water from the tank at a rate of 4 litres per minute. At 1 p.m., Tap A was turned on. At 1.15 p.m., Taps B and C were also turned on. At what time will the tank be completely filled with water?



Ans : _____ [4]

Sub-Total :

12. Jasmine spent $\frac{4}{9}$ of her money on 6 mugs. She bought another 3 identical mugs and 10 files with the rest of her money.

a) What fraction of her money did she spend on the 10 files?

b) How many files could she buy if she had spent all her money on files only?

Ans : a)_____ [2]

b)_____ [2]

Sub Total :

13. Mr Gopal spent $\frac{1}{5}$ of his money on 5 mechanical pencils and 12 highlighters. The cost of each mechanical pencil is 3 times the cost of each highlighter. He bought some more of the same mechanical pencils with $\frac{1}{3}$ of his remaining money.

a) What fraction of his money was spent on the additional mechanical pencils?

b) How many mechanical pencils did he buy altogether?

Ans : a) _____ [1]

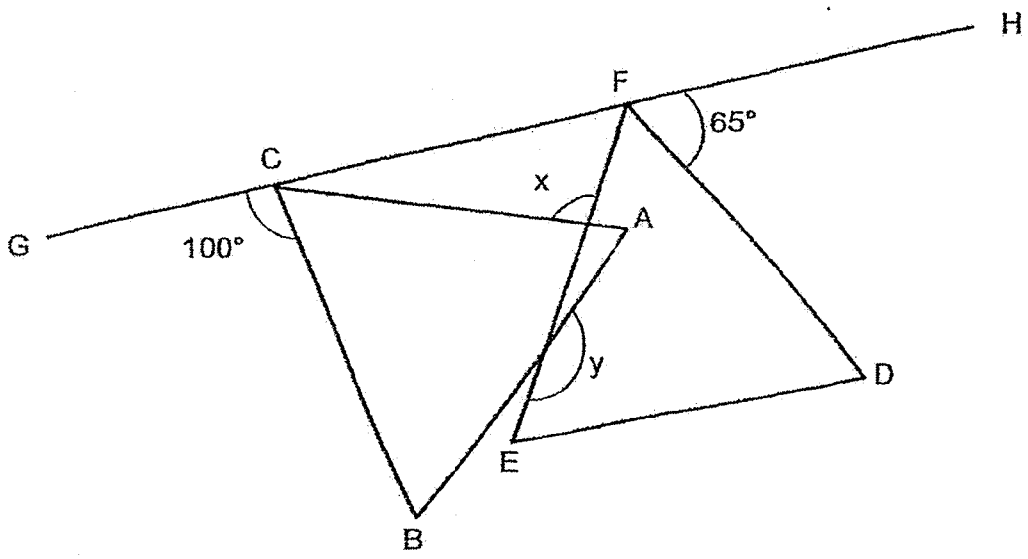
b) _____ [3]

Sub-Total :

14. In the diagram below, ABC and DEF are equilateral triangles. GCFH is a straight line. $\angle DFH = 65°$ and $\angle GCB = 100°$.

a) Find $\angle x$.

b) Find $\angle y$.



Ans : a) _____ [2]

b) _____ [2]

Sub-Total :

15. At 9 a.m., Katie left Sunville and drove towards the city at an average speed of 60 km/h. Two hours later, Perry also left Sunville and drove along the same route as Katie. After travelling 270 km, Perry caught up with Katie.

(a) What was Perry's average speed?

(b) How far apart would they be at 3 p.m.?

Ans : a)_____ [2]

b) _____ [2]

Sub-Total :

16. At a florist, roses are sold at 4 stalks for \$9 while carnations are sold at 7 stalks for \$6. Mrs Ting bought an equal number of stalks of roses and carnations. She spent \$117 more on the roses.

a) How many stalks of flowers did she buy altogether?

b) Her sister visited the same florist and spent an equal amount of money on the stalks of roses and carnations. What fraction of the stalks of flowers she bought were roses?

Ans : a)_____ [3]

b) _____ [2]

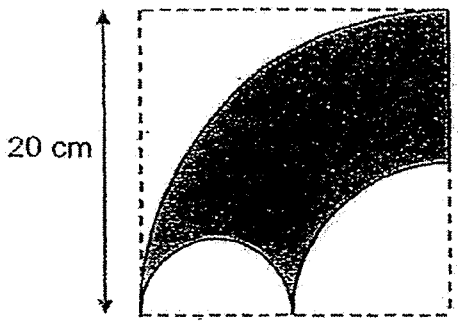
Sub-Total :

17. A figure is drawn on a square piece of paper of side 20 cm. Its outline consists of a large quadrant, 1 smaller quadrant, a semi-circle and a straight line. The radius of the smaller quadrant is twice the radius of the semi-circle.

For each of the following, use the calculator value of π to find

a) the perimeter of the figure correct to 2 decimal places,

b) the area of the figure correct to 2 decimal places.



Ans : a) _____ [2]

b) _____ [3]

Sub-Total :

18. The total number of sweets in Container A, Container B, Container C and Container D was 450. After I doubled the number of sweets in Container A, took out half of the sweets in Container B, added 50 sweets to Container C and took out 40 sweets from Container D, the number of sweets in Container A to Container B to Container C to Container D is then in the ratio 1 : 2 : 3 : 4.

a) What is the ratio of the number of sweets in Container A to the number of sweets in Container B at first?

b) What is the total number of sweets in the four containers in the end?

Ans : a) _____ [2]

b) _____ [3]

End of Paper 2

Sub-Total :

ANSWER KEY

YEAR	:	2017
LEVEL	:	PRIMARY 6
SCHOOL :	:	ANGLO-CHINESE (JUNIOR/PRIMARY)
SUBJECT :	:	MATHEMATICS
TERM	:	PRELIMINARY EXAMINATION

Paper 1

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

Q16 38

Q17 *6.375*

Q18 *2/15*

Q19 *315°*

Q20 $\frac{7}{12}$

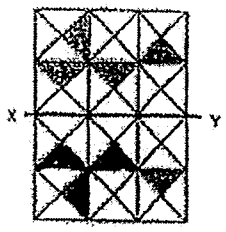
Q21 18 *cm*

Q22 $\frac{3k}{7}$

Q23 54 cm^2

Q24 314 cm^2

Q25



Q26 44 bookmarks

Q27 540 boys

Q28 60 cm

Q29 686 cm^3

Q30 240 pupils

<u>Paper 2</u>

Q1 21 customers

Q2 26°

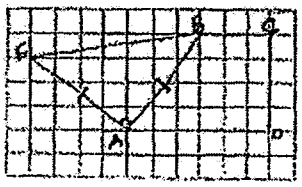
Q3 30 x 20 x 10 = *6000*
6000 – 1500 = 4500
4500 ÷ 30 ÷ 20 ⇒ 7.5cm

Q4 *9pm*

Q5 *525 + 750* + 475 + *550 + 800 = 3100*
3100 ÷ *100* = 31
525 ÷ 31 = 16.9354 ≈ *<u>16.9°</u>*

Q6 4a = 7c
4 x 0.9 = 3.6
3.6 ÷ 3 = 1.2
1.2 x 7 x 2 ⇒ $16.80

Q7 (a & b)



Q8 40% on camera }
40% - 83 on radio } 265
265 + 83 = 348
348 ÷ 80 = 4.35
4.35 x 100 ⇒ <u>$435</u>

Q9 $20 \times 20 \times 18 = 7200$
$7200 \div 38 \div 20 = 9.4736 \approx$ <u>9.47 cm</u>

Q10 $9 \times 40 = 360$
$20 \times 14 = 280$
$360 - 280 = 80$
$80 \div 16 \Rightarrow$ <u>5</u>

Q11 $8000 \times 15 = 120000$
$60 \times 80 \times 50 = 240000$
$240000 - 120000 = 120000$
$8 + 6 - 4 = 10$
$120000 \div 10000 = 12$
1:15 pm + *12 min* $\Rightarrow$ *1:27 pm*

Q12 (a) $\frac{4}{9} = 6$ *mugs*

$\frac{2}{9} = 3$ mugs

$\frac{6}{9} = 9$ mugs

$\frac{9}{9} - \frac{6}{9} \Rightarrow \frac{3}{9}$

(b) $\frac{3}{9} \times 3 = \frac{9}{9}$

$10 \times 3 \Rightarrow$ <u>30 files</u>

Q13 (a) $\frac{4}{15}$

(b) 17 pencils

Q14 (a) $\angle CFE = 180° - 60° - 65° \rightarrow 55°$
$\angle FCA = 180° - 100° - 60° \rightarrow 20°$
$\angle x = 180° - 20° - 55° \Rightarrow$ <u>105°</u>

(b) $\angle CJB = 180° - 105° \rightarrow 75°$
$\angle EJA = 180° - 75° \rightarrow 105°$
$\angle y = 180° - (180° - 105° - 60° \Rightarrow$ <u>165°</u>

Q15 (a) $270 - 120 = 150$
$150 \div 60 = 2.5$ hr
$270 \div 2.5 \Rightarrow$ <u>108 km/h</u>

(b) $108 \times 1\frac{1}{2} = 162$

$60 \times 1\frac{1}{2} = 90$

$162 - 90 \Rightarrow$ <u>70 km</u>

Q16 (a) 168 *stalks*

(b) $\frac{8}{29}$

Q17 (a) $40 \times \frac{1}{4} \times \pi = 10$

$10 \times \frac{1}{2} \times \pi = 5$

$20 \times \frac{1}{4} \times \pi = 5$

$10\pi + 5\pi + 5\pi + 10 = 72.8318 \approx$ <u>*72.83cm*</u>

(b) *196.35cm2*

Q18 (a) 1 : 8

(b) $450 - 40 = 410$
$410 + 50 = 460$
$460 \div 23 = 20$
$20 \times 20 \Rightarrow$ <u>400 sweets</u>

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION TWO (2017)

PRIMARY SIX

MATHEMATICS

PAPER 1

(BOOKLET A)

Name : _____( )

Class : Primary 6 _____

Date : 23 August 2017

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.

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 16 641 to the nearest hundred.

   (1) 16 000

   (2) 16 600

   (3) 16 700

   (4) 17 000

---

2. Which one of the following is the same as 3090 g?

   (1) 3 kg 9 g

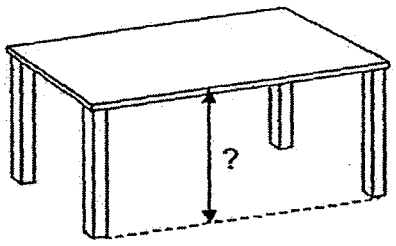
   (2) 3 kg 90 g

   (3) 30 kg 9 g

   (4) 30 kg 90 g

---

3. Which one of the following is likely to be the height of a dining table top from the ground?



   (1) 8.5 cm

   (2) 8.5 m

   (3) 85 cm

   (4) 85 m

(Go on to the next page)

4. What is the value of 2 ones, 8 tenths and 14 hundredths?

(1) 2.804

(2) 2.814

(3) 2.84

(4) 2.94

---

5. Which one of the following has the same value as $7 \div \frac{3}{5}$?

(1) $\frac{7}{1} \times \frac{5}{3}$

(2) $\frac{7}{1} \times \frac{3}{5}$

(3) $\frac{1}{7} \times \frac{3}{5}$

(4) $\frac{1}{7} \times \frac{5}{3}$

---

6. Express 0.7% as a fraction.

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

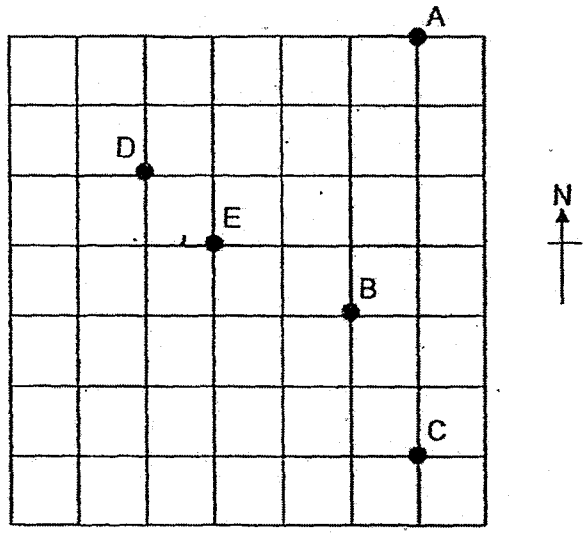
(2) $\frac{7}{10}$

(3) $\frac{7}{100}$

(4) $\frac{7}{1000}$

(Go on to the next page)

7. Five landmarks A, B, C, D and E on a map are shown in the square grid below.



Dennis is at landmark E.
He faces west and turns 135° anti-clockwise.
Which one of the following landmark is he now facing?

(1) A

(2) B

(3) C

(4) D

---

8. Wendy paid $280 for 3 similar shirts and 2 similar belts. The price of each belt is half the price of each shirt. What is the price of each belt?

(1) $35

(2) $40

(3) $56

(4) $70

(Go on to the next page)

9. Jane used a packet of flour to bake some muffins and cupcakes. After using $\frac{2}{5}$ of the packet of flour for muffins and 210 g of flour for cupcakes, she had 150 g of flour left. What was the mass of flour used for the muffins?

(1) 70 g

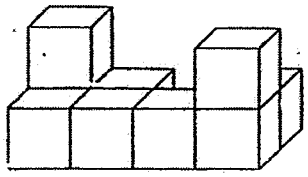
(2) 120 g

(3) 240 g

(4) 600 g

---

10. The solid shown is formed using some unit cubes.
How many unit cubes are used to form the solid?



(1) 8

(2) 9

(3) 10

(4) 11

---

11. The price of a Pego figure set was $20. Sally bought one such figure set and had to pay 7% GST on the price. How much did she pay for the Pego figure set?

(1) $1.40

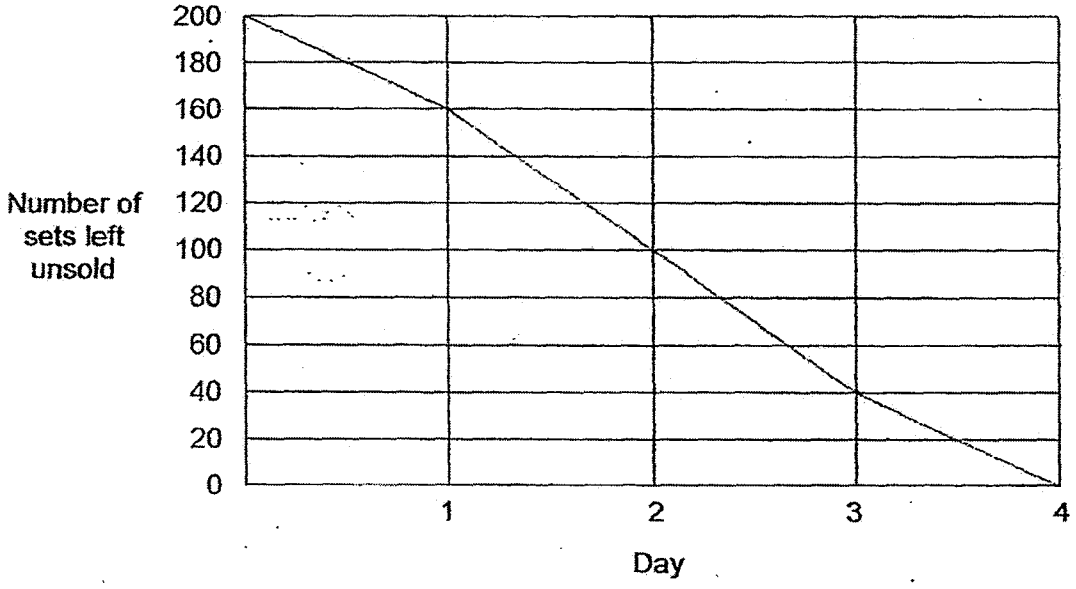
(2) $9.80

(3) $21.40

(4) $27

(Go on to the next page)

12. A toy store sold 200 sets of brick games during a 4-day sale. The line graph shows the number of sets left unsold at the end of each day.



What percentage of the brick games were sold at the end of Day 3?

(1) 20%

(2) 40%

(3) 60%

(4) 80%

---

13. John had thrice as many local stamps as foreign stamps. After giving away 59 local stamps and 11 foreign stamps, John had equal number of local and foreign stamps left. How many foreign stamps were there at first?

(1) 24

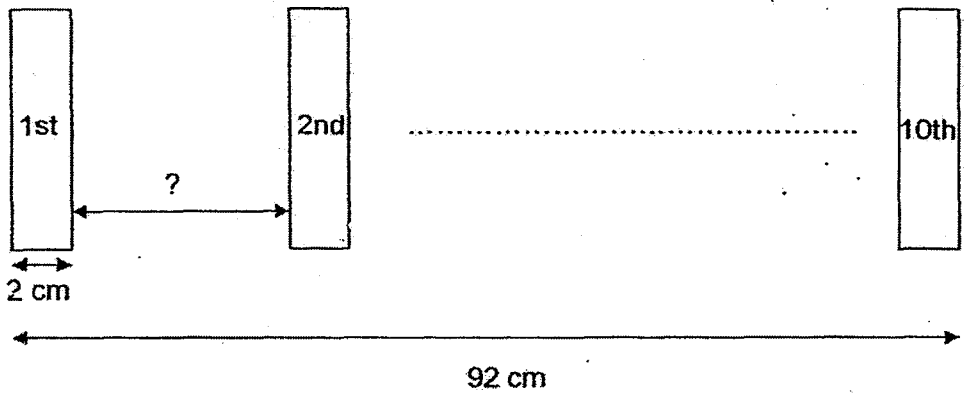
(2) 35

(3) 72

(4) 105

(Go on to the next page)

14. 10 identical rectangular cards are placed in a straight line at equal distance from one card to the next card.



How far apart is one rectangular card from the next one?

(1) 7.2 cm

(2) 8 cm

(3) 9 cm

(4) 9.2 cm

---

15. A box contained equal number of red and blue marbles. The blue marbles are repacked into 2 smaller bags in the ratio 5 : 7. The difference in the number of marbles between the two bags is 30 marbles. How many marbles were there in the box at first?

(1) 90

(2) 105

(3) 180

(4) 360

END OF BOOKLET A

PRELIMINARY EXAMINATION (2017)

PRIMARY SIX

MATHEMATICS

PAPER 1

(BOOKLET B)

Name : _____ ( )

Class : Primary 6 _____

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)

Do not write in this space

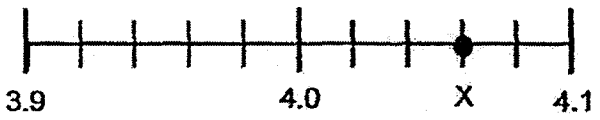
16. Write one million, ten thousand and ninety in numerals.

Ans: _____

17. Find the value of 56 – (20 ÷ 5) x 3 + 1

Ans: _____

18. The number line below is marked at equal intervals.
What is the value of X?



Ans: _____

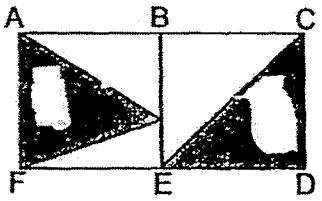
(Go on to the next page)

19. Write down all the common factors of 30 and 36.

Do not write in this space

Ans:_____

20. Figure ABCDEF is made up of 2 identical squares ABEF and BCDE.
What fraction of the figure is shaded?
Give your answer in the simplest form.



Ans: _____

21. Find the value of $\frac{8m}{3} - m$ when $m = 6$.

Ans:_____

(Go on to the next page)

22. The table shows the car park charges at a car park.

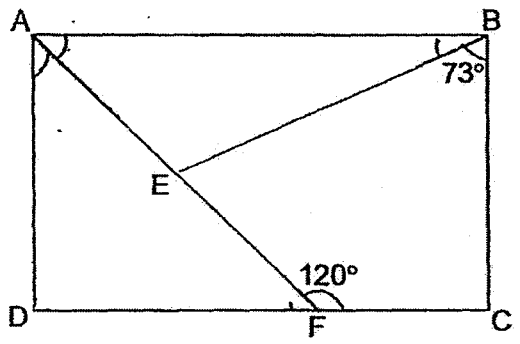
First hour	\$2.50
Every subsequent $\frac{1}{2}$ hour or part thereof	\$1.50

Mrs Lee parked in the car park from 8.45 a.m. to 11.00 a.m. on the same day. How much did she pay for the car park charges?

Ans:\$ _____

Do not write in this space

23. In the figure, ABCD is a rectangle. AEF is a straight line. Find ∠BEF.

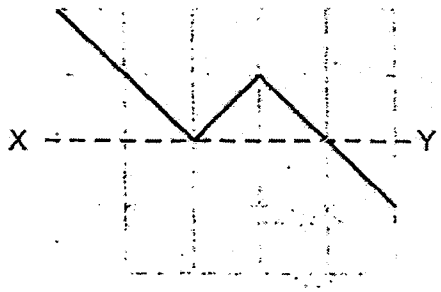


Ans: _____

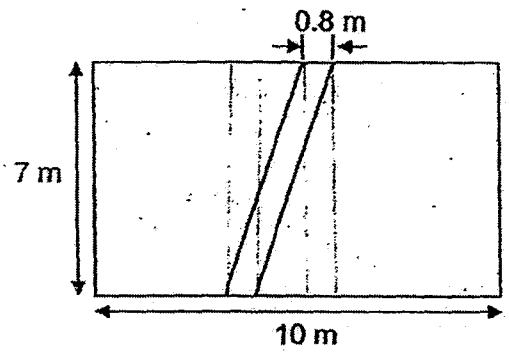
(Go on to the next page)

24. In the square grid below, three straight lines are drawn.
Draw three more straight lines to form a symmetric figure with XY as the line of symmetry.

Do not write in this space



25. The figure below shows a rectangular garden of length 10 m and breadth 7 m with a footpath of 0.8 m wide. What is the area of the garden excluding the footpath?



Ans: _____ m^2

marks for questions 16 to 25

(Go on to the next page)

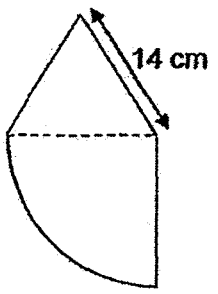
Questions **26** to **30** carry 2 marks each. Show your working and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

26. At a fruit stall, 3 mangoes cost as much as 2 papayas. Each papaya costs \$0.70 more than a mango. What is the cost of a papaya?

Ans: \$_____.

27. The figure below is made up of a quarter circle and an equilateral triangle. Find the perimeter of the figure. Give your answer in terms of π.

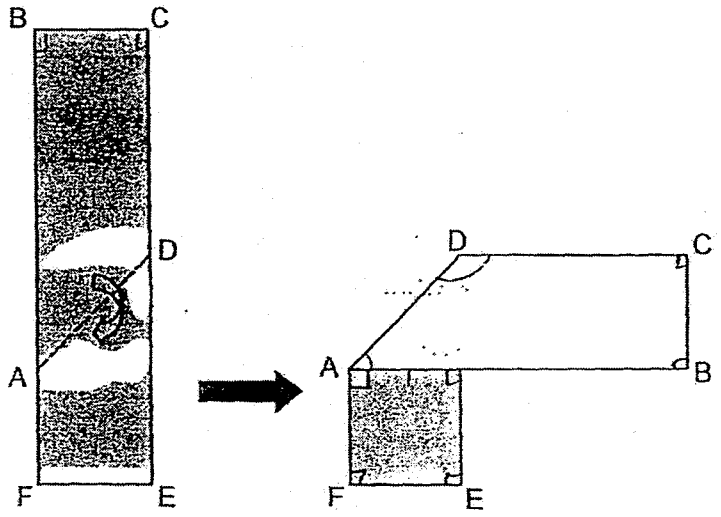


Ans: _____ cm

(Go on to the next page)

28. A rectangular piece of paper BCEF is folded along the dotted line AD as shown below. Find ∠ADC.

Do not write in this space



Before folding

After folding

Ans: _____ °

29. Some chicken nuggets were shared among a group of children. When each child tried taking 5 chicken nuggets, there were 12 chicken nuggets left over. When each child tried to take 8 chicken nuggets, they found that they needed 6 more nuggets. How many children were there in the group?

Ans: _____

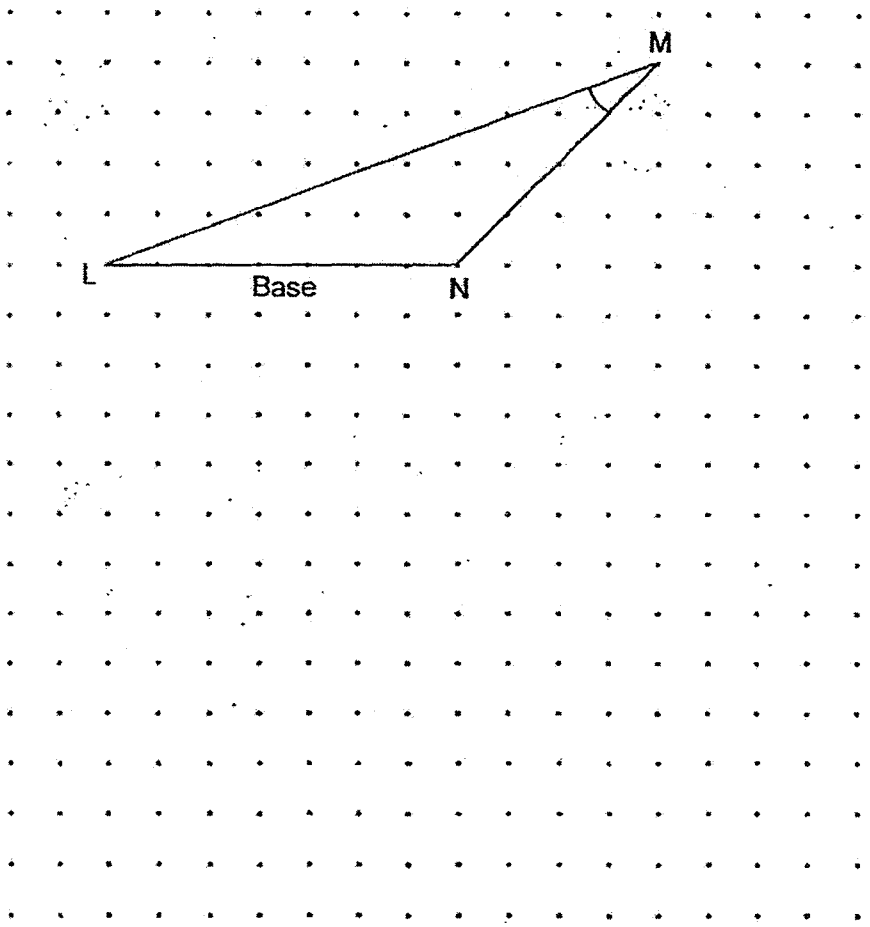
(Go on to the next page)

30. A triangle LMN is drawn by joining dots on the square grid below with three straight lines.

Do not write in this space

(a) Measure and write the size of ∠LMN.

(b) In the same way, draw a right-angled triangle with the same area as triangle LMN and the same base LN.



Ans: (a) _____ °

Total marks for questions 26 to 30

END OF BOOKLET B
END OF PAPER 1

PRELIMINARY EXAMINATION (2017)

PRIMARY SIX

MATHEMATICS

PAPER 2

Name : _____ ( )

Class : Primary 6 _____

Paper 1 Booklet A	20
Paper 1 Booklet B	20
Paper 2	60
Total Marks	100

Total Time: 1 h 40 min

18 questions

60 marks

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)

Do not write in this space

1. A fish burger costs $1 less than a chicken burger. The total cost of 4 fish burgers is $x.

   (a) Express the cost of 20 fish burgers in terms of x.

   (b) Express the cost of a chicken burger in terms of x.

Ans: (a) $_____

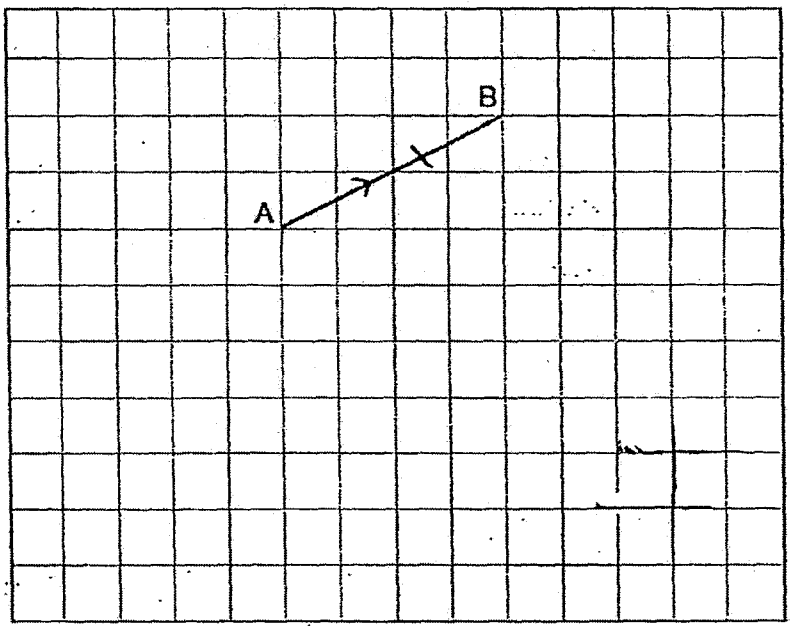
(b) $_____

2. The average of 4 numbers is 27. When one of the numbers is removed, the sum of the remaining numbers is 72. What is the number that has been removed?

Ans: _____

3. In the square grid below, AB is one side of a trapezium ABCD.
   (a) Draw and label BC that is equal in length as AB and perpendicular to AB.
   (b) Draw and label CD that is parallel to AB and twice the length of AB.

Do not write in this space

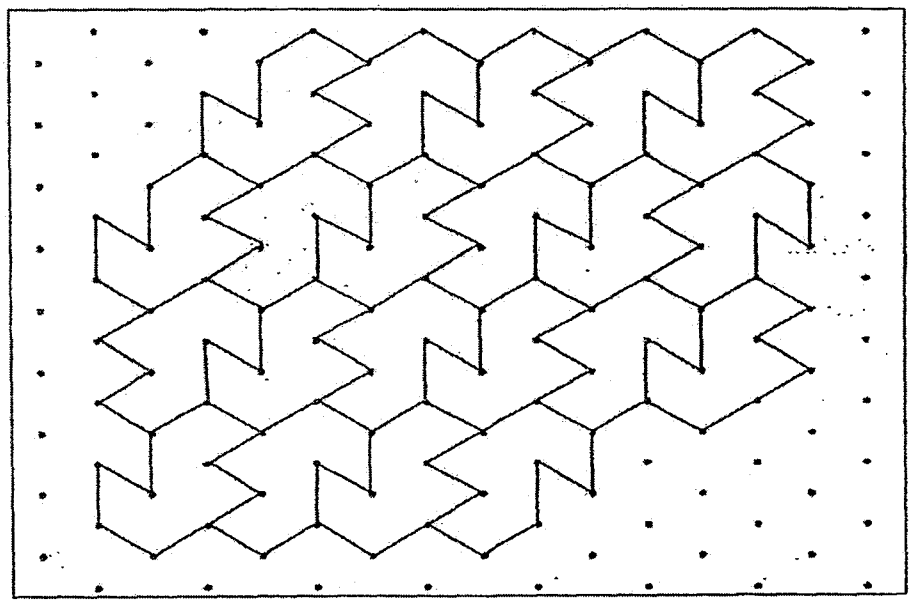


4. Maverick and Nathan completed a run with a total time of 23 minutes. Maverick was 5 minutes faster than Nathan. How long did Maverick take to complete the run?

Ans: _____ min

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.

Do not write in this space



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)

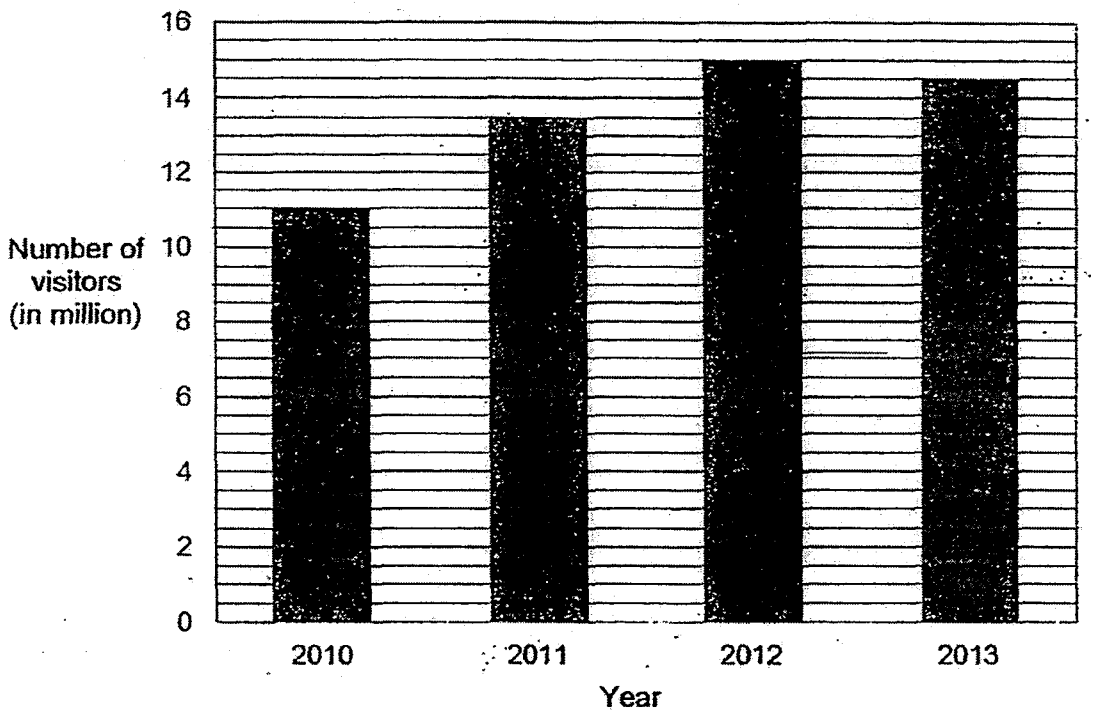
Do not write in this space

6. The mass of a container with 50 identical cups is 1500 g. When 30 of the cups are removed, the mass of the container with the remaining cups is 660 g. What is the mass of each cup?

Ans: _____ [3]

7. The graph below shows the number of visitors who arrived in Singapore from 2010 to 2013.

Do not write in this space



(a) What was the ratio of the number of visitors in 2011 to the number of visitors in 2012 to the number of visitors in 2013?

(b) What was the percentage increase in the number of visitors who visited Singapore in 2013 compared to 2010? Give your answer correct to 2 decimal places.

Ans: (a) _____ [1]

(b) _____ [2]

8. Jack and Alison have a total of \$352 at first. After Jack spent $\frac{2}{3}$ of his money and Alison spent $\frac{3}{5}$ of her money, they had equal amount of money left. How much money did Jack spend?

Do not write in this space

Ans: _____ [3]

9. The ratio of the volume of liquid in container A to the volume of liquid in container B was 5 : 2. When 112 mℓ of liquid from container A was poured into container B, the ratio of the volume of liquid in container A to the volume of liquid in container B became 1 : 2. What was the volume of liquid in container B in the end?

Do not write in this space

Ans _____ [3]

10. 398 candies were given to some children at a festival. Each boy was given 5 candies and each girl was given 3 candies. There were 18 more girls than boys at the festival. How many children were there at the festival?

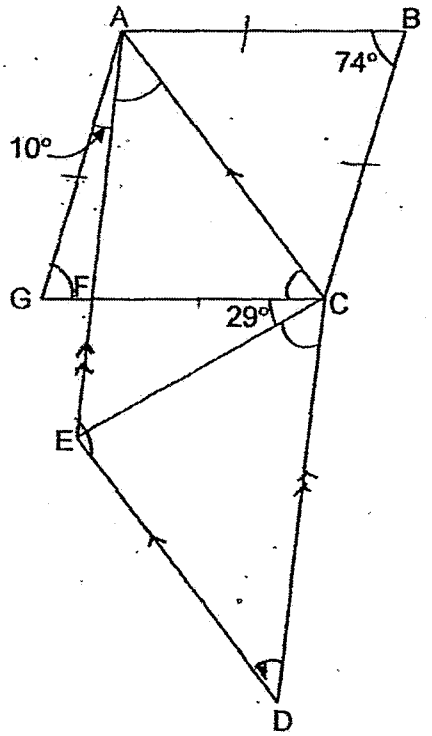
Do not write in this space

Ans: _____ [3]

11. In the figure, ABCG is a rhombus and ACDE is a parallelogram. $\angle ABC = 74°$, $\angle FCE = 29°$ and $\angle GAF = 10°$.

(a) Find $\angle FAC$.

(b) Find $\angle ECD$.



Do not write in this space

Ans: (a) _____ [2]

(b) _____ [2]

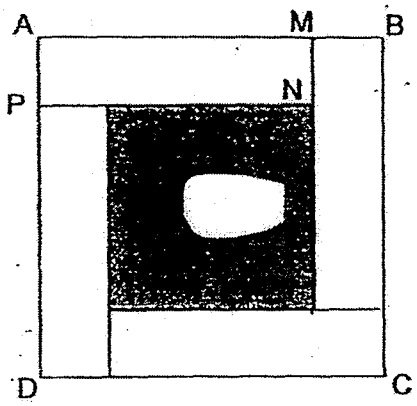
12. Anne ~~Anna~~ has 150 more stamps than Betty. After Anne sold $\frac{1}{3}$ of her stamps and Betty sold $\frac{5}{8}$ of her stamps, Anne has 191 more stamps than Betty. How many stamps do both girls have in total at first?

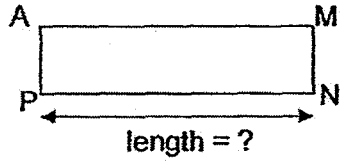
Do not write in this space

Ans: _____ [4]

13. Derek uses four identical rectangles to form the figure ABCD with a shaded square in the middle as shown below. Rectangle AMNP is one such rectangle. The perimeter of rectangle AMNP is 30 cm. The area of the shaded square is 81 cm^2.

Do not write in this space





(a) Find the length of PN.

(b) What is the area of figure ABCD?

Ans: (a) _____ [2]

(b) _____ [2]

14. After a discount of 25%, the price of a theme park ticket is \$65.25. Senior citizens are given a further discount of \$7.

Do not write in this space

(a) What is the total amount of discount given to senior citizens for the ticket?

(b) What is the percentage discount given to senior citizens for the ticket? Give your answer to the nearest whole number.

Ans (a): _____ [2]

(b): _____ [2]

15. At the start of a birthday party, $\frac{5}{7}$ of the children were boys and the rest were girls. During the party, some boys left and the remaining number of boys were $\frac{2}{5}$ of the children. 32 boys then joined the party. The number of children was 10 more than the number of children at the start of the party. How many children were there at the start of the party?

Do not write in this space

Ans: _____ [4]

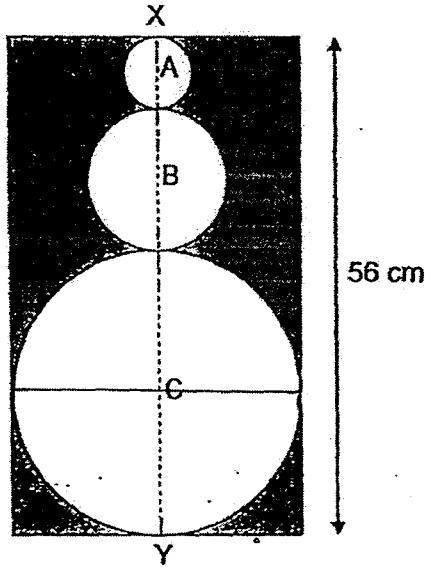
16. The figure below is formed by a rectangle and three circles A, B and C. The diameter of circle A is half that of circle B and the diameter of circle B is half that of circle C. Line XY is the line of symmetry of the figure.

Do not write in this space

(a) What is the diameter of circle A?

(b) Find the shaded area.

Take $\pi = 3.14$



Ans: (a) _____ [2]

(b) _____ [3]

17. Candies were only sold in packets of 12. Each packet was sold at $5. Mrs Lim had $128 and bought as many packets of candies as possible. She re-packed them into 42 boxes. Some boxes contained 6 candies while the rest contained 8 candies.

(a) How many candies did she buy?

(b) How many boxes contained 6 candies?

Do not write in this space

Ans: (a) _____ [2]

(b) _____ [3]

18. Three boys Alan, Ben and Carl had the same number of coins. Alan and Ben each had a mix of twenty-cent and fifty-cent coins. Alan had 7 twenty-cent coins while Ben had 17 twenty-cent coins. Carl had only fifty-cent coins.

(a) Of the three boys, who had the most money and who had the least?

(b) What was the difference in the total value of Alan and Ben's coins?

(c) Ben used all his fifty-cent coins to buy stationery. He then had $9.10 less than Carl. How many fifty-cent coins did Carl have?

Ans: (a) Most _____

Least _____ [1]

(b) _____ [2]

(c) _____ [2]

END OF PAPER.
PLEASE CHECK YOUR WORK CAREFULLY.

EXAM PAPER 2017
LEVEL : PRIMARY 6
SCHOOL : CATHOLIC HIGH SCHOOL
SUBJECT : MATHEMATICS

Paper 1

Section A

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

Section B

Q16 1010090

Q17 45

Q18 4.06

Q19 1,2,3,6

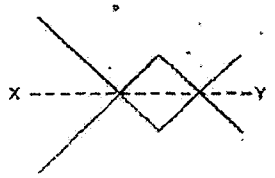
Q20 $\frac{1}{2}$

Q21 10

Q22 $7

Q23 77°

Q24



Q25 64.4m²

Q26 $2.10

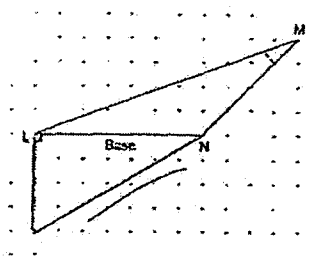
Q27 (7π + 42)cm

Q28 135°

Q29 6

Q30 (a) 25°

(b)



Paper 2

Q1 (a) 4 fish burgers = \$x

1 fish burger = $\frac{\$x}{4}$

20 fish burgers = $\frac{\$x}{4} \times 20$

= **\$5x**

(b) 1 chicken burger = 1 fish burger + \$1

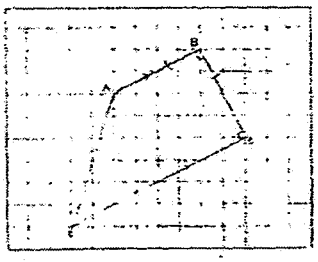
= $\frac{\$x}{4}$ + \$1

= **\$ ($\frac{x}{4}$ + 1)**

Q2 27 x 4 = 108

108 – 72 = **36**

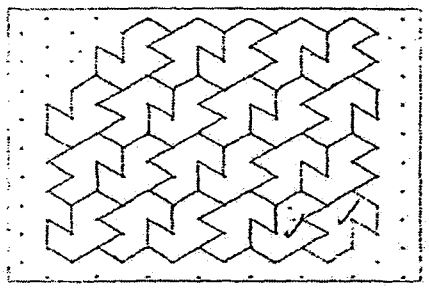
Q3



Q4 23 – 5 = 18

18 ÷ 2 = **9**

Q5



Q6 Mass of 50 cups + container = 1500g

Mass of 20 cups + container = 660g

Mass of 30 cups = 840g

Mass of 1 cup = 840g ÷ 30

= **28g**

Q7 (a)

2011	:	2012	:	2013
13.5	:	15	:	14.5
27	:	**30**	:	**29**

X2

(b) 14.5 – 11 = 3.5

3.5 ÷ 11 = 0.3182

0.3182 x 100% = **31.82%**

Q8

	spent	Left
Jack	$\frac{2}{3}$m	$\frac{1}{3}$m
Alison	$\frac{3}{5}$m	$\frac{2}{5}$m

$\frac{1}{3}$ of Jack = $\frac{2}{5}$ of Alison

Equal Fraction

$\frac{2}{6}$ of Jack = $\frac{2}{5}$ of Alison

6 + 5 = 11
$352 ÷ 11 = $32
6 – 2 = 4
4 x $32 = **$128**

Q9

	A	:	B	Total
At first	$5u_{x3}$	:	$2u_{x3}$	$7u_{x3}$
At the end	$1u_{x7}$	:	$2u_{x7}$	$3u_{x7}$

Total remained unchanged

	A	:	B	Total
At first	15u	:	6u	21u
At the end	7u	:	14u	21u

15u – 7u = 8u
112*ml* ÷ 8 = 14*ml*
14 x 14*ml* = **196*ml***

Q10 3 x 8 = 54
398 – 54 = 344
5 + 3 = 8
344 ÷ 8 = 43
43 x 2 = 86
86 + 18 = **104**

Q11 (a) 180° – 74° = 106°
106° ÷ 2 = 58°
53° - 10° = **43°**

(b) 180° – 43° = 137°
53° + 29° = 82°
137° – 82° = **55°**

Q12 191 - 150 = 41

$\frac{1}{3}A = \frac{5}{8}B - 41$

$A = 1\frac{7}{8}B - 123$

A = B + 150

150 + 123 = 273

$\frac{7}{8}B = 273$

$\frac{1}{8}B = 273 \div 7$

= 39

B = 39 x 8

= 312

A = 312 + 150

= 462

A + B = 462 + 312

= **774**

Q13 (a) 9 x 9 = 81

9 + 9 = 18

30 – 18 = 12

12 ÷ 4 = 3

9 + 3 = **12**

(b) 12 x 3 = 36

36 x 4 = 144

144 + 81 = **225**

Q14 (a) 100 – 25 = 75

$62.25 ÷ 3 = $21.75

$21.25 + $7 = **$28.75**

(b) $21.75 x 4 = $87

$28.75 ÷ $87 = 0.33

0.33 x 100% = **33%**

Q15 Before

Boys	:	Girls	Total
$5u_{x3}$	:	$2u_{x3}$	
15u	:	6u	21u

After

Boys	:	Girls	Total
$2u_{x2}$	:	$3u_{x2}$	
4u	:	6u	10u

Girls remained unchanged

10u + 32 = 21u +10 (32 boys joined, 10 more children)

11u = 22

1u = 2

21u = **42**

Q16 (a) 1u + 2u + 4u = 7u
7u = 56
1u = 56 ÷ 7
= **8**

(b) Area of circle A = 3.14 x 4 x 4
= 50.24cm^2
Area of circle B = 3.14 x 8 x 8
= 200.96 cm^2
Area of circle C = 3.14 x 16 x 16
= 803.84 cm^2
Area of rectangle = 56 x 32
= 1792cm^2

Total area of circles = 1055.04cm^2
Area of shaded = 1792 – 1055.04
= **736.96 cm^2**

Q17 (a) \$128 ÷ \$5 = 25.6
25 x 12 = **300**

(b) Assume all are 8 candies boxes
42 x 8 = 336
336 – 300 = 36
8 – 6 = 2
36 ÷ 2 = **18**

Q18 (a)

	20¢	**50¢**
Alan	7	17
Ben	17	7
Carl	-	24

Alan = 0.2x7 + 0.5x17
= \$9.90
Ben = 0.2x17 + 0.5x7
= \$6.90 (Least)
Carl = 0.5x24
= \$12 (Most)

(b) \$9.90 - \$6.90 = **\$3**

(c) 0.20x17 = \$3.40
\$3.40 + \$9.10 = \$12.50
\$12.50 ÷ 0.50 = **25**

HENRY PARK PRIMARY SCHOOL
2017 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. What is the value of 30 ones, 30 tenths and 30 hundredths?

(1) 33.3
(2) 30.33
(3) 33.03
(4) 3 330

2. Find the value of $\frac{8}{9} \div \frac{2}{3}$

(1) $\frac{3}{4}$
(2) $\frac{16}{27}$
(3) $1\frac{1}{3}$
(4) $1\frac{11}{16}$

3. Which of the following is the same as 4020 g ?

(1) 4 kg 2 g
(2) 4 kg 20 g
(3) 40 kg 2 g
(4) 40 kg 20 g

(Go on to the next page)

4. Mrs Toh started her 20-minute jog at 6.35 a.m. After her jog, she did her housework until 8.15 a.m. How much time did she spend doing her housework?

(1) 1 h 20 min
(2) 1 h 40 min
(3) 2 h 20 min
(4) 2 h 40 min

5. The table below shows the number of library books borrowed by some pupils on a particular day.

Number of books borrowed	0	1	2	3	4
Number of pupils	6	8	10	12	4

How many pupils borrowed **at least** 3 library books?

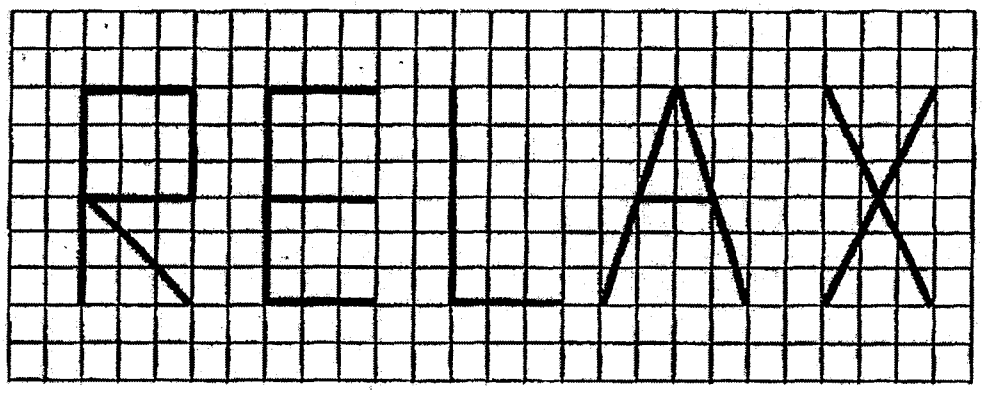
(1) 24
(2) 16
(3) 12
(4) 4

6. Find the value of $33 - (18 - 12 \div 3)$.

(1) 1
(2) 9
(3) 19
(4) 31

(Go on to the next page)

7. In the diagram below, the letters R, E, L, A and X are drawn on a square grid.



Which of the letters above have <u>only</u> 1 line of symmetry?

(1) A and E

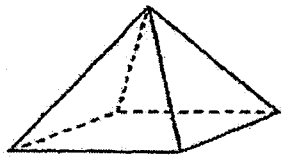
(2) A and X

(3) E and R

(4) L and X

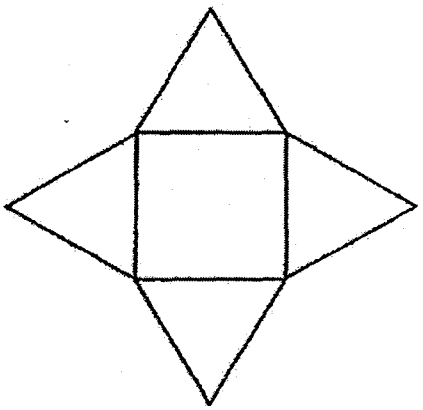
(Go on to the next page)

8. The figure below shows a pyramid.

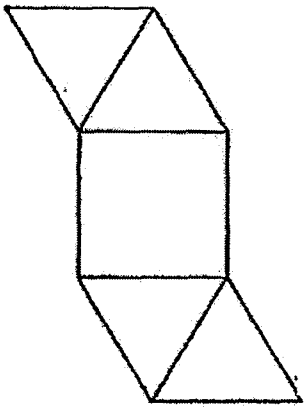


Which one of the following is **not** a net of the pyramid?

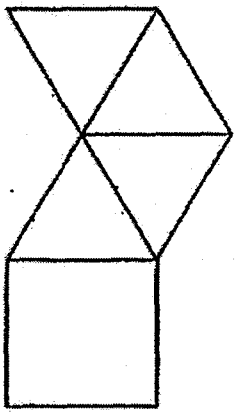
(1)



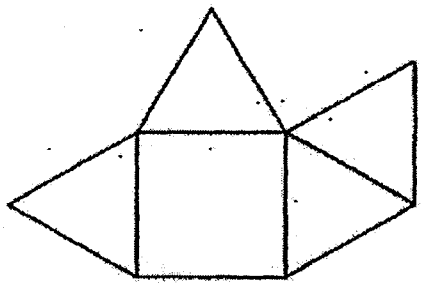
(2)



(3)



(4)

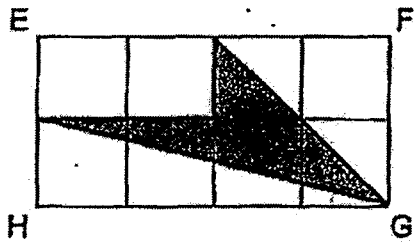


(Go on to the next page)

9. Fatimah spent 30% of her salary and still had $4200 of her salary left. How much money did she spend?

(1) $600
(2) $980
(3) $1400
(4) $1800

10. The rectangle EFGH below is made up of 8 identical squares. What is the ratio of the area of the shaded part to the area of the unshaded part?



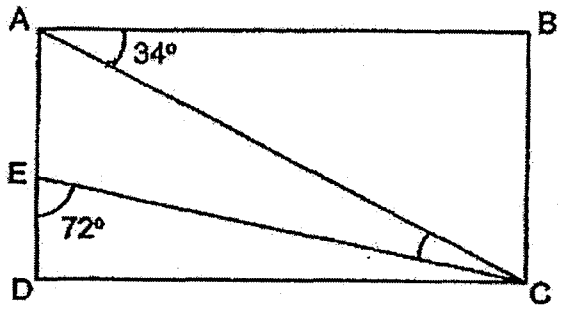
(1) 1 : 3
(2) 1 : 4
(3) 3 : 1
(4) 4 : 1

11. Jack and Bill had $300 altogether. After Jack spent $60, he had twice as much money as Bill. How much money did Bill have?

(1) $70
(2) $80
(3) $140
(4) $160

(Go on to the next page)

12. In the figure below, ABCD is a rectangle. $\angle BAC = 34°$ and $\angle CED = 72°$. Find the value of $\angle ACE$.



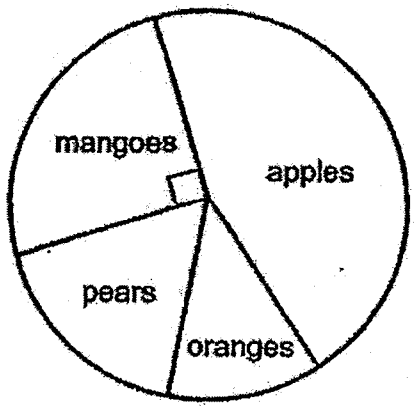
(1) 16°

(2) 17°

(3) 18°

(4) 27°

13. The pie chart shows the number of fruits sold at a fruit stall.



There are 65 pears and 100 mangoes at the stall. The number of mangoes is twice the number of oranges. How many apples are there at the stall?

(1) 115

(2) 145

(3) 165

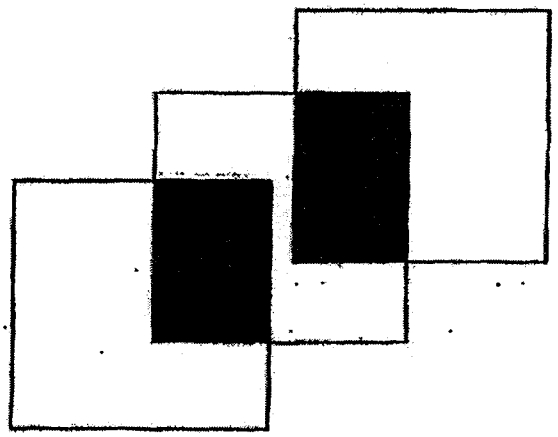
(4) 185

(Go on to the next page)

14. A baker sold 400 cakes in 5 days. Each day, he sold 7 cakes fewer than the previous day. Find the number of cakes he sold on the first day.

(1) 59
(2) 66
(3) 87
(4) 94

15. The figure below is made up of 3 identical squares, each with an area of 81 cm^2. The squares overlap each other as shown below. The overlapped parts are identical. Given that the area of the figure is 183 cm^2, find the area of each overlapped part.



(1) 20 cm^2
(2) 30 cm^2
(3) 51 cm^2
(4) 60 cm^2

(Go on to Booklet B)

2017 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)

Do not write in this space

16. Round off 49 989 to the nearest hundred.

Ans: _____

17. In a Mathematics test, Abel scored 64 marks, Barney scored 68 marks and Chris scored 48 marks. What was their average score for the test?

Ans: _____

18. Mrs Tee paid for 6 identical bowls with a fifty-dollar note. She received $\$m$ change. Express the cost of 1 bowl in terms of m.

Ans: $_____

(Go on to the next page)

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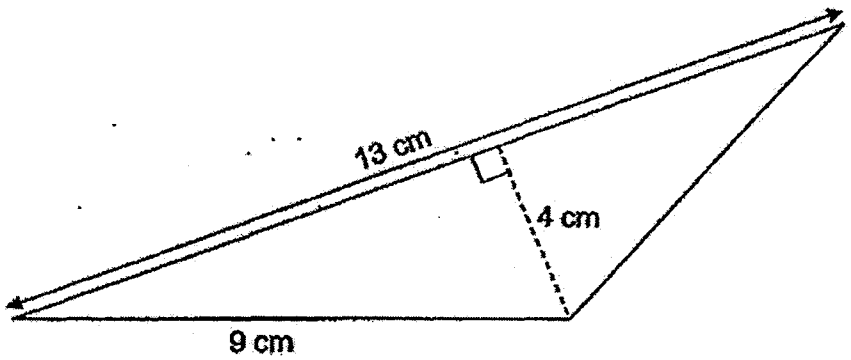
19. The table shows the postage charges for sending letters.

Mass	Cost
First 20 g	$ 1.20
Every additional 10 g or part thereof	$ 0.35

Wendy posted a letter weighing 38 g. How much money did she have to pay as postage?

Ans: $_____

20. Find the area of the triangle shown below.



Ans: _____ cm^2

(Go on to the next page)

21. The graph below shows the number of durians sold from Monday to Friday.

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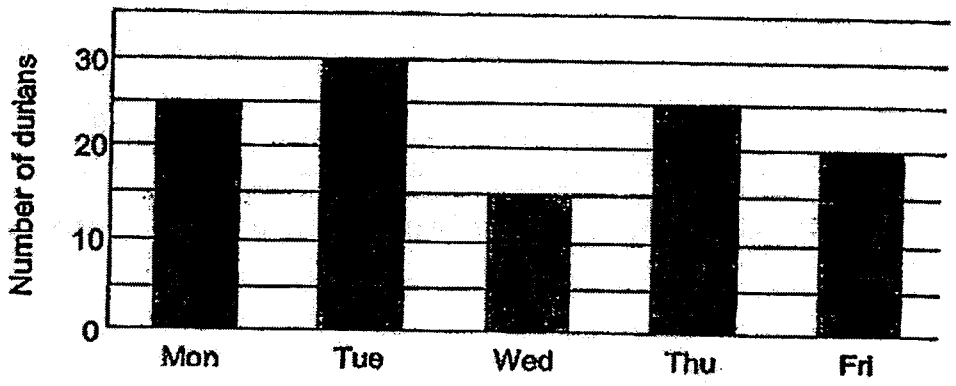
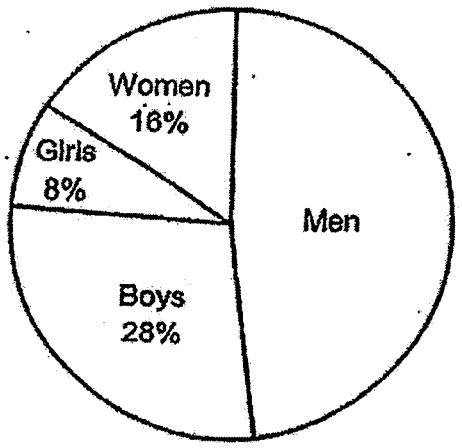


What is the ratio of the number of durians sold on Wednesday to the total number of durians sold over the five days?

Ans: _____

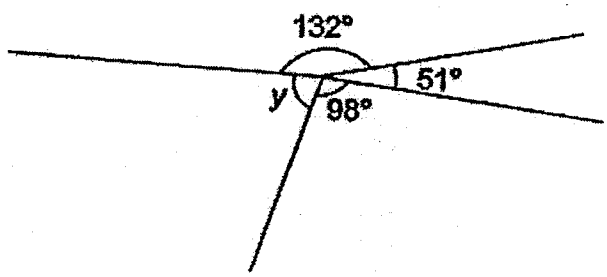
22. The pie chart below represents the number of spectators at a soccer match. What fraction of the spectators is made up of men? Give your answer in the simplest form.



Ans: _____

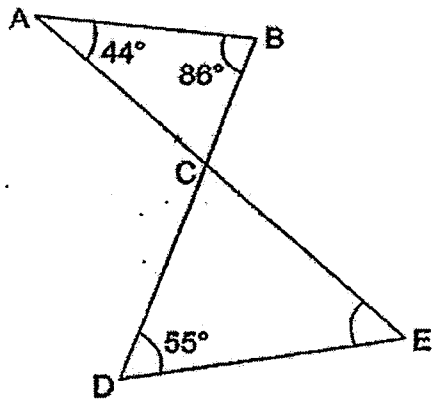
(Go on to the next page)

23. Find $\angle y$ in the figure below.



Ans: _____ °

24. In the figure below, ACE and BCD are straight lines.
$\angle ABC = 86°$, $\angle CAB = 44°$ and $\angle CDE = 55°$. Find $\angle CED$.



Ans: _____ °

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25. Four identical 7–cm squares were cut out from a rectangular piece of grey paper measuring 100 cm by 45 cm as shown below. Find the perimeter of the remaining piece of grey paper.

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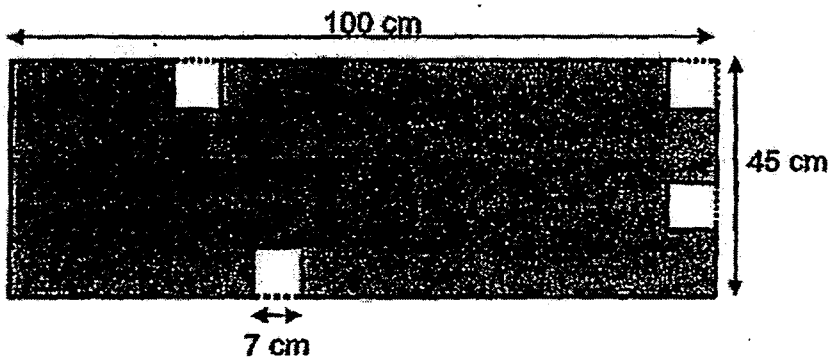


Ans:_____ cm

(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.

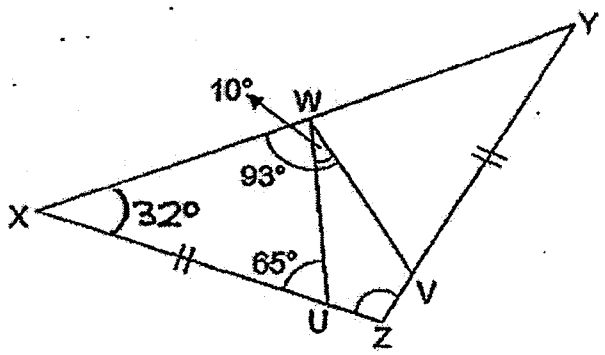
Do not write in this space

(10 marks)

26. Sally used 2 identical pieces of ribbon to tie a hamper. $\frac{5}{8}$ of each piece of ribbon was 4 m. Find the total length of the ribbon used. Express your answer as a fraction in its simplest form.

Ans: _____ m

27. In the figure below, XYZ is an isosceles triangle.
Given that $\angle XWV = 93°$, $\angle UWV = 10°$ and $\angle WUX = 65°$, find $\angle XZY$.



Ans: _____ °

Do not write in this space

28. The price of an eraser is $\frac{3}{4}$ the price of a pencil. The price of a highlighter is $\frac{1}{2}$ the price of an eraser. Given that each highlighter costs \$1.50, find the cost of the pencil.

Ans: \$_____

29. A childhood game is played by rolling a wheel as shown below.

The radius of a wheel is 40 cm. What is the distance covered when the wheel makes 10 complete turns? (Take $\pi = 3.14$)

Ans: _____ cm

(Go on to the next page)

30. Chloe collected 2 types of bookmarks. The table shows the number of each type of bookmarks she had at first.

Do not write in this space

Materials of bookmarks	Number of bookmarks
Paper	69
Plastic	36

After Chloe's father gave her some paper bookmarks, the percentage of her plastic bookmarks decreased to 20%. Find the total number of bookmarks given to Chloe by her father.

Ans: _____

End of Paper 1

2017 PRELIMINARY EXAMINATION
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.

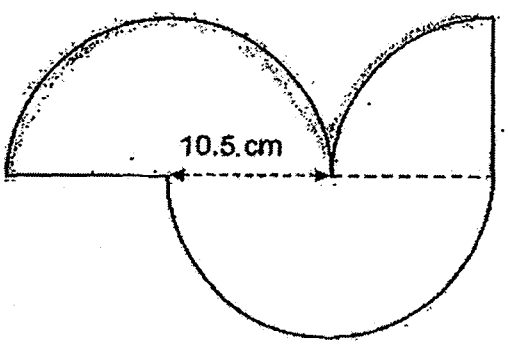
Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

1. A chef bought a total of 9 kg of prawns and fish. He cooked 3.855 kg of fish and had $\frac{1}{4}$ of the mass of fish left. What is the mass of prawns he bought?

Ans: _____ kg

2. The figure below is made up of a quadrant and 2 identical semicircles of radius 10.5 cm. Find the perimeter of the figure. (Take $\pi = \frac{22}{7}$)



Ans: _____ cm

(Go on to the next page)

3. Since January, David deposits his savings into his bank account every month. The graph below shows the amount of money in David's bank account at the end of each month from January to May.

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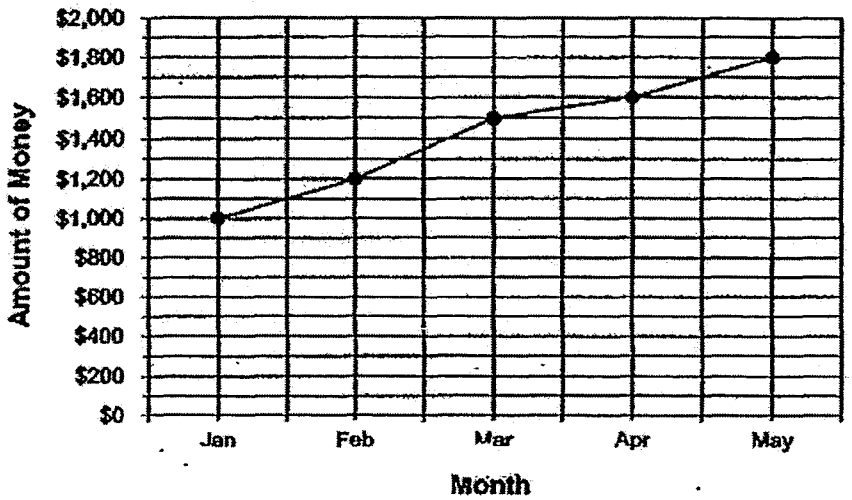

Given that David's monthly salary is $4500 what percentage of David's salary did he save in March? Express your answer as a fraction in its simplest form.

Ans: _____ %

4. Peter must score an average of 85 points for 3 games in order to win a prize at a funfair. Peter scored 68 points and 79 points for the first 2 games. What is the least number of points he needs to score in the 3rd game to win a prize?

Ans: _____

(Go on to the next page)

5. Mrs Yip had 615 red pens and 549 blue pens. After selling twice as many blue pens as red pens, she had a total of 363 pens left. How many red pens had she left?

Do not wri
In this spa

Ans: _____

(Go on to the next page)

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.

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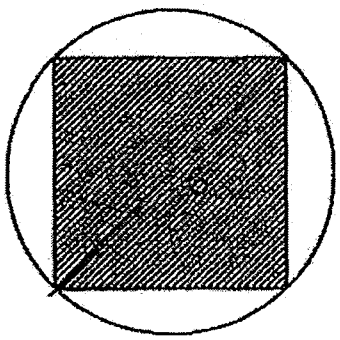
(50 marks)

6. The figure below consists of a square and a circle with diameter of 6 cm. What is the area of the unshaded part? (Take $\pi = 3.14$)



Ans: _____ [3]

7. Ben received \$1.50 more pocket money than Jerry daily. Each boy spent \$2.20 a day and saved the rest. When Jerry had saved \$28.80, Ben had saved \$24 more than Jerry. How much pocket money did Ben receive daily?

Ans: _____ [3]

(Go on to the next page)

8. A rectangular tank measures 34 cm by 52 cm by 16 cm. Alice managed to fit in a total of 56 identical cubes into the tank before covering it with a lid. This was the greatest number of such cubes she could fit into the tank. Given that the length of one side of the cube is a whole number find its length.

Do not write in this space

Ans:_____[3]

(Go on to the next page)

9. Weiming is f years old now. His mother is 1 year younger than his father. In 4 years' time. Weiming's father will be twice Weiming's age. How old is Weiming's mother now? Express your answer in terms of f.

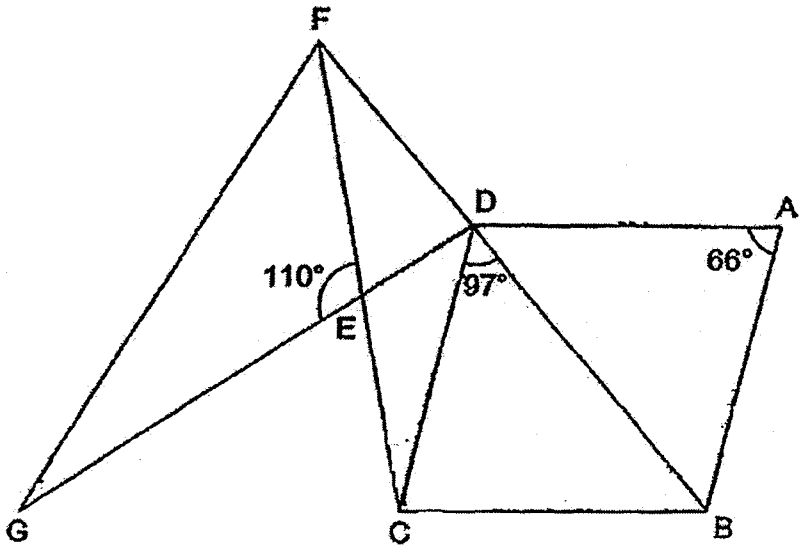
Do not write in this space

Ans: _____ [3]

(Go on to the next page)

10. In the figure below, ABCD is a rhombus. $\angle EDB = 97°$ $\angle FEG = 110°$ and $\angle BAD = 66°$. Given that GED, FEC and FDB are straight lines, find $\angle FGD$.

Do not write in this space



Ans: _____ [3]

(Go on to the next page)

11. Steven and Tom started cycling at the same time along a 6.5 km track. Both did not change their speeds throughout the whole journey. Steven cycled at a speed of 30 m/min faster than Tom. When he reached the end of the track, Tom was 600 m behind him. What was Tom's cycling speed in m/min?

Do not write in this space

Ans:_____ [4]

(Go on to the next page)

12: Meifen has a number of 10¢, 20¢ and 50¢ coins in the ratio of 8 : 3 : 5 respectively. The total value of all the coins is $195.

(a) Meifen spent half the number of her 50¢ coins. Find the new ratio of the number of 10¢ coins to the number of 20¢ coins to the remaining number of 50¢ coins.

(b) What is the total value of the 20¢ coins?

Do not write in this space

Ans: (a) _____ [1]

(b) _____ [3]

(Go on to the next page)

13. Mrs Tang had some money. She used $53 to pay for 4 identical large potted plants and 7 identical small potted plants.

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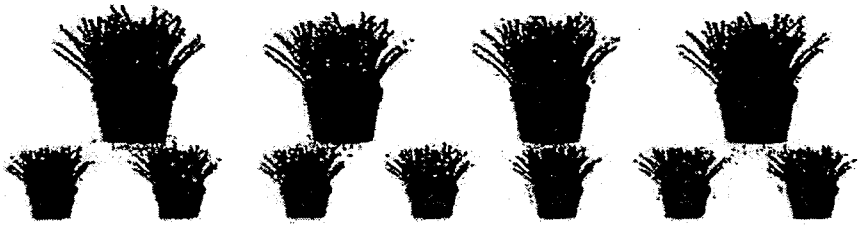

If she bought another large potted plant, she would be short of $3.50.
If she bought another small potted plant, she would have $1.50 left.

a) What is the difference in price between the large and the small potted plant?

b) Find the price of one large potted plant.

Ans: (a) _____ [1]

(b) _____ [3]

(Go on to the next page)

14. Every month, Jevier spends $\frac{2}{5}$ of his salary on food $\frac{4}{9}$ of the remainder on rent and saves the rest of his salary.

(a) What fraction of his salary does Jevier save?
Give your answer in the simplest form

(b) Jevier is saving to buy a laptop that costs $4000. Given that he spends $1200 on food every month. how long will he take to save in order to buy the laptop?

Ans: (a) _____ [2]

(b) _____ [3]

(Go on to the next page)

Do not write in this space

15. The figure below shows 2 rectangular tanks, A and B. Tank A has a base area of 30 cm^2 while Tank B has a base area of 90 cm^2.

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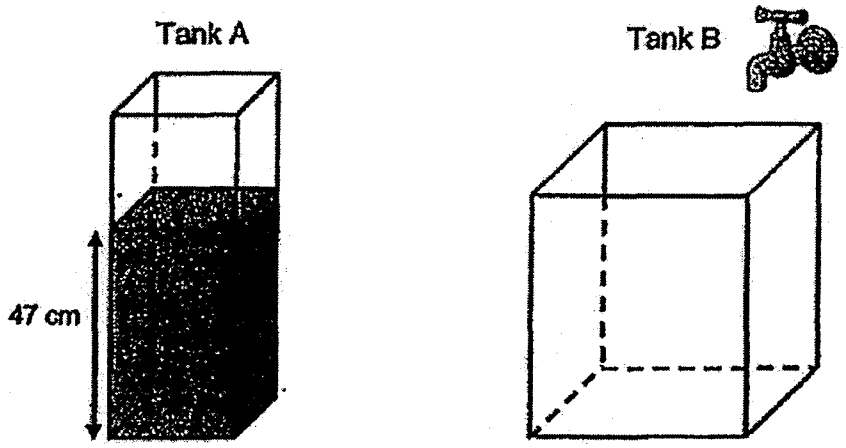


a) Tank A contained water to a height of 47 cm. What was the volume of water in Tank A?

b) Tank B was empty at first. Alvin turned on the tap for 6 minutes, allowing water to flow at a rate of 95 cm^3/ min into Tank B Then, he poured some water from Tank A into Tank B until the height of the water level in Tank B was the same as the height of the water level in Tank A. Find the height of the water level in Tank B.

Ans:(a) _____ [1]

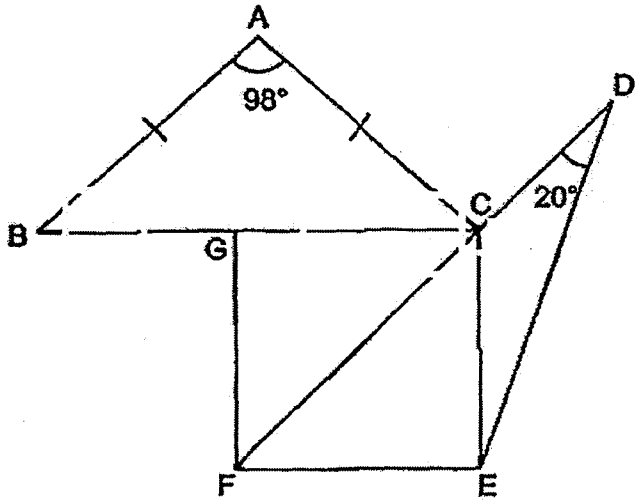
(b) _____ [4]

(Go on to the next page)

16. In the figure below, ABC is an isosceles triangle and EFGC is a square. $\angle CDE = 20°$ and $\angle BAC = 98°$ DCF is a straight line.

(a) Find $\angle FCA$.

(b) Find $\angle DEC$.



Ans: (a) _____ [2]

(b) _____ [2]

(Go on to the next page)

Do not write in this space

17. Mr Lau bought a tennis racket and a bag at discounted prices. He spent a total of \$168.75 on the two items. The ratio of the amount Mr Lau paid for the tennis racket to the amount he paid for the bag was 2 : 1.

Do not write in this space

(a) Find the cost of the bag after the discount.

(b) The total discount given for the two items was \$31.25. Mr Lau was given a 10% discount for the tennis racket. What was the percentage discount given for the bag?

Ans: (a) _____ [1]

(b) _____ [4]

(Go on to the next page)

18. Numbers are written in order beginning from 1 as shown in the pattern below.

Do not write in this space

Row 1					1						
Row 2				2	3	4					
Row 3			5	6	7	8	9				
Row 4		10	11	12	13	14	15	16			
Row 5	17										
Row 6						N					

Given that the pattern continues,

(a) find the number represented by the letter N.
(b) find the greatest number in Row 8.
(c) find the number in the middle of Row 12

Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [2]

End of Paper

Setters:
Mrs Josephine Lai, Ms Grace Chan, Ms Yew Hew Mei, Mr Yip Yew Fei and Mrs Norah Idil

ANSWER SHEET

EXAM PAPER 2017 (P6)

SCHOOL : HENRY PARK

SUBJECT : MATHEMATICS

TERM : PRELIM

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

16)50000

17)68 + 64 + 48 = 180

180 ÷ 3 = 60

18)$50 - $m

=$(50 – m)

$(50 – m) ÷ 6

= $(50-m/6)

19)$1.20 + $0.70 = $1.90

20) ½ x 13cm x 4cm = 26cm2

21)30 + 25 + 25 + 20 + 15 = 115

15 : 115

3 : 23

22)100% – 28% – 16% – 8% = 48%

=48/100 = 12/25

23)360° – 132° – 98° – 51° = 79°

24)∠180° – 86° – 44° = 50°

∠ACB = ∠DCE

∠CED→180° – 55° – 50° = 75°

25)(100cm + 4cm) x 2 = 290cm

6 x 7cm = 42cm

290cm + 42cm = 332cm

26)5/8→4m

1/8→0.8m

2→12.8m = $12\frac{8}{10}$m = $12\frac{4}{5}$m

27)∠XWU→93° – 10° = 83°

∠YXZ→180° – 83° – 65° = 32°

∠XYZ→180° – 32° – 32° = 116°

28)H : E : P 3u→$1.50

3 : 4 u→$1.50 ÷ 3 = $0.50

1 : 2 8u→8 x $0.50 = $4

3 : 6 : 8

29)40cm x 2 = 80cm

10x (80cm x 3.14)

=2512cm

30)20% →36

80% →36 x 4 = 144

144 – 69 = 75 bookmarks

Paper 2

1)¾ →3.855kg

¼ →3.855kg ÷ 3 = 1.285kg

1→1.285kg x 4 = 5.14kg

2) ¼ (2 x 22/7x 10.5) x 1¼ = 82.5

82.5 + 10.5 + 10.5 = 103.5cm

3)300/4500 x 100 = 62/3

4)85 x 3 = 255

255 – 79 – 68 = 108

5)615 + 549 = 1164

1164 – 363 = 801

801 ÷ 3 = 267

615 – 267 = 348 red pens

6)Area of square (6cm x 6cm) ÷ 2 = 18cm2

6cm ÷ 2 = 3cm

Area of circle→3.14 x 3cm x 3cm = 28.26cm2

Area of unshaded→28.26cm2 – 18cm2 = 10.26cm2

7)$24 ÷ $1.50 = 16

$28.80 + $24 = $52.80

$52.80 ÷ 16 = $3.30

$3.30 + $2.20 = $5.50

8)52cm ÷ 7cm = 7R3cm

16cm ÷ 7cm = 2R2cm

34cm ÷ 7cm = 4R6cm

7 x 4 x 2 = 56

Ans: 7cm

9)4 years later

W→(f + 4)

WF→(f + 4) x 2 = (2f + 8)

M→(2f + 8) – 1 = (2f + 7)

Now

M→(2f + 7) – 4 = (2f + 3) years old

10)∠CBD→180° – 66° / 2 = 57°

∠EDC→97° – 57° = 40°

∠FCD→180° – 40° – 110° = 30°

11)600m ÷ 30 m/min = 20 min

6.5km = 6500m

Steven speed→6500m ÷ 20 min = 325m/min

Tom speed→325m/min – 30m/min = 295m/min

12)a)16 : 6 : 5

b)150 x \$0.20 = \$30

13)a)\$3.50 + \$1.50 = \$5

b)4 x \$5 = \$20

\$53 – \$20 = \$33

\$33 ÷ (7 + 4) = \$3

\$3 + \$5 = \$8

14)a)1 – 2/5 = 3/5

R→4/9 x 3/5 = 4/15

1 – 2/5 – 4/15 = 1/3

b)F→6/15

R→4/5

S→5/15

6u→\$1200

u→\$1200 ÷ 6 = \$200

5u→\$200 x 5 = \$100

\$4000 ÷ \$1000 = 4 months

15)a)47cm x 30cm2 = 1410cm3

b)95cm3/min x 6min = 570cm3

1410cm3 + 570 cm3 = 1980cm3

1980cm3 ÷ (90cm2 + 30cm2) = 16.5cm

16)a) $\angle ACB \rightarrow (180^\circ - 98^\circ) \div = 41^\circ$

$\angle GCF \rightarrow 90^\circ \div 2 = 45^\circ$

$\angle FCA \rightarrow 45^\circ + 41^\circ = 86^\circ$

b) $\angle FEC \rightarrow 90^\circ$

$\angle CFE \rightarrow 90^\circ \; 2 = 45^\circ$

$\angle DEC \rightarrow 180^\circ - 90^\circ - 20^\circ - 45^\circ = 25^\circ$

17)a)u→$168.75 ÷ 3 = $56.25

b)TR→$56.25 x 2 = $112.50

90% →$112.50

10% →$112.50 ÷ 9 = $12.50

Discount for bag→$31.25 - $12.50 = $18.75

$56.25 + $18.75 - $75

18.75/75 x 100 = 25%

18)a)(6x 5)+ 1 = 31

b)Middle number for row 8→(8 x 7) + 1 = 57

8 – 1 = 7

57 + 7 = 64

c)(12 x 11) + 1 = 133

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

PRELIMINARY EXAMINATION 2017
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: 22 August 2017

20

This booklet consists of 7 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) and shade your answer on the Optical Answer Sheet.
(20 marks)

---

1 Round off 145.105 to the nearest hundredth.

(1) 140 000
(2) 145.100
(3) 145.110
(4) 150 000

2 Which of the following is the most likely height of the desk in a classroom?

(1) 7 cm
(2) 7 m
(3) 70 cm
(4) 70 m

3 Sally paid $12 for 30 identical pencils. What was the cost of each pencil?

(1) $0.04
(2) $0.25
(3) $0.40
(4) $2.50

4 Which one of the following fractions is less than $\frac{1}{3}$?

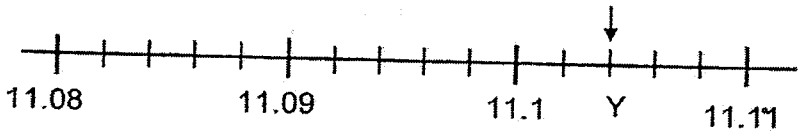
(1) $\frac{4}{10}$

(2) $\frac{4}{11}$

(3) $\frac{4}{12}$

(4) $\frac{4}{13}$

5 In the scale below, what is the value of Y?



(1) 11.12

(2) 11.14

(3) 11.102

(4) 11.104

6 Express 36 minutes as a percentage of 2 hours.

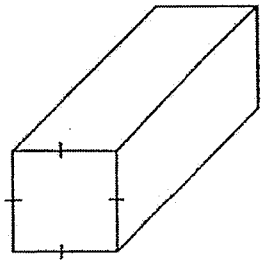
(1) 18%

(2) 30%

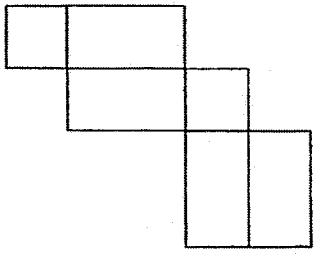
(3) 36%

(4) 60%

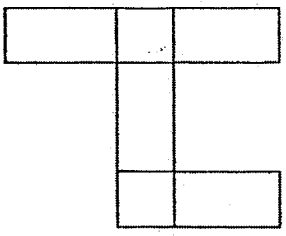
7 Which of the following is **not** a net of the solid below?



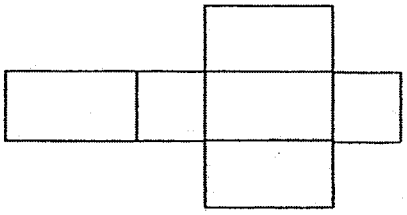
(1)



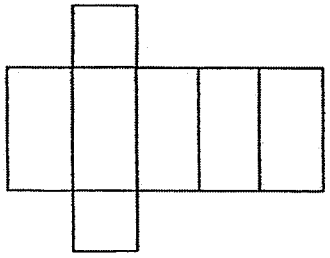
(2)



(3)



(4)



8 Find the value of $\frac{17b}{5} - 2b + 3$ when $b = 4$.

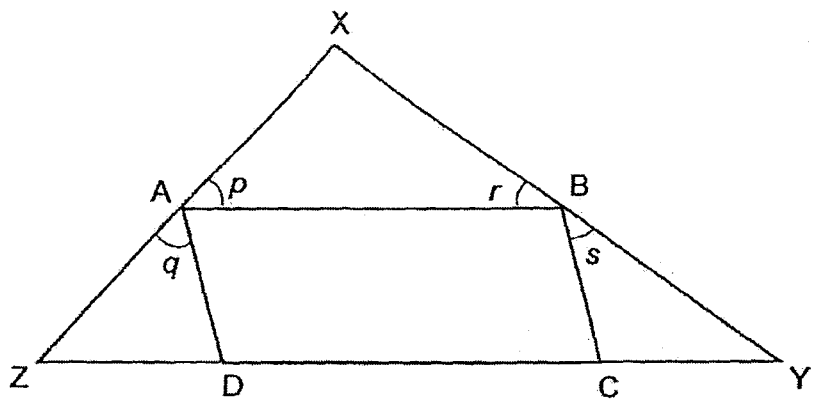
(1) 4.4

(2) 8.6

(3) 14.6

(4) 15

9 In the figure below, ABCD is a parallelogram and XYZ is a triangle. Find the value of $\angle p + \angle q + \angle r + \angle s$.



(1) 180°

(2) 270°

(3) 360°

(4) 540°

10 Mrs Lim bought 1.4 m of ribbon to make 5 bows. What was the length of the ribbon used for each bow?

(1) 0.28 cm

(2) 2.80 cm

(3) 28 cm

(4) 280 cm

11 There are 54 girls and 36 boys in a school choir. All of them are arranged such that there are the same number of pupils in each row. Each row is made up of either all girls or all boys.
What is the greatest number of pupils in each row?

(1) 9
(2) 6
(3) 3
(4) 18

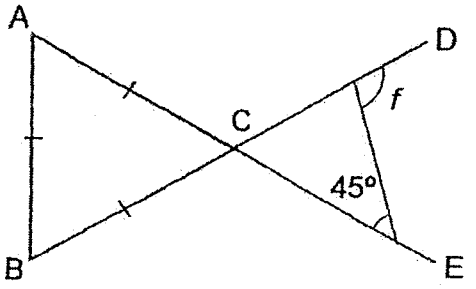
12 Shu Ning bought $\frac{5}{6}$ kg of minced meat. She gave $\frac{1}{4}$ of it to her neighbour and $\frac{1}{3}$ of the remainder to Ali. How much minced meat had Shu Ning left?

(1) $\frac{1}{4}$ kg
(2) $\frac{1}{2}$ kg
(3) $\frac{5}{12}$ kg
(4) $\frac{5}{24}$ kg

13 There were 1600 participants at a conference. 80% of them were female. Some female participants left the conference and the ratio of the number of female participants to the number of male participants became 7 : 4. How many female participants left the conference?

(1) 320
(2) 560
(3) 720
(4) 960

14 In the figure below, ABC is an equilateral triangle. AE and BD are straight lines. Find $\angle f$.



(1) 45°

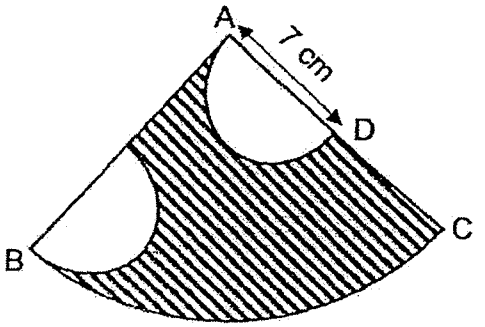
(2) 75°

(3) 105°

(4) 120°

15 The figure below is made up of a quadrant and 2 identical semicircles. AC is twice of AD. What is the perimeter of the shaded figure below?

(Take $\pi = \frac{22}{7}$)



(1) 44 cm

(2) 47 cm

(3) 51 cm

(4) 58 cm

PRELIMINARY EXAMINATION 2017
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: 22 August 2017

Parent's Signature: _____

Paper 1 Booklet A	**/ 20**
Paper 1 Booklet B	**/ 20**
Paper 2	**/ 60**
TOTAL	**/ 100**

This booklet consists of 8 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 Write one million, twenty thousand and three in numerals.

Ans: _____

17 Find the value of 7 056 ÷ 7.

Ans: _____

18 A : B = 5 : 6 and B : C = 2 : 5. What is the ratio of A : C ?

Ans: _____

(Go on to the next page)

19 The shaded figure below shows an incomplete net of a cube. Shade the square(s) needed to complete the net of a cube.

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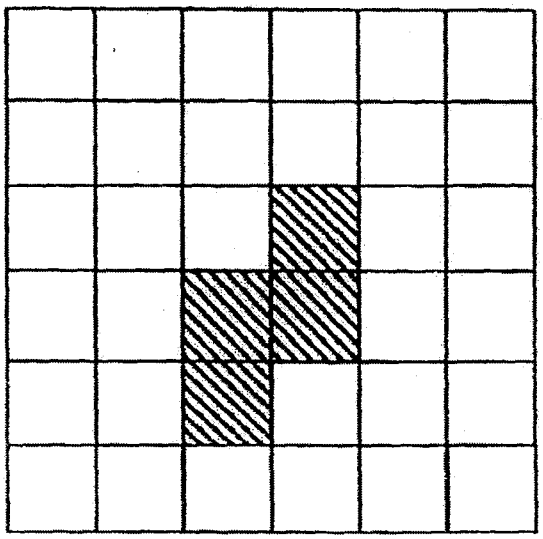
in this spac



20 The average of 5 numbers is 8. When one of the numbers was removed, the average became 9. What is the value of the number that was removed?

Ans: _____

(Go on to the next page)

Do not write in this space

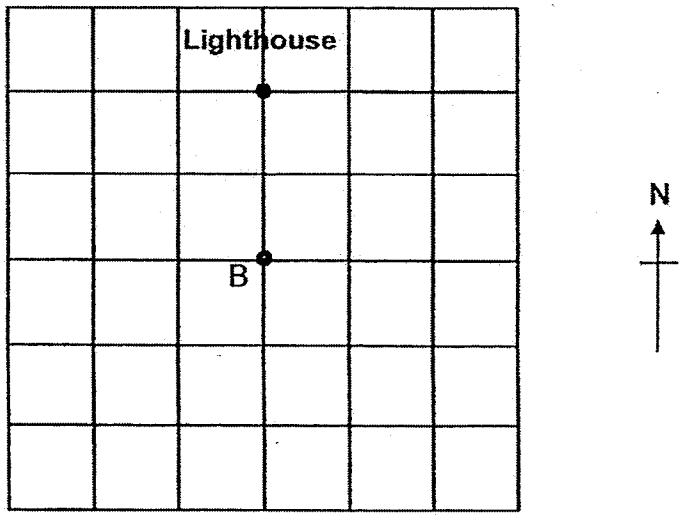
21 Express $\frac{1}{11}$ as a decimal to 2 decimal places.

Ans: _____

22 Find the value of $2\frac{4}{9} - \frac{2}{3}$. Give your answer as a mixed number in its simplest form.

Ans: _____

23 In the diagram, a ship is at point B facing the lighthouse. The lighthouse is north of the ship. The captain of the ship turns the ship 135° anticlockwise. Which direction is the ship facing now?



Ans: _____

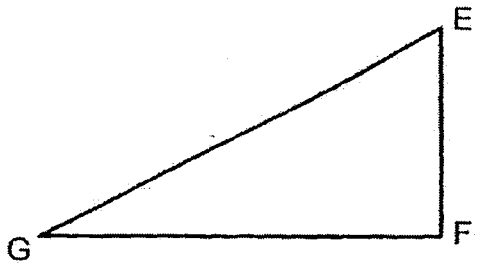
(Go on to the next page)

24 A cheetah can run at an average speed of 120 km/h. How long will it take for the cheetah to run a 42-km marathon?

Do not wr
in this spa

Ans: _____ min

25 The figure below shows a right-angled triangle EFG.
Construct 2 lines, HG and HE, such that $\angle$ HGE = 40° and HEFG is a trapezium.

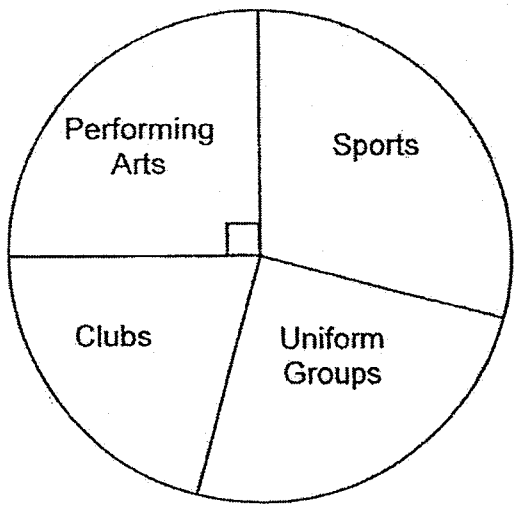


(Go on to the next page)

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)

Do not write in this space

26 The pie chart below shows the Co-curricular Activities (CCA) that the Primary 6 pupils of Sophia Primary School participated in. There are 240 pupils in Primary 6. The number of pupils who participate in the Performing Arts and the Uniformed Group are the same.



(a) What fraction of the pupils participated in the Performing Arts and Uniformed Groups?

Ans: _____

(b) 20% of the pupils were in the Clubs CCA. How many pupils participated in Sports?

Ans: _____

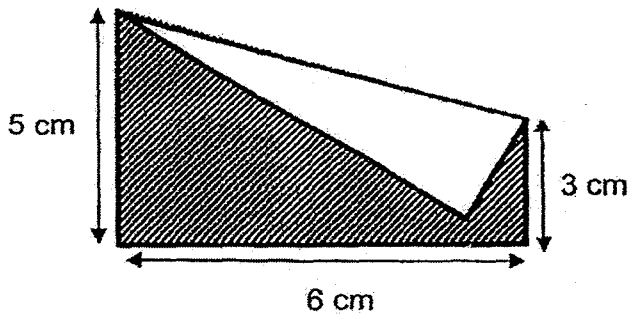
(Go on to the next page)

27 There were two boxes containing yellow and red beads. Each box had the same total number of beads. In Box A, the ratio of the number of yellow beads to the number of red beads was 5 : 1. In Box B, the ratio of the number of yellow beads to the number of red beads was 6 : 1. All the beads were then transferred into an empty container. What was the ratio of the number of yellow beads to the number of red beads in the container in the end?

Do not writ in this spac

Ans: _____

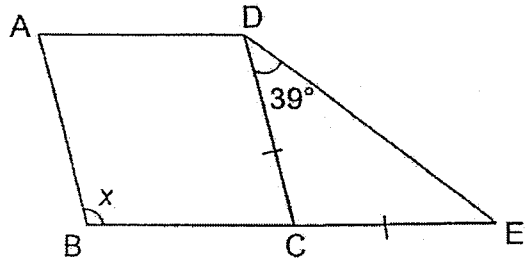
28 A rectangle piece of paper is folded at one of the corners as shown in the diagram below. Find the area of the shaded part.



Ans: _____ cm^2

(Go on to the next page)

29 In the figure below, ABCD is a rhombus and CDE is an isosceles triangle. $\angle CDE = 39°$ and BCE is a straight line. Find $\angle x$.



Ans: _____

Do not write in this space

30 What is the greatest number of cuboids 5 cm by 3 cm by 3 cm that can fit into a carton 40 cm by 30 cm by 20 cm?

Ans: _____

End of Paper

PRELIMINARY EXAMINATION 2017
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: 22 August 2017

Parent's Signature: _____

60

This booklet consists of **15** printed pages including this page.

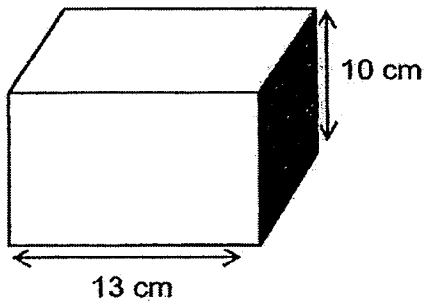
Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

1 The average mass of Mark, Steven and Raju is 65 kg. The mass of each of these 3 boys is a whole number. Mark and Steven have the same mass. Raju's mass is less than 71 kg.
What is the largest possible mass of Raju?

Ans: _____ kg

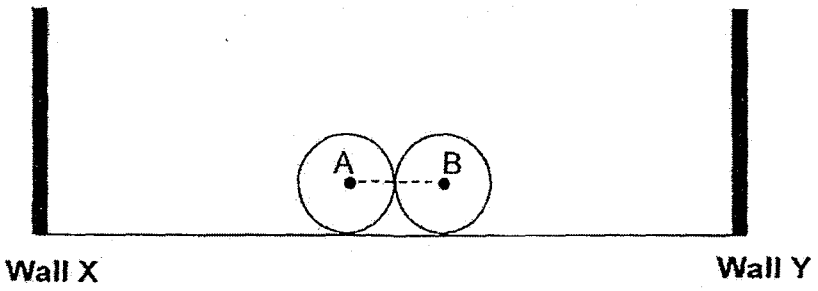
2 The figure below shows a cuboid. The volume of the cuboid is 780 cm^3. Find the perimeter of the shaded face of the cuboid.



Ans: _____ cm

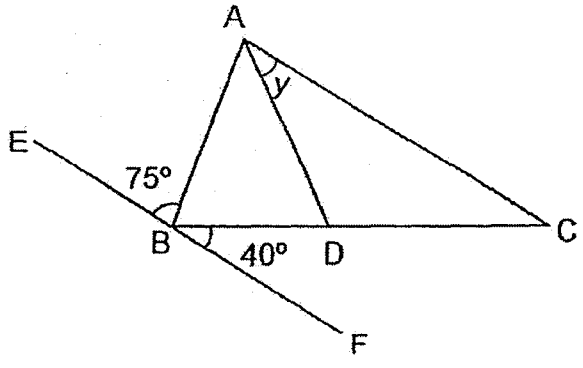
3 Two wheels, with centres A and B, are rolled along a straight line in opposite directions. Each wheel makes 3 completed revolutions before touching Wall X and Wall Y. The diameter of each wheel is 62 cm.
What is the distance between Wall X and Wall Y in terms of π?

Do not write in this space



Ans: _____ cm

4 In the figure below, ABC is a triangle and EBF is a straight line.
AC is parallel to EF and AB = AD. Find $\angle y$.



Ans: _____

(Go on to the next page)

5 Mrs Raju bought some files. She gave 100 files to her pupils and $\frac{3}{7}$ of the remainder to Ms Lim. The number of files left was $\frac{1}{3}$ of the number of files she had at first. How many files did Mrs Raju buy at first?

Do not write in this space

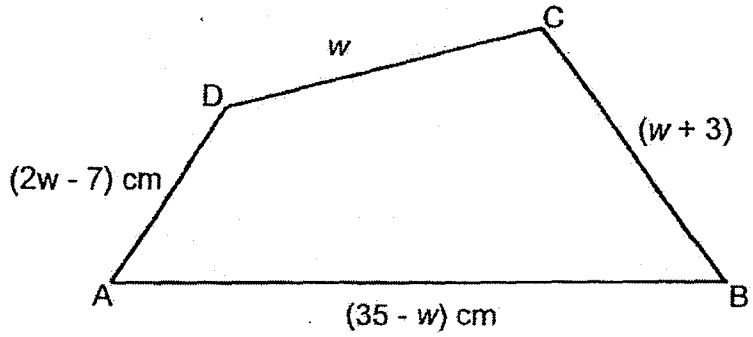
Ans: _____

(Go on to the next page)

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 wri in this spa

6 A 2-m string was used to form the figure below.



(a) Express the length of the string that was used to form the figure in terms of w.

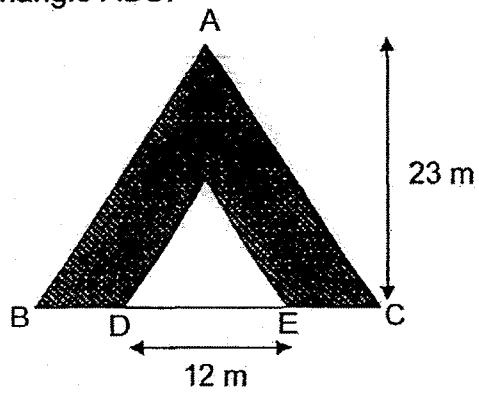
(b) If $w = 4$, what was the length of the remaining string? Give your answer in centimetres.

Ans: (a) _____ [1]

(b) _____ [2]

Do not write in this space

7 The figure below is made up of 2 triangles. The ratio of the length of BD to the length of DE to the length of EC is 2 : 3 : 2. DE is 12 cm. The shaded area of the figure is 60% of the area of Triangle ABC.
What is the area of the unshaded part?



Ans: _____ [3]

8 Tank X with a rectangular base measuring 120 cm by 80 cm was filled with water to a height of 15 cm. When 30 ℓ of water was removed from the tank, the water level dropped to $\frac{3}{5}$ of the height of the tank.
What was the capacity of the tank?

Ans: _____ [3]

(Go on to the next page)

9 Mary went to the market and bought 650 g of cod, 0.6 kg of prawns and 1 080 g of squid. She gave the fishmonger $100. How much change did Mary receive? Give your answer to the nearest ten-cent.

Seafood	Price per kg
Prawns	$23.50
Cod	$68.00
Squid	$17.25

Ans: _____ [3]

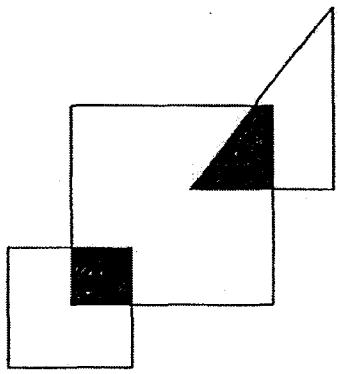
Do not wri in this spa

10 John left Admiralty Town at 11.30 a.m. for Bukit Town which was 35 km away. At the same time, Bala left Bukit Town for Admiralty Town. Bala's speed was 16 km/h faster than John's speed. They travelled along the same route. Fifteen minutes later, they were 10 km apart, after passing each other. Find Bala's average speed.

Ans: _____ [3]

Do not write in this space

11 The figure below is made up of 2 squares and a triangle. $\frac{1}{4}$ of the smaller square is shaded and $\frac{1}{3}$ of the triangle is shaded. The ratio of the area of the small square to the area of the big square to the area of the triangle is 1 : 3 : 2. What fraction of the big square is shaded?



Ans: _____ [4]

12 Ahmad and David collected some toy cars. The ratio of the number of Ahmad's toy cars to the number of David's toy cars was 8 : 11.
Both of them gave away an equal number of toy cars. In the end, the ratio of the number of Ahmad's toy cars to the number of David's toy cars became 9 : 14. What percentage of his toy cars did Ahmad give away?

Do not wri
in this spa

Ans: _____ [4]

(Go on to the next page)

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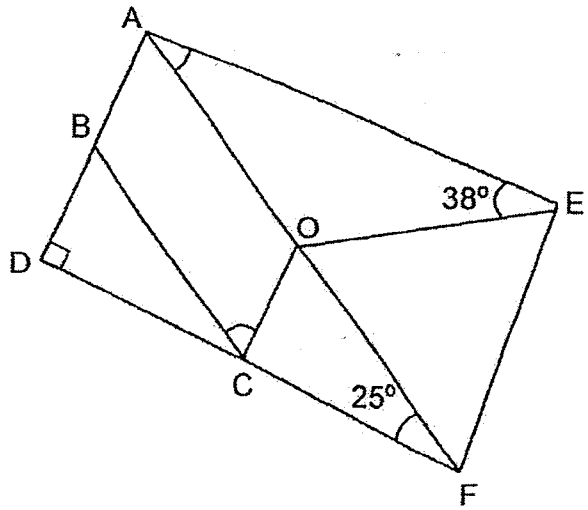
13 In the figure below, OABC is a parallelogram and OA = OE = OF. ADF is a right-angled triangle and AOF is a straight line.

(a) Find ∠OCB.

(b) Find ∠CFE.



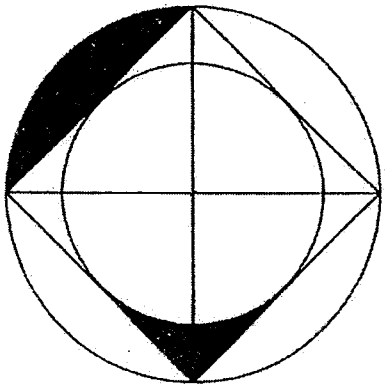
Ans: (a) _____ [2]

(b) _____ [2]

(Go on to the next page)

14 The figure below is made up of a big circle, a small circle and a square. The corners of the square touch the circumference of the big circle. The radius of the small circle is 8 cm. The area of the square is 256 cm². Find the area of the shaded part. (Take $\pi = 3.14$)

Do not write in this space



Ans: _____ [4]

15 The line graph below shows the sale of cars in a showroom from January to June. Study the graph and answer the questions.

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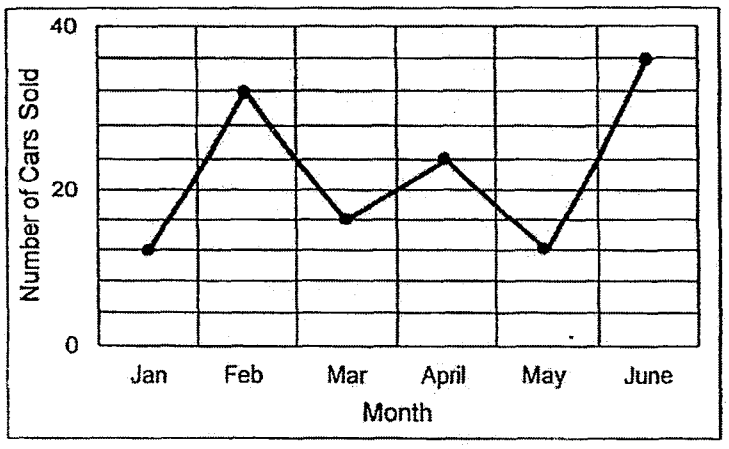


(a) Between which 2 months was there the biggest drop in the sale of cars?

(b) In which month, was the sale of cars $1\frac{1}{2}$ times that of March?

(c) What was the average number of cars sold per month from January to June?

Ans: (a) _____ and _____ [1]

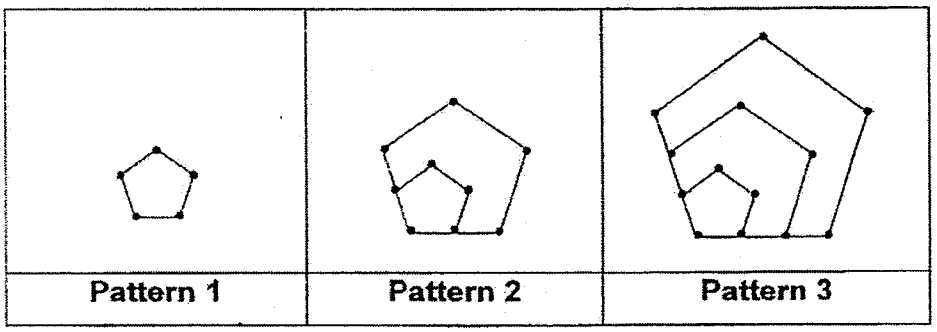
(b) _____ [1]

(c) _____ [2]

(Go on to the next page)

16 The pattern below shows a series of hexagons which are made using beads and strings. Study the pattern and answer the questions that follow.

Do not write in this spac



(a) How many beads are there in Pattern 5?

(b) Which pattern number will have 253 beads?

(c) Ahmad wants to make a pattern consisting of 43 hexagons. He has 151 beads. How many more beads does he need?

Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

Do not write in this space

17 In a library, there were 160 books on Bookshelf A. Bookshelf B had 15% fewer books than Bookshelf A. The librarian added more books to Bookshelf B and the number of books on Bookshelf B increased by 25%. Some books from Bookshelf A were borrowed by some children and the number of books on Bookshelf A decreased by 10%.

(a) How many books were there on Bookshelf B after the librarian had added more books?

(b) (i) Was there an overall increase or decrease in the total number of books?

(ii) What was the percentage increase or decrease in the total number of books? Give your answer correct to the nearest whole number.

Ans: (a) _____ [2]

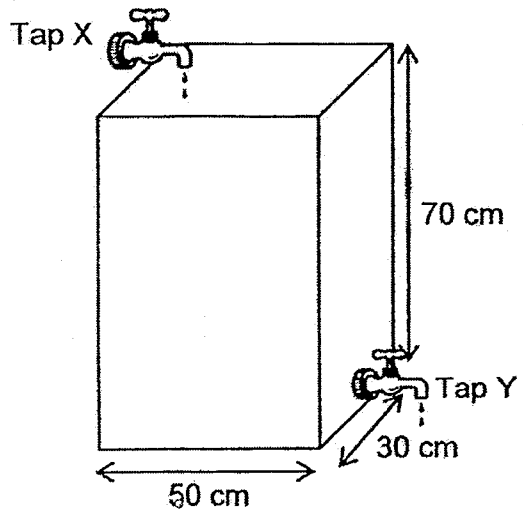
(b) (i) _____ [1]

(ii) _____ [1]

(Go on to the next page)

18 A tank measuring 50 cm by 30 cm by 70 cm was completely filled with water at first. Tap Y was then turned on and water flowed out at a rate of 1.2 ℓ per minute. After 10 minutes, Tap X was turned on and water filled the tank at a rate of 800 cm^3 per minute. Tap Y was still running when Tap X was turned on. Find the height of the water in the tank after Tap X had been running for 30 minutes.

Do not writ in this spac



Ans: _____ [5]

END OF PAPER

PRELIMINARY EXAM PAPER 2017

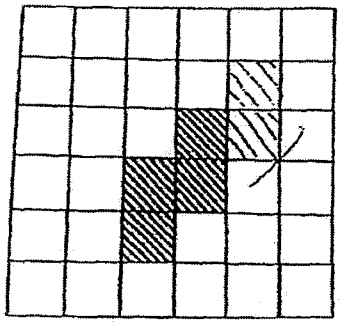
SCHOOL : METHODIST GIRLS' PRIMARY SCHOOL
SUBJECT : PRIMARY 6 MATH PAPER 1 BOOKLET A & B
TERM : PRELIMINARY EXAMINATION 2017

Paper 1
Booklet A:
Answer:

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

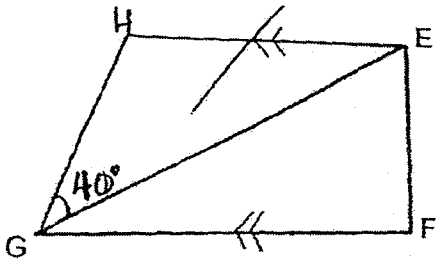
Q11	Q12	Q13	Q14	Q15
4	3	3	3	4

Paper 1
Booklet B:
16) Ans: 1020003 17) Ans: 1008 18) 1: 3
19)



20) Ans: 4
21) Ans: 0.09
22) Ans:$1\frac{7}{9}$
23) Ans: South-West
24) Ans: 21 min

25)



26a) Ans: $\frac{1}{2}$

26b) Ans:72

27) Ans: 71:13

28) Ans: $18cm^2$

29) Ans: 102°

30) Ans: 520

END

Z

PRELIMINARY EXAM PAPER 2017

SCHOOL : METHODIST GIRLS' PRIMARY SCHOOL
SUBJECT : PRIMARY 6 MATH PAPER 2
TERM : PRELIMINARY EXAMINATION 2017

PAPER 2 ANSWER

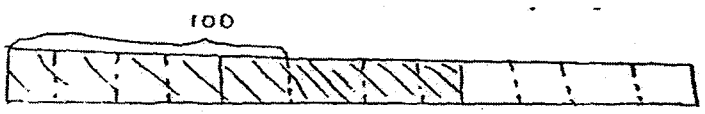
Question 1:
65 x 3= 195
195- 69= 126
126 ÷ 2= 63
Answer: 69kg

Question 2:
780 ÷ 3 ÷ 10 = 6
6+ 10+ 6+ 10= 32
Answer: 32cm

Question 3:
62π x 6 +62 + 62= (372 π + 124)
Answer: (372 π + 124)cm

Question 4:
∠ABD= ∠ADB
=180°-75°- 40°= 65°
∠BAD= 180°- 65°- 65°= 50°
∠Y = 75°- 50°= 25°
Answer: 25°

Question 5:



5u → 100
1u → 20
3x 4= 12
12u → 240
Answer: 240

Question 6:
a) 2w- 7+ W+ W+ 3+ 35- W
= 2W + W+ W- W- 7+ 3+ 35
= (3w+31)
Answer a: (3w+31)cm

b) 3x 4 +31= 43
2m= 200cm
200- 43= 157
Answer b: 157cm

Question 7:
12 ÷ 3x 7= 28
28x 23 x $\frac{1}{2}$ = 322
100%- 60%= 40%
322x 40%= 128.8
Answer: 128.8m^2

Question 8:
120x 80x 15= 144000
30L = 30 000cm^2
144 000- 30 000= 114 000
114 000 ÷ 3x 5= 190 000
190 000cm^2= 190L
Answer: 190L

Question 9:

650g= 0.65kg

1080g= 1.08kg

23.5x 0.6= 14.1

68x 0.65= 44.2

17.25x 1.08= 18.63

100- 14.1- 44.2- 18.63= 23.07 round up to 23.10

Answer: $23.10

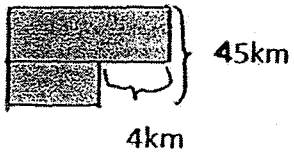
Question 10:

11.30am J---→B

J ←---B 11.30am

Total 10km 2 way of J to B

AT←-------35km--------→ BT



Total distance -→ 35km + 10km= 45km

1h= 16km

15min= $\frac{1}{4}$h → $\frac{1}{4}$h x 16km= 4 km

45km + 4km= 49km

49km ÷ 2 = 24.5km

Speed → 24.5km ÷ $\frac{1}{4}$h = 98km/h

Answer: 98km/h

Question 11:

S: B: T

1: 3: 2

12: 36 : 24

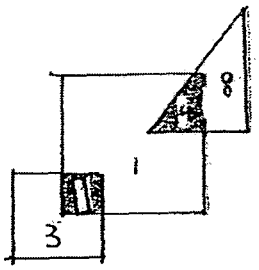
$\frac{1}{4}$ x 12= 3

$\frac{1}{3}$ x 24= 28

3+ 8= 11

Fraction of BS → $\frac{11}{36}$

Answer: $\frac{11}{36}$ *of it is shaded*



Question 12:

A: D

8: 11

9 : 14 -70

80u- 9p= 11u- 14p

14p- 9p= 11u- 8u

5p = 3u

P= 0.6u

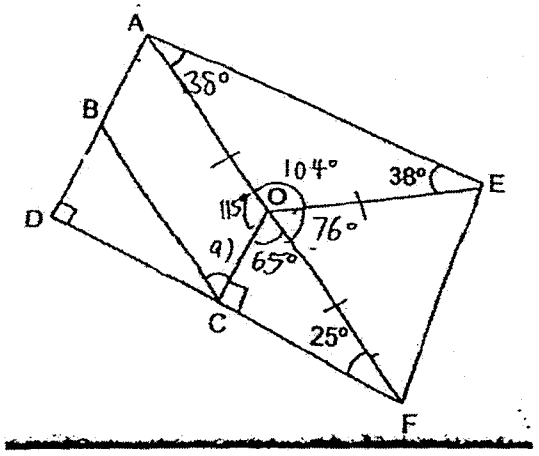
9p= 5.4u

8u-5u.4u= 2.6u

2.6u ÷ 8 x 100= 32.5

Answer: 32.5%

Question 13:



a) ∠COF= ∠OCB

= 180°- 25°- 90°= 65°

Answer: ∠OCB is 65°

b) ∠AOC= 180°- 65°= 115°

∠AOE= 180°- 38°- 38°= 104°

∠EOF= 360°- 104°- 115°- 65°= 76°

∠OFE= ∠EOF

= 180°- 76° ÷2 = 52°

∠CFE= 52°+ 25°= 77°

Answer: 77°

Question 14:

$256 \times \frac{1}{4} = 64$

Rx r= 128

BQ → $\frac{1}{4} \times 3.14 \times 128 = 100.48$

SQ → $\frac{1}{4} \times 3.14 \times 8 \times 8 = 50.24$

$100.48 - 50.24 = 50.24cm^2$

Answer: $50.24cm^2$

Question 15:

15a) Answer: February & March

b) $20 \div 5 = 4$

$4 \times 4 = 16$

$16 \times 1\frac{1}{2} = 24$

The sale of cars was $1\frac{1}{2}$ times that of March in April.

15b) Answer: April

c)$(12 + 32 + 16 + 24 + 12 + 36) \div 6 = 22$

15c) Answer: 22

Question 16:

16a) 5-1= 4

4x 4+ 5= 21

Answer: a) 21

16b) 253- 5= 248

248 ÷ 4= 62

62+ 1= 63

Answer: b) 63

16c) 43- 1= 42

42x 4 +5= 173

173- 151= 22

Answer: c) 22

Question 17

a) 160x 85%= 136

136x 125%= 170

Answer: a) 170

b(i) 160x 90%= 144

After → 144+ 170= 314

Before → 160+ 136= 296

Answer: b(i) increase

b(ii) 314- 296= 18

$\frac{18}{296}$ x 100 ≈ 6

Answer: b(ii) 6%

Question 18

50x 30x 70= 10500

1.2L = 1200cm^3

1200x 10= 12000

10500- 12000=-93000

800x 30= 24000

93000+ 24000= 117000

1200x 30= 36000

17000- 36000= 81000

81000 ÷ 50 ÷ 30= 54

Answer: 54cm

END

NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2017

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	**/ 20**
Booklet B	**/ 20**

Paper 1 Total: / 40

Name: _____ ( )

Class: Primary 6 ( )

Date: 23 August 2017

Any query on marks awarded should be raised by 14 September 2017. 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 Find the value of 873 – 418 + 229.

(1) 226

(2) 684

(3) 1062

(4) 1520

2 Which one of the following is not a common factor of 16 and 72?

(1) 8

(2) 2

(3) 3

(4) 4

3 What does the digit 8 in 10.801 stand for?

(1) 8 ones

(2) 8 tenths

(3) 8 hundredths

(4) 8 thousandths

4 Find the value of $0.45 \div 9$.

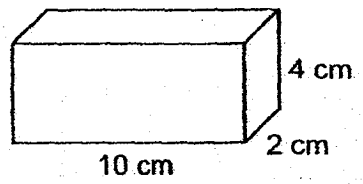
(1) 0.05

(2) 0.09

(3) 0.5

(4) 0.9

5 The rectangular block of wood shown below was cut into four equal pieces. What was the volume of each piece of the wood?



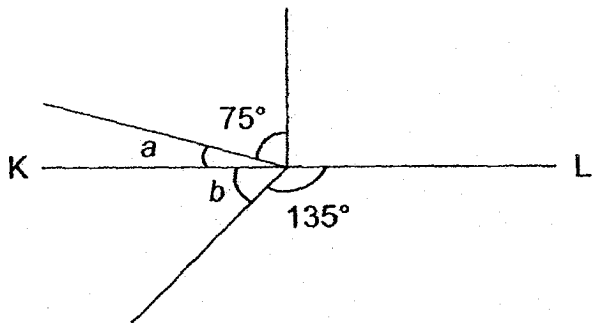
(1) 80 cm^3

(2) 20 cm^3

(3) 16 cm^3

(4) 4 cm^3

6 In the figure, KL is a straight line. Find the sum of $\angle a$ and $\angle b$.



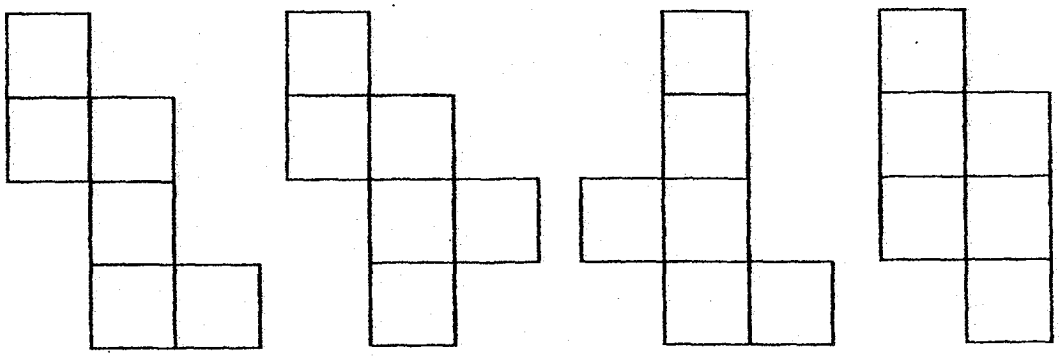
(1) 15°

(2) 45°

(3) 60°

(4) 90°

7 Which one of the following figure is **not** a net of a cube?



(1) (2) (3) (4)

8 There are 16 students in Group A. Group A has 12 fewer students than Group B. Find the ratio of the number of students in Group A to that in Group B.

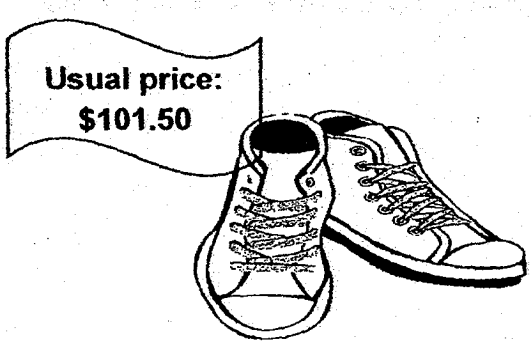
(1) 1 : 4

(2) 4 : 1

(3) 4 : 7

(4) 7 : 4

9 Hamzah was given a 20% discount for a pair of sneakers. How much was the discount?



(1) $20.30

(2) $23.00

(3) $81.20

(4) $121.80

10 Vijay studied the population of three countries, P, Q and R. He found out that:

- Country P's population was half that of Country Q.
- Country R's population was 15 000 less than that of Country P.

Arrange the countries from the one with the largest population to the one with the smallest population.

(1) Country Q, Country R, Country P

(2) Country P, Country R, Country Q

(3) Country Q, Country P, Country R

(4) Country R, Country P, Country Q

11 The perimeter of a rectangle is 40 cm. The length of the rectangle is 4 cm more than its breadth. Find the length of the rectangle.

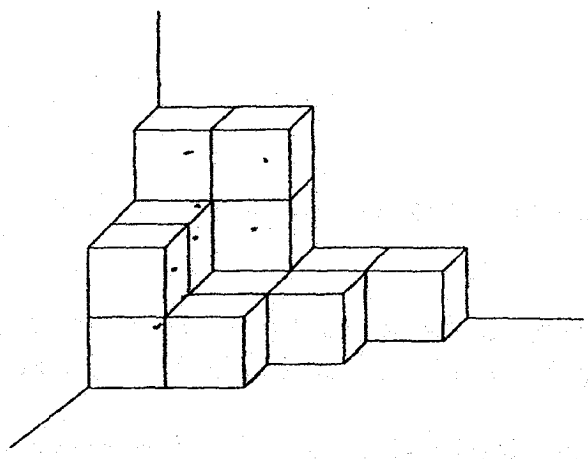
(1) 8 cm

(2) 12 cm

(3) 18 cm

(4) 22 cm

12 The solid below is made up of 1-cm cubes. How many more 1-cm cubes are needed to build a cube of edge 4 cm?



(1) 15

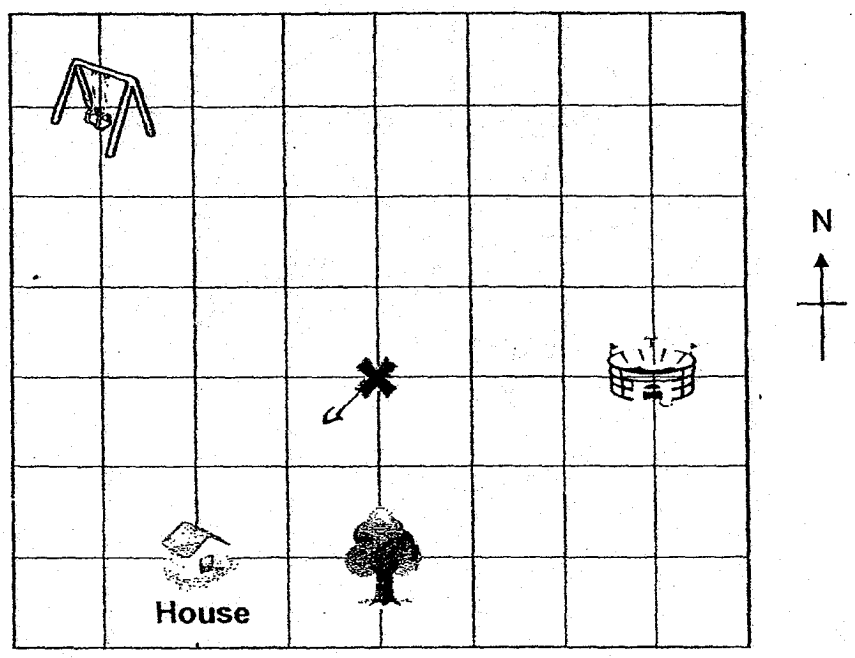
(2) 49

(3) 53

(4) 64

13 Refer to the square grid below.

Mr Happy is resting at point X. In which direction is the house ( ) from point X ( )?



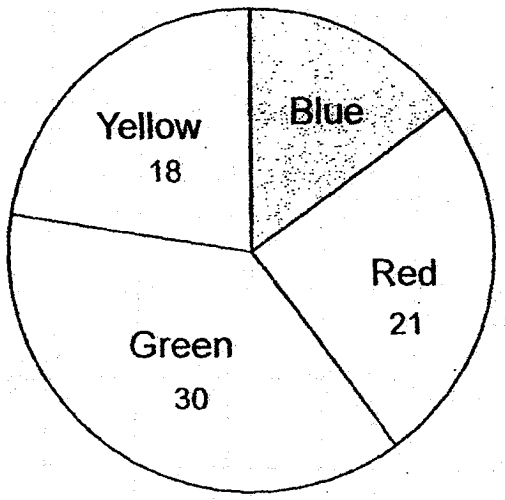
(1) North-east

(2) North-west

(3) South-east

(4) South-west

14 There were some blue, red, green and yellow highlighters in a shop. The pie chart below shows the number of highlighters of each colour. 60% of them were green and yellow. How many blue highlighters were there?



(1) 11

(2) 19

(3) 31

(4) 32

15 Geena had $8y$ paper clips. She used 4 paper clips and gave the rest to her friends, Megan and Bryan. Megan received twice as many paper clips as Bryan. Find the number of paper clips Bryan received in terms of y.

(1) $\frac{8y-4}{2}$

(2) $\frac{8y-4}{3}$

(3) $\frac{16y-8}{2}$

(4) $\frac{16y-8}{3}$

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)

---

16 Given that 12 × 44 = 528, what is the missing number in the box below?

$$120 \times 44 = \boxed{\ ?\ } \times 528$$

Ans: _____

---

17 Find the difference between $\frac{3}{4}$ and $\frac{1}{3}$.

Ans: _____

---

18 Mingwei poured 3 litres of orange juice equally into 4 bottles. What was the total volume of orange juice in 3 such bottles? Give your answer as a mixed number in the simplest form.

Ans: _____ litres

---

19 Round off 29.098 to the nearest whole number.

Ans: _____

---

20 At 11 50, Ali left his house for the library. It took him half an hour to reach the library. What time did Ali reach the library?

Ans: _____

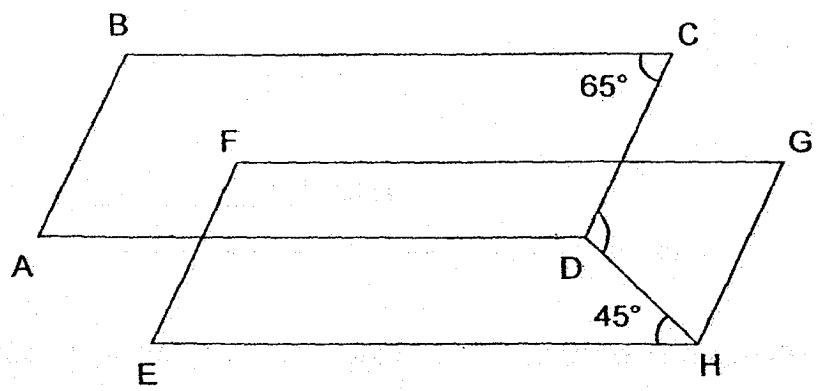
---

21 Express 30 g in kg.

Ans: _____ kg

---

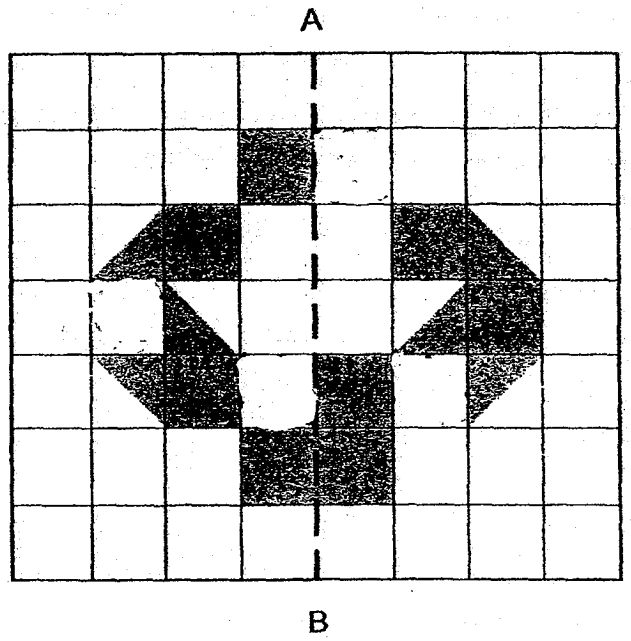
22 In the figure, ABCD and EFGH are identical parallelograms. BC is parallel to FG, $\angle BCD = 65°$ and $\angle DHE = 45°$. Find $\angle CDH$.



Ans: _____ °

---

23 The figure is made up of identical squares and identical triangles. Shade 4 more squares to form a symmetric figure with AB as the line of symmetry.



---

24 Matthew's height is 120 cm. The ratio of Matthew's height to Kelly's height is 4 : 5. Find Kelly's height.

Ans: _____ cm

---

25 Messi took 20 minutes to travel 2 km. Find Messi's average speed in m/min.

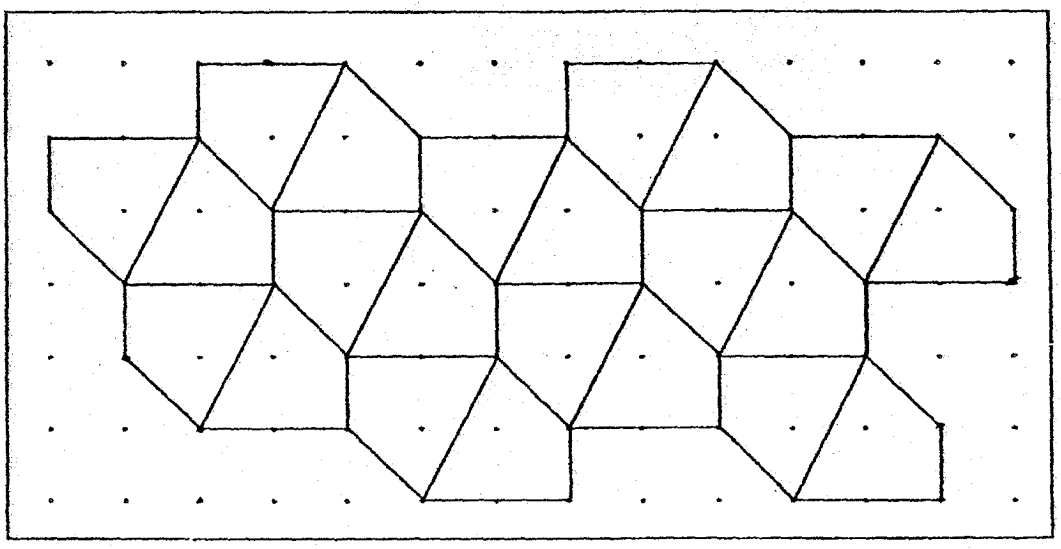
Ans: _____ m/min

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 Part of a tessellation is shown below. Extend the tessellation by drawing 2 more unit shapes within the grid.



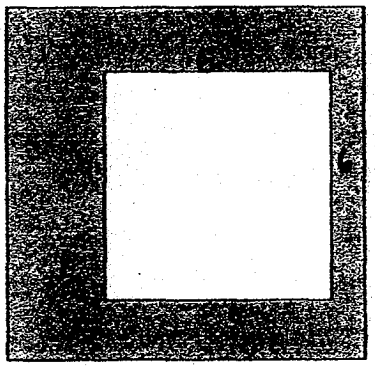
---

27 Khalid wants to cut squares of side $\frac{1}{3}$ m from a rectangular piece of paper measuring 4 m by 2 m. At most, how many of such squares can he cut?

Ans: _____

---

28 The figure below is made up of two squares. The perimeter of the smaller square is 24 cm and the area of the shaded part is 45 cm^2. Find the length of one side of the bigger square.



Ans: _____ cm

29 Yesung and Minho bought some pens and some pencils from a shop at the prices shown below.

Pens	Pencils
$4 for a pack of 3	$3 for a pack of 3

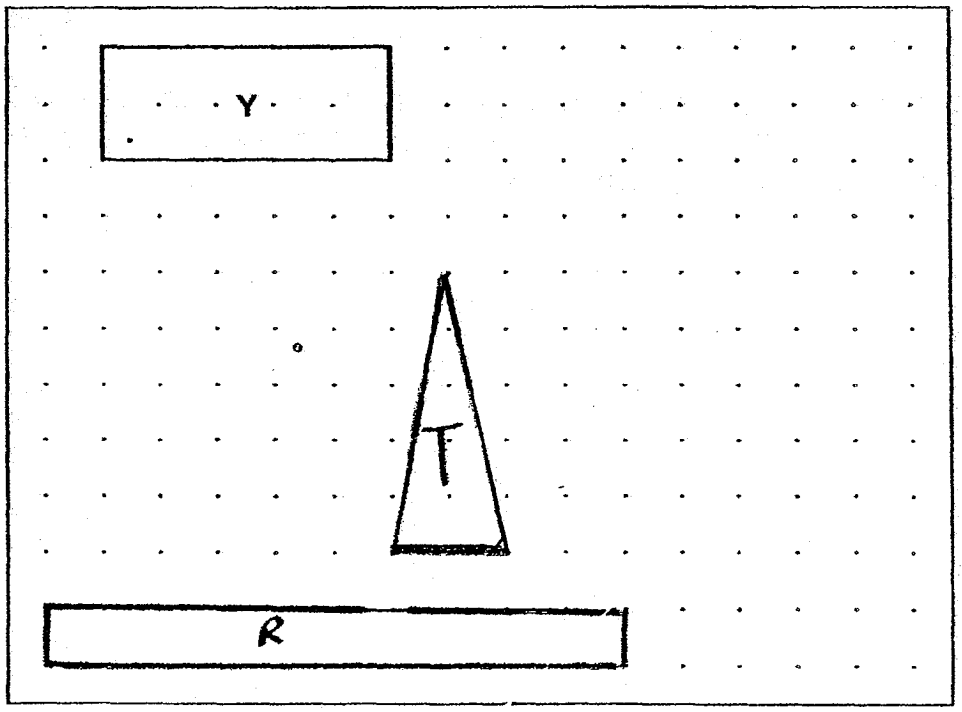
Yesung bought 6 more pens than Minho. Minho bought 3 more pencils than Yesung. What was the difference in the amount of money Yesung and Minho spent at the shop?

Ans: $ _____

30 . A rectangle Y is drawn by joining dots on the square grid below with four straight lines. Lines must meet at the dots in the given grid. In the same way,

(a) draw a rectangle, with the same area as Y, that gives the largest possible perimeter. Label the rectangle R.

(b) draw an isosceles triangle with half the area as Y. Label the triangle T.



NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2017

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

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

Name: _____ ( )

Class: Primary 6 ( )

Date: 23 August 2017

Any query on marks awarded should be raised by 14 September 2017. 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.

(10 marks)

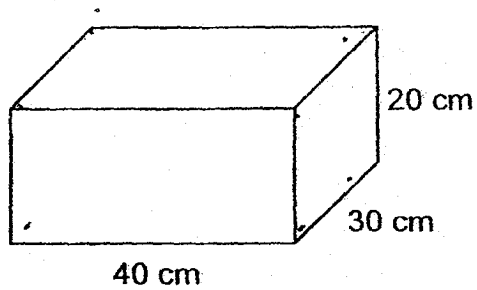
---

1 Reika's mass was 48 kg last year. She lost 6 kg this year. What was the percentage decrease in her mass?

Ans: _____ %

---

2 A 5-cm cube was removed from each corner of a cuboid measuring 40 cm by 30 cm by 20 cm. What was the volume of the remaining solid?



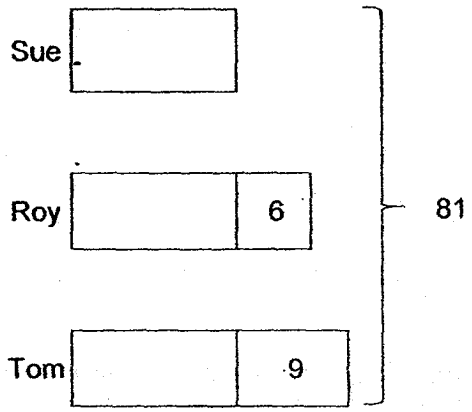
Ans: _____ cm^3

---

3 Roy is 6 years older than Sue while Tom is 9 years older than Sue. The sum of their ages is 81.

The bar model below illustrates the age of the three children.

(a) Insert a pair of brackets, ( ) , in the mathematical expression beside the bar model, so that the mathematical expression represents Roy's age. [1]



Roy's age:

6 + 81 − 15 ÷ 3

(b) Find Roy's age.

Ans: (b) _____ [1]

4 The length and the breadth of a rectangle were each increased by 11 cm. Find the increase in the perimeter of the rectangle.

Ans: _____ cm

---

5 A, B and C are three 2-digit numbers. Their average is 55. The value of A is twice the value of B. Find the smallest possible value of C.

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 Krishnan and Shobana had the same amount of money. Using all his money, Krishnan could buy 16 apricots or 24 oranges. Shobana bought 10 apricots and 5 oranges. At most, how many oranges could Shobana buy with her remaining money?

Ans: _____ [3]

---

7 Mr Kek spent $\$(4n + 5)$ on a pen and \$7 on a book. He divided his remaining money equally among his three children. Each of his children received $\$n$, find the amount of money Mr Kek have at first in terms of n in the simplest form.

Ans: _____ [3]

---

8 Yang bought thrice as many blue marbles as pink marbles. He spent as much money on the blue marbles as he did on the pink marbles. The difference between the cost of each blue marble and that of each pink marble was \$0.60. Find the cost of each pink marble.

Ans: _____ [3]

---

9 Mdm Nora paid $11.70 for two identical sacks of rice using the Saver's Coupon as shown below. How much more would she have to pay for two such sacks of rice if she did not use the coupon?

SAVE & SHOP SUPERMART

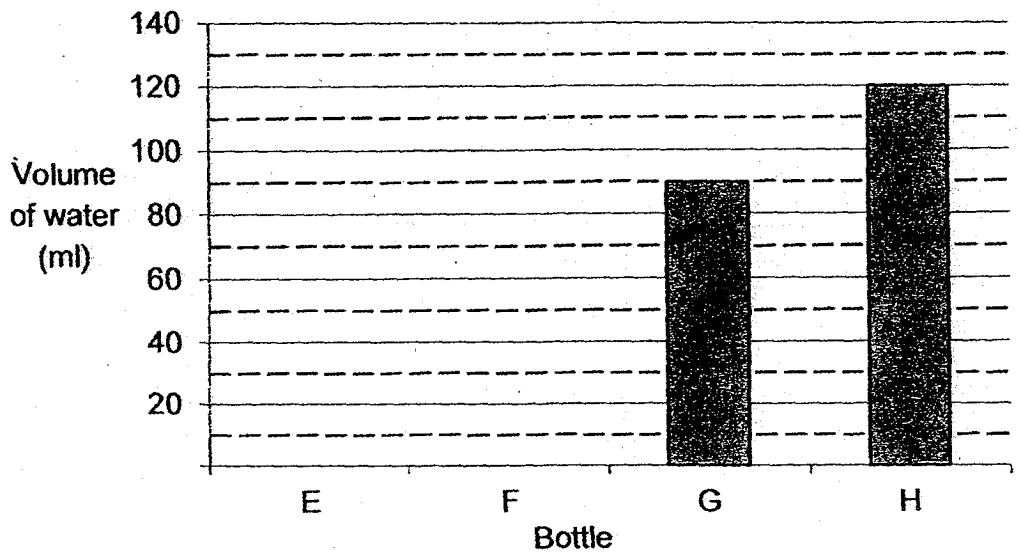
SAVER'S COUPON

Buy the 1st sack at 20% discount

and the 2nd sack at 50% discount.

Ans: _____ [3]

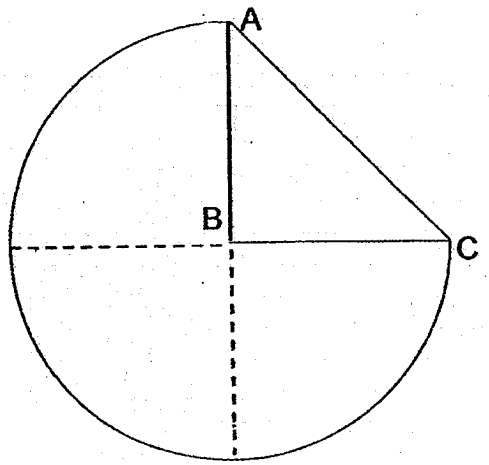
10 Shi Jin has 4 bottles labelled E, F, G and H respectively. The bar graph below shows the volume of water in each bottle. The bars that show the volume of water in Bottle E and Bottle F have not been drawn.



The ratio of the volume of water in Bottle E to the total volume of water in the 4 bottles is 2 : 9. Bottle F contains 40 ml more water than Bottle E. Find the total volume of water in the 4 bottles.

Ans: _____ [4]

11 The figure is made up of 3 identical quarter circles and a right-angled isosceles triangle. $\angle ABC = 90^\circ$ and $AB = BC$ The length of AC is 6 cm. Find the area of the figure. Take $\pi = 3.14$.



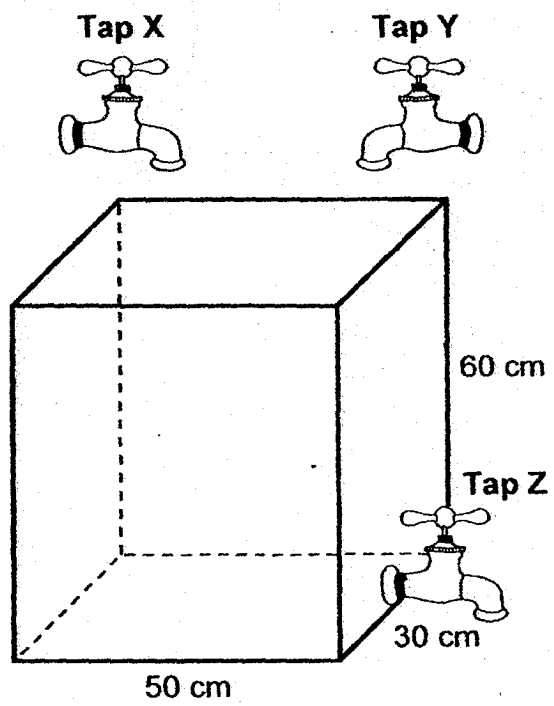
Ans: _____ [4]

12 The figure below shows Tap X, Tap Y, Tap Z and an empty rectangular tank measuring 50 cm by 30 cm by 60 cm. Water flows from Tap X at a rate of 2 litres per minute and from Tap Y at 3 litres per minute to fill the tank. Tap Z drains water out of the tank at a rate of 10 litres per minute.

Tap X was turned on at 2 p.m. Tap Y was turned on 5 minutes later. Tap Z was turned on at 2.20 p.m. All three taps were turned off at 2.30 p.m.

(a) What was the volume of water in the tank at 2.30 p.m.?

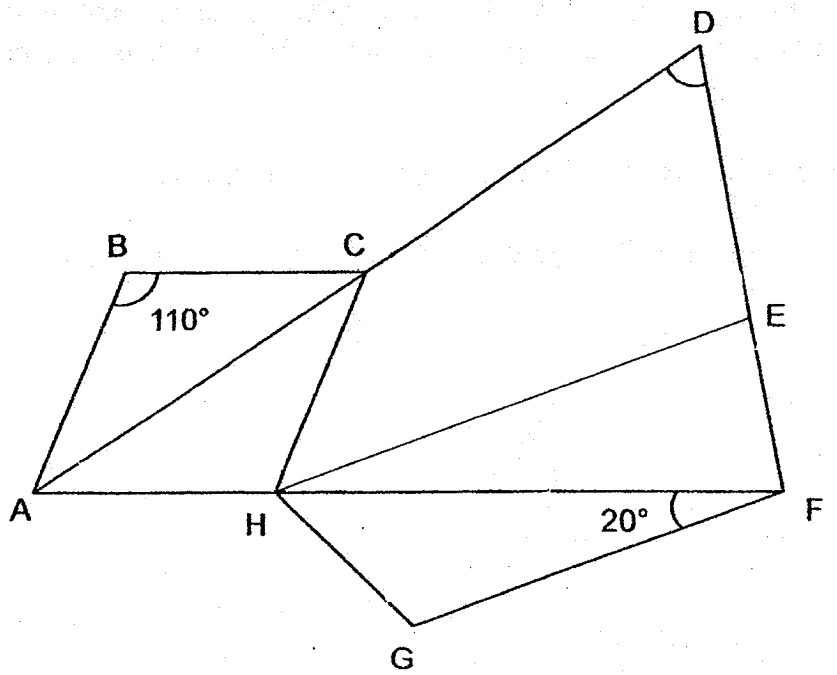
(b) What was the height of the water level in the tank at 2.30 p.m.?



Ans: (a) _____ [2]

(b) _____ [2]

13 In the figure, ABCH is a rhombus. ACD, AHF and DEF are straight lines. HE is parallel to GF and HE = HF. $\angle ABC = 110°$ and $\angle HFG = 20°$. Find $\angle CDE$.



Ans: _____ [4]

14 Study the number pattern below.

12 , 15 , 18 , ... , 93 , 96 , 99 .

The pattern is made up of all the 2-digit multiples of 3 written in increasing order.

(a) Find the sum of all the numbers in the pattern.

(b) How many numbers in the pattern do not contain the digit 3?

Ans: (a) _____ [2]

(b) _____ [2]

15 A brown bag and a blue bag contained some notes. They each had a mix of \$2 and \$5 notes. The brown bag had 5 more \$2 notes than the blue bag. The blue bag had 2 more \$5 notes than the brown bag. $\frac{3}{4}$ of the number of notes in the blue bag was equal to $\frac{2}{3}$ of the number of notes in the brown bag. The total number of \$2 notes in the two bags was 15.

(a) How many \$2 notes were there in the blue bag?

(b) How much money was there in the blue bag?

Ans: (a) _____ [1]

(b) _____ [4]

16 Lizan bought 44 stickers at the prices shown below.

Type of sticker	Price per sticker
Big	40 cents
Medium	30 cents
Small	20 cents

She paid a total of $12.40 for the stickers. The number of big stickers Lizan bought was the same as the number of medium stickers she bought.

(a) How many small stickers did Lizan buy?

(b) How much more did Lizan spend on the big stickers than she did on the small stickers?

Ans: (a) _____ [3]

(b) _____ [2]

17 At first, Box M had 18 pears and 42 lemons while Box N had 36 pears and 50 lemons. Then, some lemons were moved from Box M to Box N and some pears were moved from Box N to Box M. In the end, Box M contained pears and lemons in the ratio 3 : 4 while Box N contained pears and lemons in the ratio 1 : 2.

(a) In the end, how many lemons were there in Box M?

(b) In the end, how many more pears did Box N contain than Box M?

Ans: (a) _____ [4]

(b) _____ [1]

18 The distance between Town P and Town Q was 216 km. At 07 10, Timothy left Town P for Town Q. At 08 30, Steven left Town Q for Town P. Both did not change their speed throughout. The ratio of Timothy's speed to Steven's speed was 4 : 3. When they met each other, their distance from Town P was twice their distance from Town Q. Find Timothy's speed in km/h.

Ans: _____ [3]

END OF PAPER

YEAR : 2017
LEVEL : PRIMARY 6
SCHOOL : NANYANG PRIMARY
SUBJECT : MATHEMATICS
TERM : PRELIMINARY EXAMINATION

Paper 1

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

Q16 10

Q17 $\frac{5}{12}$

Q18 $2\frac{1}{4}$ litres

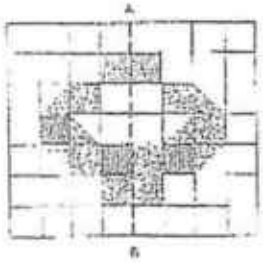
Q19 29

Q20 12:20 pm

Q21 0.03 kg

Q22 110°

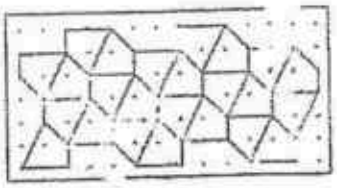
Q23



Q24 150 cm

Q25 100 m/min

Q26

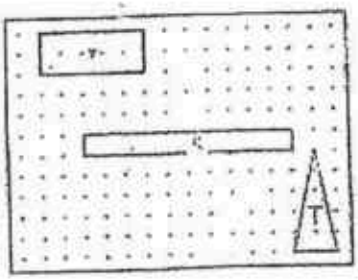


Q27 72 squares

Q28 9 cm

Q29 $5

Q30 (a & b)



<u>Paper 2</u>

Q1 $\frac{6}{48} \times 100\% \Rightarrow 12\frac{1}{2}\%$

Q2 Total no. of corners → 8
$(5 \times 5 \times 5) \times 8 = 1000$
$40 \times 30 \times 20 = 24000$
Remaining volume → $24000 - 1000 \Rightarrow$ <u>23000 cm^3</u>

Q3 (a) <u>Roy's age:</u>
$6 + (81 - 15) \div 3$

(b) $81 - 6 - 9 = 66$
$66 \div 3 = 22$
$22 + 6 \Rightarrow$ <u>28 years old</u>

NANYANG PRELIM

Q4 $11 \times 4 \Rightarrow$ 44 cm

Q5 Total $\rightarrow 55 \times 3 = 165$
$A + B + C = 165$
$A \rightarrow 98$
$B \rightarrow 98 \div 2 = 49$
$98 + 49 + C = 165$
$C = 165 - 147 \Rightarrow$ 18

Q6 $10 \div 2 = 5$
$5 \times 3 = 15$
$15 + 5 = 20$
$24 - 20 \Rightarrow$ 4 oranges

Q7 1 child $\rightarrow$ \$n
3 children $\rightarrow$ \$n x 3 = \$(3n)
Total amount at first $\rightarrow$ \$(4n + 5) + \$7 + \$(3n)
\$7n + \$5 + \$7 $\Rightarrow$ \$(7n + 12)

Q8 2u = \$0.60
1u = \$0.30
3u $\rightarrow$ \$0.30 x 3 $\Rightarrow$ \$0.90

Q9 1st $\rightarrow$ 100% - 20% = 80%
2nd $\rightarrow$ 100% - 50% = 50%
Total % paid using coupon = 80% + 50% = 130%
130% $\rightarrow$ \$11.70
1% $\rightarrow$ \$$\left(\frac{11.70}{130}\right)$
100% $\rightarrow$ \$$\left(\frac{11.70}{130}\right)$ x 100 = \$9
\$9 x 2 = \$18
\$18 - \$11.70 $\Rightarrow$ \$6.30

Q10 E → 2u
F → 2u + 40
G → 90
H → 120
Total = 9u
2u + (2u + 40) + 90 + 120 = 9u
4u + 250 = 9u
5u = 250
u = 50
9u = 50 x 9 ⇒ <u>450 ml</u>

Q11 Area of square → 6 x 6 = 36
Area of 1 triangle → 36 ÷ 4 = 9
Area of 2 triangles → 9 x 2 = 18

Area of $\frac{3}{4}$ circle → $\frac{3}{4} \times \pi \times r \times r$

→ $\frac{3}{4} \times \pi \times \sqrt{18} \times \sqrt{18}$

→ $\frac{3}{4} \times 3.14 \times \sqrt{18} \times \sqrt{18}$

→ 42.39

Area of figure → 42.39 + 9 ⇒ <u>51.39 cm²</u>

Q12 (a)

Tap X	1min → 2ℓ 30min → 2 x 30 = 60ℓ
Tap Y	1min → 3ℓ 25min → 3ℓ x 25 = 75ℓ
Tap Z	1min → 10ℓ 10min → 10ℓ x 10 = 100ℓ

Volume of water = (60 + 75) – 100
= 135 – 100 ⇒ <u>35ℓ or 35000 cm³</u>

(b) Height of water level → $\frac{35000}{50 \times 30}$ ⇒ $23\frac{1}{3}$ cm

NANYANG PRELIM

Q13 $\angle EHF = \angle GFH = 20°$
$\angle HEF = \angle HFE = (180° - 20°) \div 2 = 80°$
$\angle CAH = \angle HCA = (180° - 110°) \div 2 = 35°$
$\angle CDE = 180° - 80° - 35° \Rightarrow \underline{65°}$

Q14 (a) $12 + 99 = 111$
$30 \div 2 = 15$
$15 \times 111 \Rightarrow \underline{1665}$

(b) $30 - 6 \Rightarrow \underline{24}$

Q15 (a) No. of \$2 notes in blue bag $\rightarrow (15 - 5) \div 2 \Rightarrow \underline{5}$

(b) $\frac{3}{4}$ of blue $\rightarrow \frac{2}{3}$ of brown

$\frac{6}{8}$ of blue $\rightarrow \frac{6}{9}$ of brown

No. of notes in blue bag : No. of notes in brown bag
8 : 9
1 unit $\rightarrow 5 - 2 = 3$
8 units $\rightarrow 3 \times 8 = 24$
No. of \$5 notes in blue bag $\rightarrow 24 - 5 = 19$
$(5 \times \$2) + (19 \times \$5) \Rightarrow \underline{\$105}$

Q16 (a) Let the no. of big stickers be b.
Let the no. of medium stickers be m.
Let the no. of small stickers be s.

$b + m + s = 44$

$b + (b) + s = 44$

$2b + s = 44$ ---- ①

1 big sticker → 40 ¢

(b) big stickers → (40 x b) ¢ = (40b) ¢

(b) medium stickers → (30 x b) ¢ = (30b) ¢

(s) small stickers → (20 x s) ¢ = (20s) ¢

(40b) ¢ + (30b) ¢ + (20s) ¢ = 1240 ¢

(70b) ¢ + (20s) ¢ = 1240 ¢

$7b + 2s = 124$ ---- ②

$2b + s = 44$ ---- ①

$7b + 2s = 124$ ---- ②

① x 2 $4b + 2s = 88$ ---- ③

② - ③ $3b = 124 - 88$

$b = 36 \div 3 = 12$

From ① $2b + s = 44$

$(2 \times 12) + s = 44$

$s = 44 - 24 \Rightarrow \underline{20}$

(b) big stickers → (40 x b) ¢

= (40 x 12) ¢

= 480 ¢

small stickers → (20 x s) ¢

= (20 x 20) ¢

= 400 ¢

Difference = 480 ¢ - 400 ¢ ⇒ <u>80 ¢ / $0.80</u>

NANYANG PRELIM

Q17 (a) Total pears → 18 + 36 = 54
Total lemons → 42 + 50 = 92
12u + 4p = 216
12u + 6p = 276
2p = 276 – 216
2p = 60
since 4u + 2p = 92
4u + 60 = 92
4u = 92 – 60
4u ⇒ <u>32 lemons</u>

(b) Since 4u + 2p = 92
32 + 2p = 92
2u = 92 – 32
2p = 60
Pears in N → 1p = 60 ÷ 2 = 30
Pears in M → 3u + p = 54
3u + 30 = 54
3u = 54 – 30 = 24
Difference → 30 – 24 ⇒ <u>6 more pears</u>

Q18 3u – 2u = 80 min
1u = 80 min
3u = 80 x 3 = 240
240 min = 4 h
Distance travelled by Timothy in 4 h → 216 ÷ 3 x 2 = 144.
Timothy's speed → $\frac{144}{4}$ ⇒ <u>36 km/h</u>

End

Word Problem Worksheet

& Solutions

Nanyang Paper

P6 Mathematics SA2 2017

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. Krishnan and Shobana had the same amount of money. Using all his money. Krishnan could buy 16 apricots or 24 oranges. Shobana bought 10 apricots and 5 oranges. At most, how many oranges could Shobana buy with her remaining money?

Ans: _____

---

7. Mr Kek spent $(4n + 5) on a pen and $7 on a book. He divided his remaining money equally among his three children. Each of his children received $n, find the amount of money Mr Kek have at first in terms of n in the simplest form.

Ans: _____

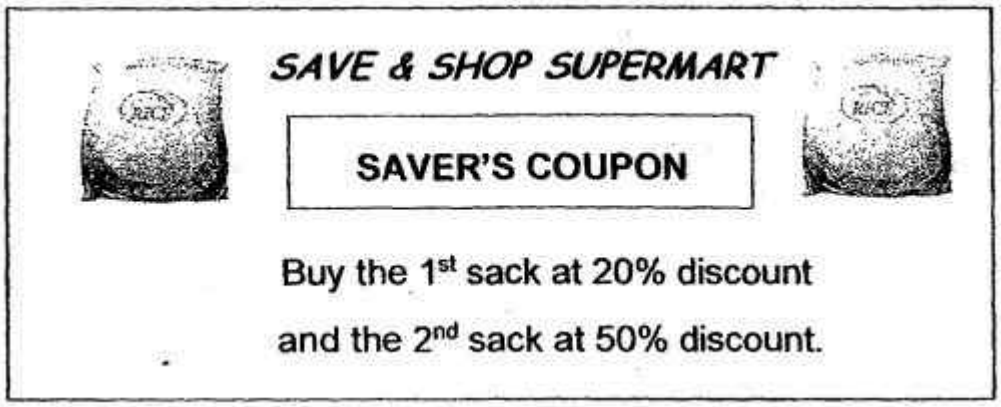
---

8. Yang bought thrice as many blue marbles as pink marbles. He spent as much money on the blue marbles as he did on the pink marbles. The difference between the cost of each blue marble and that of each pink marble was $0.60. Find the cost of each pink marble.

Ans: _____

---

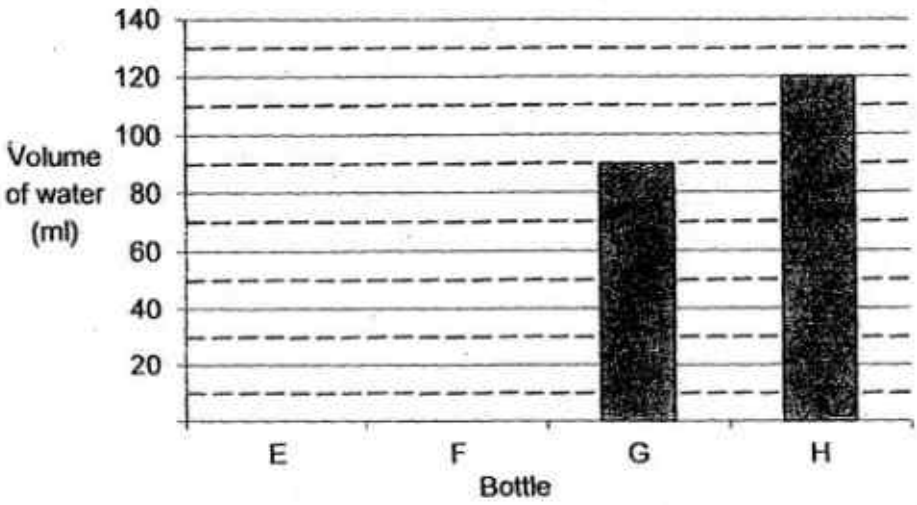
9. Mdm Nora paid $11.70 for two identical sacks of rice using the Saver's Coupon as shown below. How much more would she have to pay for two such sacks of rice if she did not use the coupon?



Ans: _____

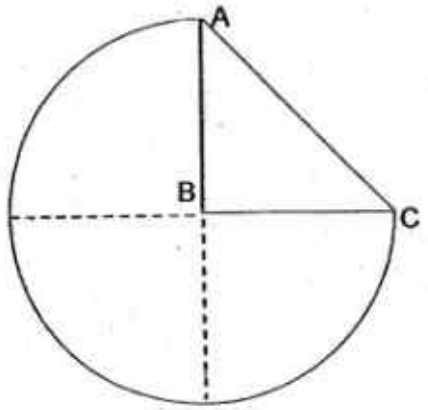
---

10. Shi Jin has 4 bottles labeled E, F, G and H respectively. The graph below shows the volume of water in each bottle. The bars show the volume of water in Bottle E and Bottle F have not been drawn.



Ans: _____

11. The figure is made up of 3 identical quarter circles and a right-angled isosceles triangle. $\angle ABC = 90°$ and AB = BC. The length of AC is 6 cm. Find the area of the figure. Take $\pi = 3.14$.

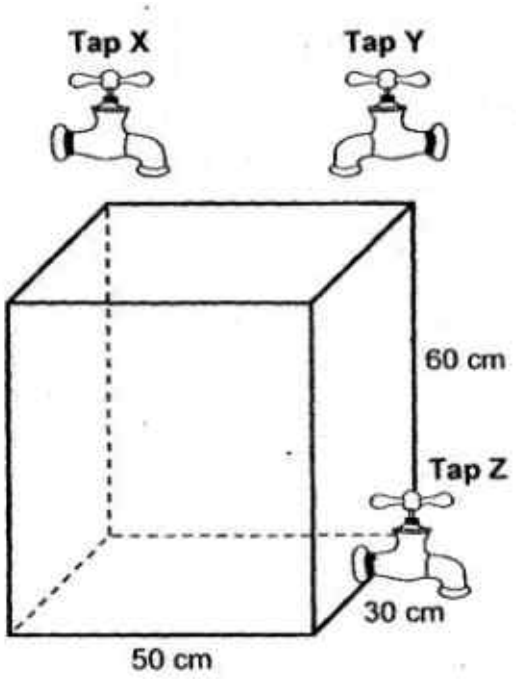


Ans: _____

12. The figure below shows Tap X, Tap Y, Tap Z and an empty rectangular tank measuring 50 cm by 30 cm by 60 cm. Water flows from Tap X at a rate of 2 litres per minute and from Tap Y at 3 litres per minute to fill the tank. Tap Z drains water out of the tank at a rate of 10 litres per minute.

Tap X was turned on at 2 p.m. Tap Y was turned on 5 minutes later. Tap Z was turned on at 2.20 p.m. All three taps were turned off at 2.30 p.m.

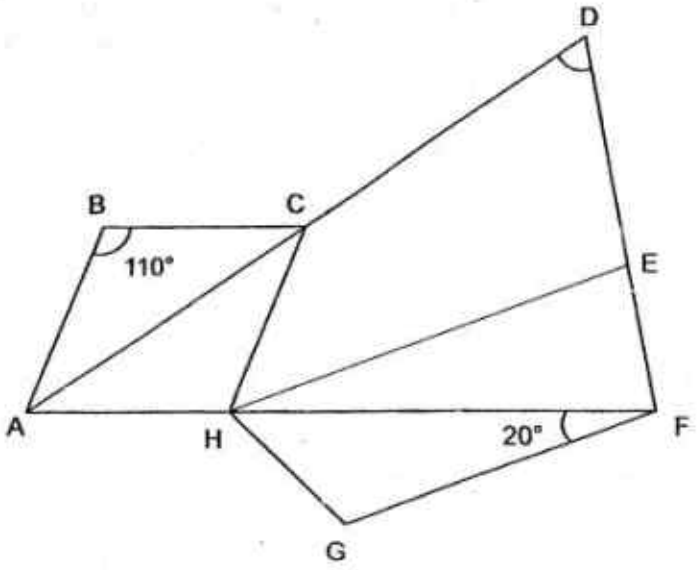
(a) What was the volume of water in the tank at 2.30 p.m.?
(b) What was the height of the water level in the tank at 2.30 p.m.?



Ans: (a) _____

(b) _____

13. In the figure, ABCH is a rhombus. ACD, AHF and DEF are straight lines. HE is parallel to GF and HE = HF. ∠ABC = 110 ° and ∠ HFG = 20 °. Find ∠ CDF.



Ans: _____

14. Study the number pattern below.

12, 15, 18, … …, 93, 96, 99.

The pattern is made up of all the 2-digit multiples of 3 written in increasing order.

(a) Find the sum of all the numbers in the pattern.

(b) How many numbers in the pattern do not contain the digit 3?

Ans: (a) _____

(b) _____

15. A brown bag and a blue bag contained some notes. They each had a mix of \$2 and \$5 notes. The brown bag had 5 more \$2 notes than the blue bag. The blue bag had 2 more \$5 notes than the brown bag. $\frac{3}{4}$ of the number of notes in the blue bag was equal to $\frac{2}{3}$ of the number of notes in the brown bag. The total number of \$2 notes in the two bags was 15.

(a) How many \$2 notes were there in the blue bag?

(b) How much money was there in the blue bag?

Ans: (a) _____

(b) _____

16. Lizan bought 44 stickers at the price shown below.

Type of sticker	Price per sticker
Big	40 cents
Medium	30 cents
Small	20 cents

She paid a total of $12.40 for the stickers. The number of big stickers Lizan bought was the same as the number of medium stickers she bought.

(a) How many small stickers did Lizan buy?

(b) How much more did Lizan spend on the big stickers than she did on the small stickers?

Ans: (a) _____

(b) _____

17. At first, Box M had 18 pears and 42 lemons while Box N had 36 pears and 50 lemons. Then some lemons were moved from Box M to Box N and some pears were moved from Box N to Box M. In the end, Box M contained pears and lemons in the ratio 3 : 4 while Box N contained pears and lemons in the ratio 1 : 2.

(a) In the end, how many lemons were there in Box M?

(b) In the end, how many more pears did Box N contain than Box M?

Ans: (a) _____

(b) _____

18. The distance between Town P and Town Q was 216 km. At 07 : 10, Timothy left Town P for Town Q. At 8 : 30, Steven left Town Q for Town P. Both did not change their speed throughout. The ratio of Timothy's speed to Steven's speed was 4 : 3. When they met each other, their distance from Town P was twice their distance from Town Q. Find Timothy's speed in km/h.

Ans: _____

Answer Key

Subject: Primary 6 Maths – Word Problem Solutions
Paper: SA2 2017 Nanyang

6. 4 oranges
7. $(7n + 12)
8. $0.90
9. $6.30
10. 450 mℓ
11. 51.39 cm^2
12. a) 35 ℓ b) 23.33 mℓ
13. 65°
14. a) 1665 b) 25
15. a) 5 b) $105
16. a) 20 b) $0.80
17. a) 32 lemons b) 6 more pears
18. 36 km/h

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. Krishnan and Shobana had the same amount of money. Using all his money. Krishnan could buy 16 apricots or 24 oranges. Shobana bought 10 apricots and 5 oranges. At most, how many oranges could Shobana buy with her remaining money?

Let price of each apricot = a, price of each orange = o

16 x a = 24 x o
2a = 3o
a = price of apricot = 1.5 times price of orange

Cost of 10 apricots → cost of 15 oranges

Shobana's purchase → 15 + 5 oranges = 20 oranges

Number of oranges, Shabana could buy with remaining money = 24 – 20 = 4

Ans: 4 oranges

---

7. Mr Kek spent $(4n + 5) on a pen and $7 on a book. He divided his remaining money equally among his three children. Each of his children received $n, find the amount of money Mr Kek have at first in terms of n in the simplest form.

Amount of the three children received = $3n
At first, amount of Mr Kek had = 4n + 5 + 7 + 3n = 7n + 12

Ans: $(7n + 12)

---

8. Yang bought thrice as many blue marbles as pink marbles. He spent as much money on the blue marbles as he did on the pink marbles. The difference between the cost of each blue marble and that of each pink marble was $0.60. Find the cost of each pink marble.

Let cost of each blue marble = b, cost of each pink marble = p

Cost of all blue marbles = cost of all pink marbles
Number of blue marbles = 3 times number of pink marbles
Cost of each pink marble = 3 times of cost of each blue marble
p = 3 b
Difference in cost = 3b – b = 2b = 0.60
b = $0.30

Cost of each pink marble = p = 3 b = 3 x 0.30 = $0.90

Ans: $0.90

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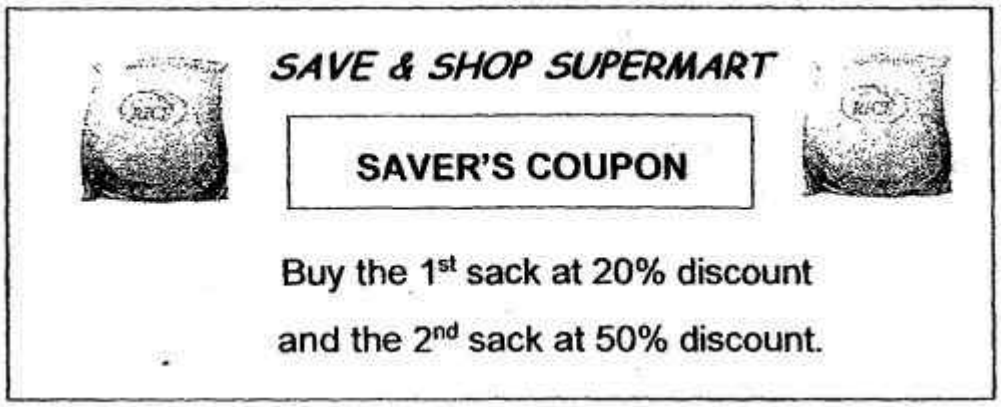
9. Mdm Nora paid $11.70 for two identical sacks of rice using the Saver's Coupon as shown below. How much more would she have to pay for two such sacks of rice if she did not use the coupon?



Let p = price of each sack of rice without discount

Discounted price of 1st sack of rice = 0.8 p
Discounted price of 2nd sack of rice = 0.5 p
Discounted price of first 2 sacks of rice = 0.8p + 0.5p = 11.70
1.3p = 11.70
Undiscounted sack of rice = p = 11.70 ÷ 1.3 = $9
Undiscounted 2 sacks of rice = 9 x 2 = $18

Additional amount to pay for undiscounted 2 sacks of rice = 18 – 11.7 = $6.30

Ans: $6.30

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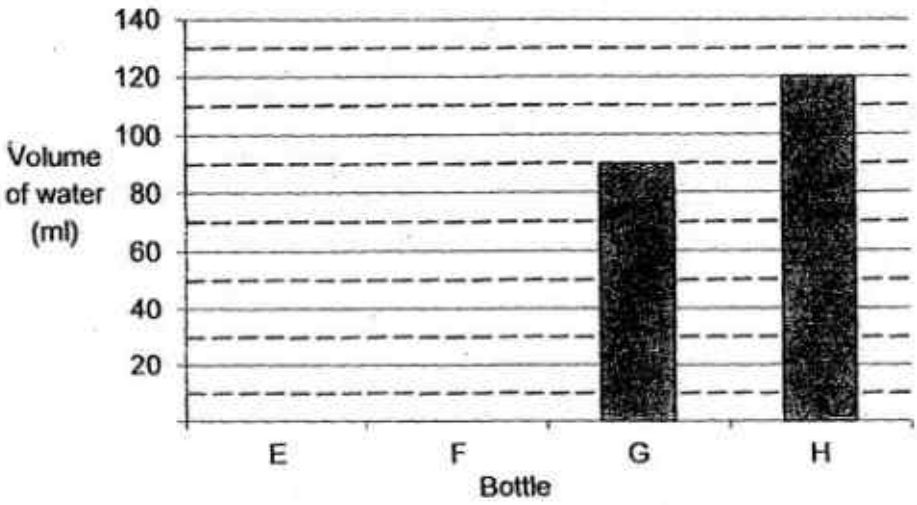
10. Shi Jin has 4 bottles labeled E, F, G and H respectively. The graph below shows the volume of water in each bottle. The bars show the volume of water in Bottle E and Bottle F have not been drawn.



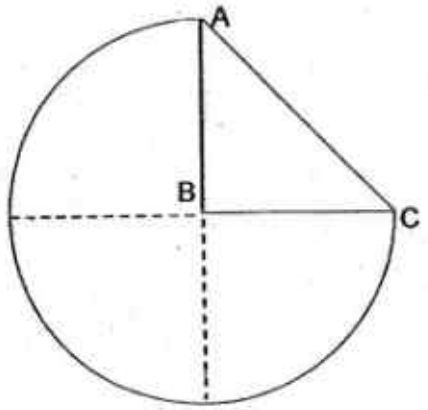
The ratio of the volume of water in Bottle E to the total volume of water in the 4 bottles is 2 : 9. Bottle F contains 40 mℓ more water than Bottle E. Find the total volume of water in the 4 bottles.

Ratio of volume of Bottle E to total volume of 4 bottles = 2 : 9 → 2u : 9u
Volume of E + F = Total – G – H
2u + 2u + 40 = 9u – 90 – 120
9u – 4u = 40 + 90 + 120
5u = 250
u = 50 mℓ

Total volumne of water in 4 bottles = 9u = 9 x 50 = 450 mℓ

Ans: <u>450 mℓ</u>

11. The figure is made up of 3 identical quarter circles and a right-angled isosceles triangle. $\angle ABC = 90°$ and AB = BC. The length of AC is 6 cm. Find the area of the figure. Take $\pi = 3.14$.



Let r = radius
Area of 4 triangles = 6 x 6 = 36
Area of 2 triangles = 18 = r x r
Area of 3 quarter circles = $\frac{3}{4} \times \pi \times r \times r = \frac{3}{4} \times 3.14 \times 18 = 42.39$
Area of $\triangle$ ABC = $\frac{1}{2} \times r \times r = \frac{1}{2} \times 18 = 9$

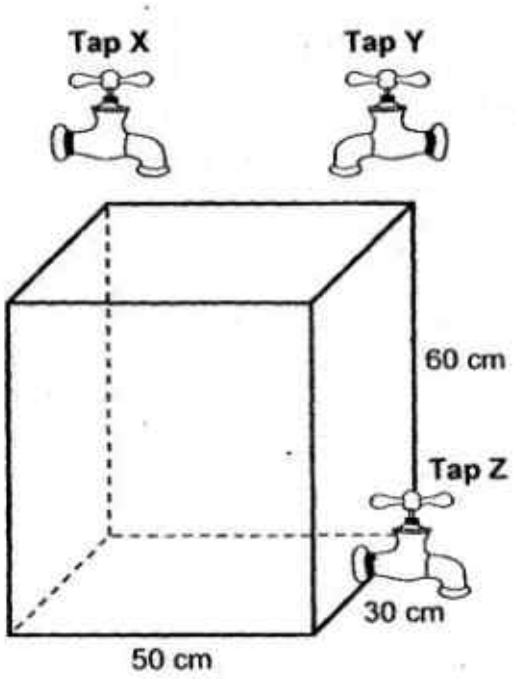
Area of figure = 42.39 + 9 = 51.39 cm^2

Ans: 51.39 cm^2

12. The figure below shows Tap X, Tap Y, Tap Z and an empty rectangular tank measuring 50 cm by 30 cm by 60 cm. Water flows from Tap X at a rate of 2 litres per minute and from Tap Y at 3 litres per minute to fill the tank. Tap Z drains water out of the tank at a rate of 10 litres per minute.

Tap X was turned on at 2 p.m. Tap Y was turned on 5 minutes later. Tap Z was turned on at 2.20 p.m. All three taps were turned off at 2.30 p.m.

(a) What was the volume of water in the tank at 2.30 p.m.?
(b) What was the height of the water level in the tank at 2.30 p.m.?



Volume of water from Tap X at 2:30 pm = 2 x 30 = 60 ℓ
Volume of water from Tap Y at 2:30 pm = 3 x 25 = 75 ℓ
Volume of water from Tap Z at 2:30 pm = -10 x 10 = -100 ℓ

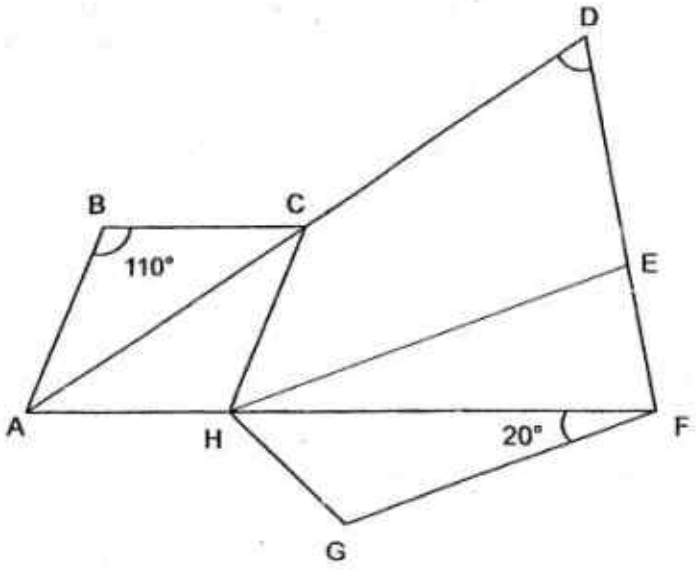
(a) Net volume at 2:30 pm = 60 + 75 – 100 = 35 ℓ = 35 000 m ℓ

(b) Area of tank = 30 x 50 = 1500 cm^2
Height at 2:30 pm = 35000 ÷ 1500 = 23.33 mℓ

Ans: (a) 35 ℓ

(b) 23.33 mℓ

13. In the figure, ABCH is a rhombus. ACD, AHF and DEF are straight lines. HE is parallel to GF and HE = HF. ∠ABC = 110 ° and ∠ HFG = 20 °. Find ∠ CDF.



∠ BAH = $\frac{1}{2}$ x (360 – 110 – 110) = 70 °

∠ CAH = 70 ÷ 2 = 35°

∠EHF = ∠GFH = 20°

∠ HEF = ∠ HFE = (180° – 20°) ÷ 2 = 80°

∠CDE = 180° – 80° - 35° = 65°

Ans: 65°

14. Study the number pattern below.

12, 15, 18, … …, 93, 96, 99.

The pattern is made up of all the 2-digit multiples of 3 written in increasing order.

(a) Find the sum of all the numbers in the pattern.

(b) How many numbers in the pattern do not contain the digit 3?

(a)

The number of terms in the series = 1 + (99 – 12) ÷ 3 = 30

Average of the terms in the series = (12 + 99) ÷ 2 = 55.5

Sum of all the numbers = 55.5 x 30 = 1665

(b) Number of 3s →
12, 15, 18, 21, 24, 27, 30, 33, 36, 39 → 3
42, …… 69 → 1
72 ……. 99 → 1

Number 3 appears 5 times
Numbers without 3s = 30 – 5 = 25

Ans: (a) 1665

(b) 25

15. A brown bag and a blue bag contained some notes. They each had a mix of \$2 and \$5 notes. The brown bag had 5 more \$2 notes than the blue bag. The blue bag had 2 more \$5 notes than the brown bag. $\frac{3}{4}$ of the number of notes in the blue bag was equal to $\frac{2}{3}$ of the number of notes in the brown bag. The total number of \$2 notes in the two bags was 15.

(a) How many \$2 notes were there in the blue bag?

(b) How much money was there in the blue bag?

(a)

Excess \$2 notes = 5

Number of \$2 notes in blue bag = (15 – 5) ÷ 2 = 5

Number of \$2 notes in brown bag = 5 + 5 = 10

(b)

$\frac{3}{4}$ of number of blue bag notes = $\frac{2}{3}$ of number of brown bag notes

All of blue bag notes = $\frac{2}{3}$ x $\frac{4}{3}$ of brown bag notes = $\frac{8}{9}$ of brown bag notes

Ratio of number of blue bag notes vs number of brown bag notes → 8 : 9

→ 8u : 9u →

Additional number of notes in brown bag = 9u – 8u = u = 5 – 2 = 3

Number of notes in blue bag = 8 x 3 = 24

Number of \$5 notes in blue bag = 24 – 5 = 19

Value of \$5 notes in blue bag = 19 x 5 = \$95

Value of \$2 notes in blue bag = 5 x 2 = \$10

Total value in blue bag = 95 + 10 = \$105

Ans: (a) 5

(b) \$105

16. Lizan bought 44 stickers at the price shown below.

Type of sticker	Price per sticker
Big	40 cents
Medium	30 cents
Small	20 cents

She paid a total of $12.40 for the stickers. The number of big stickers Lizan bought was the same as the number of medium stickers she bought.

(a) How many small stickers did Lizan buy?

(b) How much more did Lizan spend on the big stickers than she did on the small stickers?

Let number of big stickers = number of medium stickers = n
Number of small stickers = s

n + n + s = 2n + s = 44 (1)
40n + 20s = 880 (2)

n x 0.40 + n x 0.30 + s x 0.20 = 12.40
0.70n + 0.20s = 12.40
70n + 20s = 1240 (3)

30n = 360 (4) = (3) – (2)
n = 12
2 x 12 + s = 44 from (1)
s = 44 – 24 = 20

(a) number of small stickers = 20

(b) Additional spending on big stickers compared with small stickers
= 0.40 x 12 - 0.2 x 20 = $0.80

Ans: (a) 20

(b) $0.80

17. At first, Box M had 18 pears and 42 lemons while Box N had 36 pears and 50 lemons. Then some lemons were moved from Box M to Box N and some pears were moved from Box N to Box M. In the end, Box M contained pears and lemons in the ratio 3 : 4 while Box N contained pears and lemons in the ratio 1 : 2.

(a) In the end, how many lemons were there in Box M?

(b) In the end, how many more pears did Box N contain than Box M?

At first ratio of pears and lemons in Box M → 18 : 42
At first ratio of pears and lemons in Box N → 36 : 50
Total fruits = 146

In the end ratio of pears and lemons in Box M → 3 : 4 → 3u : 4u
Box M fruits = 7u
If u = 7, 8, 9, 10
Box M fruits = 49, 56, 63, 70
Box N fruits = 97, *90*, 83, 76 as 90 is multiple of 3, u = 8
In the end ratio of pears and lemons in Box M → 1 : 2 → 1v : 2v
Box N fruits = 3v = 90
v = 30
Box N pears and lemons → 30 : 60
(a)
In the end number of lemons in Box M = 4 x 8 = 32
In the end number of pears in Box M = 3 x 8 = 24
(b)
In the end, additional number of pears in Box N = 30 – 24 = 6

Ans: (a) 32 lemons

(b) 6 more pears

18. The distance between Town P and Town Q was 216 km. At 07 : 10, Timothy left Town P for Town Q. At 8 : 30, Steven left Town Q for Town P. Both did not change their speed throughout. The ratio of Timothy's speed to Steven's speed was 4 : 3. When they met each other, their distance from Town P was twice their distance from Town Q. Find Timothy's speed in km/h.

When they met, distance from Town P = 2 x distance from Town Q = 2u
u + 2u = 216
Distance from Town Q = u = 216 ÷ 3 = 72 km
Distance taken by Timothy from Town P = 216 – 72 = 144

Ratio of Timothy's speed vs Steven's speed → 4 : 3
Ratio of Timothy's time vs Steven's time take → 3 : 4 → 3v : 4v

Difference in time taken = 4v – 3v = v = 8hr 30 min – 7hr 10 min = 80 minutes
v = 80
Time taken by Timothy is 3v = 3 x 80 = 240 minutes = 4 hours

Timothy's speed = 144 ÷ 4 = 36 km/h

Ans: <u>36 km/h</u>

PRELIMINARY EXAMINATION, 2017

MATHEMATICS

PAPER 1

(BOOKLET A)

Additional materials: Optical Answer Sheet (OAS) **Total Time For Booklets A & B : 50 min**

Name : _____ ( )

Class : Primary 6 ___

Date : 2 August 2017

INSTRUCTIONS TO CANDIDATES

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL THE 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 (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet. (20 marks)

1. What does the digit 5 in 532 081 stand for?

(1) 500

(2) 5000

(3) 50 000

(4) 500 000

2. The price of a television when rounded to the nearest hundred is $2000. Which of the following is likely to be the price of the television?

(1) $1948

(2) $1952

(3) $2073

(4) $2125

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

$$\frac{5}{8}, \frac{2}{5}, \frac{7}{10}$$

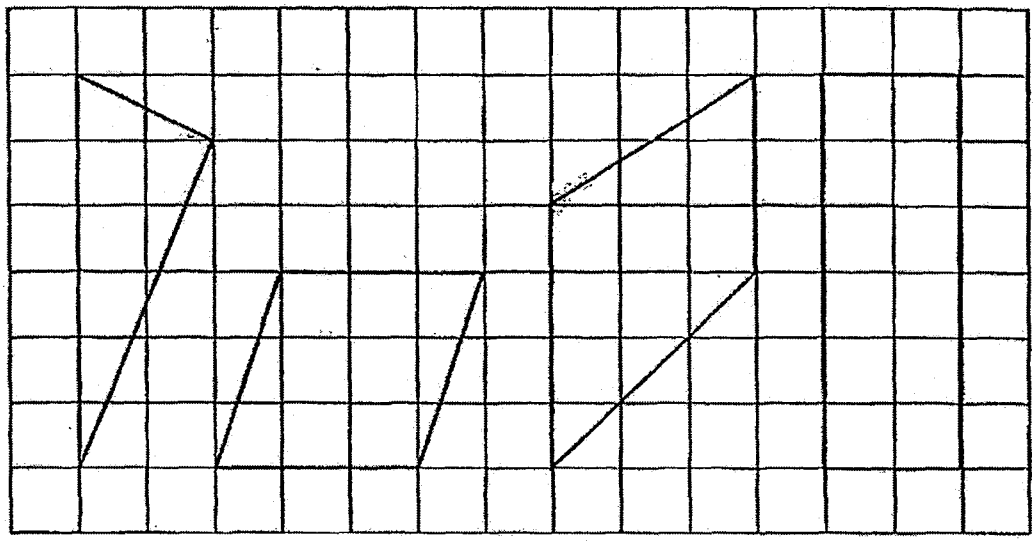
(1) $\frac{2}{5}, \frac{7}{10}, \frac{5}{8}$

(2) $\frac{5}{8}, \frac{7}{10}, \frac{2}{5}$

(3) $\frac{2}{5}, \frac{5}{8}, \frac{7}{10}$

(4) $\frac{7}{10}, \frac{5}{8}, \frac{2}{5}$

4. Which of the following figures below is a trapezium?



(1) (2) (3) (4)

5. Which of the following fractions is the nearest to 0.8?

(1) $\frac{8}{20}$

(2) $\frac{21}{30}$

(3) $\frac{15}{20}$

(4) $\frac{9}{10}$

6. Express 8005 m in kilometres and metres.

(1) 8 km 5 m

(2) 8 km 50 m

(3) 80 km 5 m

(4) 80 km 50 m

7. What is the value of $\frac{8m+6}{6}$ when $m = 9$?

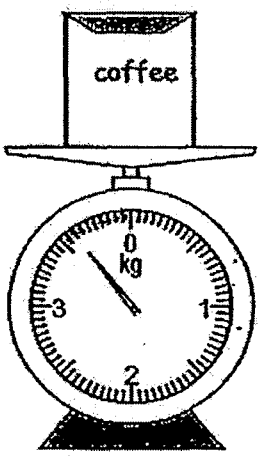
(1) 13

(2) 20

(3) 73

(4) 78

8. What is the mass of the packet of coffee as shown on the weighing scale in the figure?



(1) 3.6 kg

(2) 3.7 kg

(3) 4.1 kg

(4) 4.2 kg

9. Mrs Lee had $\frac{2}{3}$ kg of rice. She gave away $\frac{1}{5}$ kg of it to her friends. How much rice had she left?

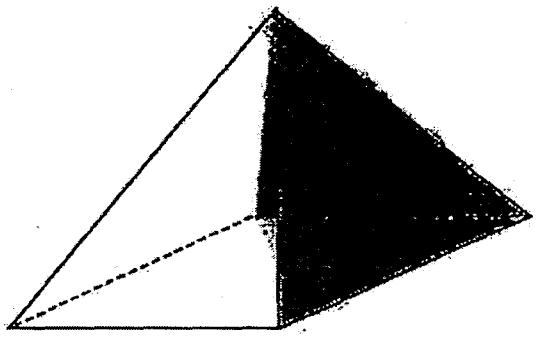
(1) $\frac{8}{15}$ kg

(2) $\frac{7}{15}$ kg

(3) $\frac{4}{15}$ kg

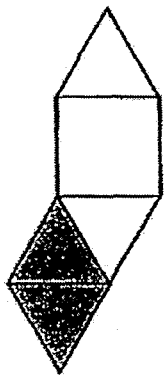
(4) $\frac{2}{15}$ kg

10. The figure below shows a pyramid with two sides shaded.

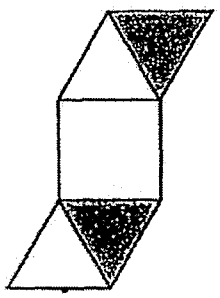


Which of the following are nets of the above solid?

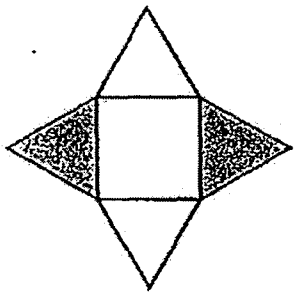
A.



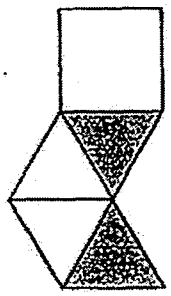
B.



C.



D.



(1) A and B only

(2) C and D only

(3) A and C only

(4) B and D only

11. George had some buttons. After he bought more buttons, the number of buttons he had increased by 20% to 240. How many buttons did he have at first?

(1) 40

(2) 192

(3) 200

(4) 1200

12. Hulll filled two identical bottles completely with mixtures of orange syrup and water. The ratio of the amount of orange syrup to the amount of water in the first bottle was 2 : 1 and in the second bottle was 5 : 4. What was the ratio of the total amount of orange syrup to the total amount of water in both bottles?

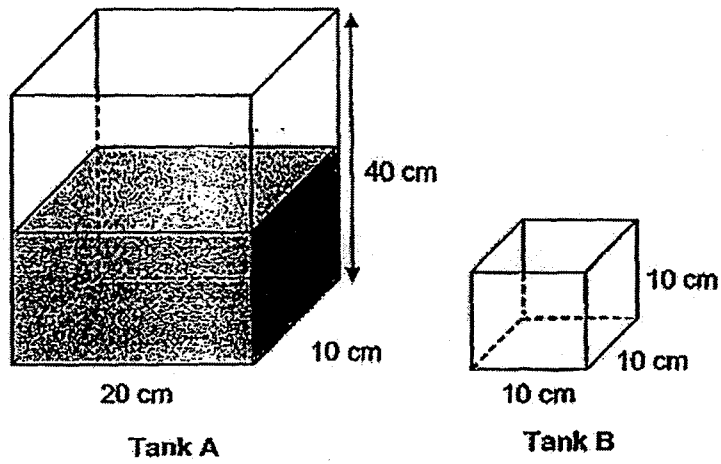
(1) 7 : 5

(2) 7 : 18

(3) 11: 7

(4) 11 : 18

13. Tank A was filled with water to half its height. Water from Tank A was poured into Tank B and filled to its brim.



What was the height of the water level left in Tank A?

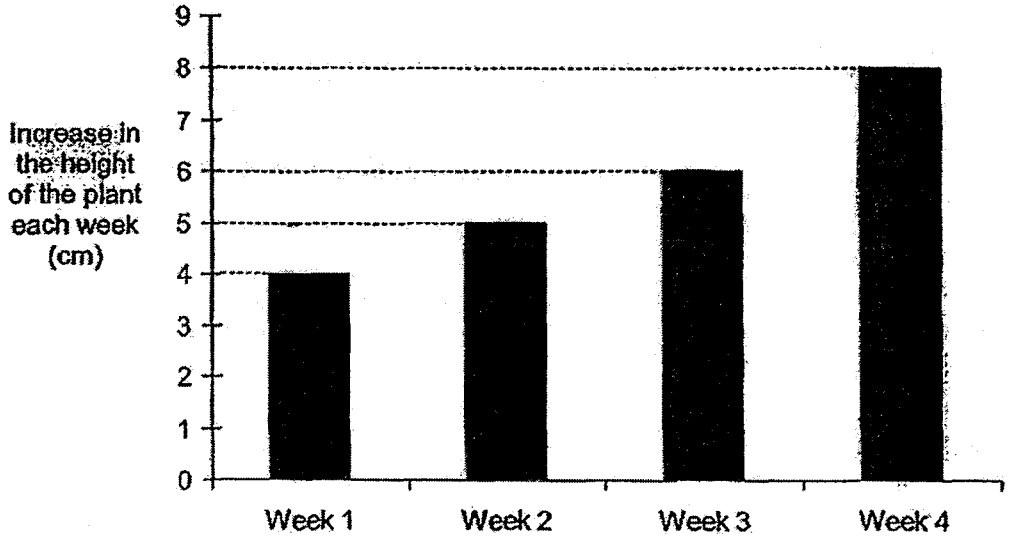
(1) 5 cm

(2) 15 cm

(3) 30 cm

(4) 35 cm

14. Rahmid bought a plant that was 16 cm tall. He measured the height of the plant and recorded its increase in height by the end of each week. The bar graph below shows his records.



What was the height of the plant at the end of Week 3?

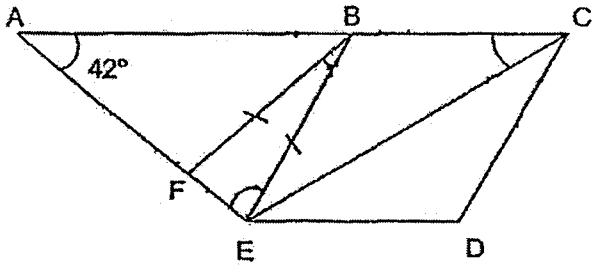
(1) 6 cm

(2) 15 cm

(3) 22 cm

(4) 31 cm

15. In the figure below, ACDE is a trapezium. ABF and BFE are isosceles triangles. BCDE is a rhombus.



Find ∠BCE.

(1) 27°

(2) 54°

(3) 63°

(4) 84°

PRELIMINARY EXAMINATION, 2017

MATHEMATICS

PAPER 1

(BOOKLET B)

Total Time For Booklets A & B : 50 min

Name : _____ ( )

Class : Primary 6 ___

Date : 2 August 2017

20

INSTRUCTIONS TO CANDIDATES

DO NOT OPEN THIS BOOKLET 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 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. What is the first common multiple 3 and 6 ?

Answer: _____

17. Find the value of 5.07 × 1000.

Answer: _____

18. What is the value of $\frac{3}{5} \times \frac{2}{15}$? Express your answer as a fraction in its simplest form.

Answer: _____

19. Find the value of 118.26 ÷ 9.

Answer: _____

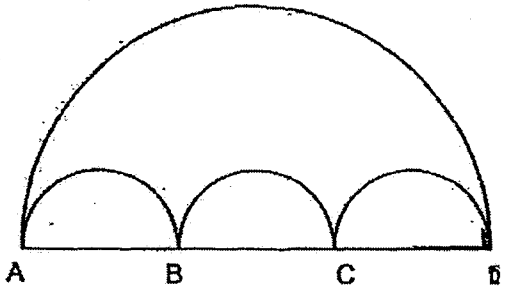
20. Simplify $9a + 17 - 5a - 4$.

Answer: _____

SCORE

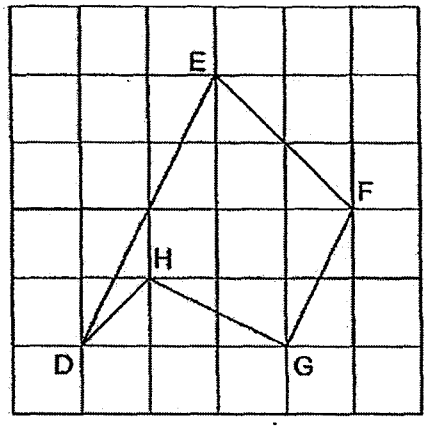
Do not write in this space

21. The figure below shows three identical small semicircles in a big semicirle. AD = 12 cm. What is the radius of each small semicircle?



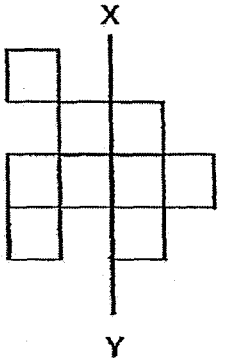
Answer: _____ cm

22. Study the figure below. Name a pair of parallel lines in the figure below.



Answer: _____ and _____

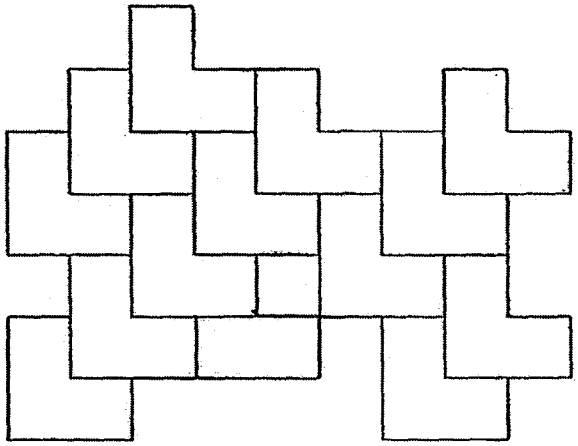
23. The figure below shows some squares. What is the smallest number of squares that must be added so that line XY is the line of symmetry?



Answer: _____

SCORE

24. The pattern below shows part of a tessellation. One of the shapes does not fit into the tessllation shown below. Shade it.



25.

Café De Singapore

Open Daily
10.30 a.m. to 9.00 p.m.

For how long is Café De Singapore open each day?
(Give your answer in h and min.)

Answer: _____ h _____ min

Do not write in this space

SCORE

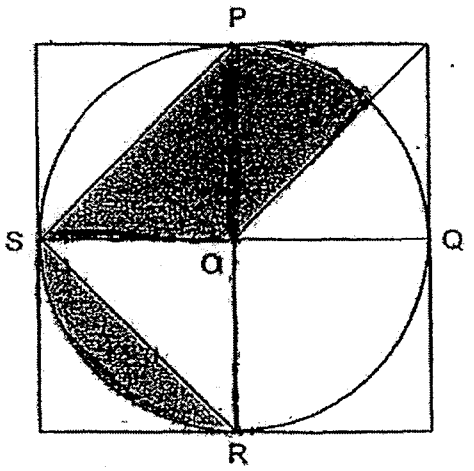
Questions 26 to 30 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

26. Anne bought $\frac{3}{4}$ kg of sweets. She gave $\frac{1}{2}$ of them to her friend and packed the rest equally into 4 packets. What was the mass of the sweets in each packet?

Answer: _____ kg

27. The figure below shows a circle PQRS in a square. The radius of the circle is 40 cm. What is the total area of the shaded parts? Leave your answer in terms of π.



Answer: _____ cm^2

SCORE

28. One afternoon, 5 friends rented 3 bicycle from 5.00 p.m. to 6.30p.m. and took turns to ride on them. At any time, 3 of them cycled while the other 2 friends rested.

If each of them had the same amount of cycling time, how many minutes did each person ride on a bicycle ?

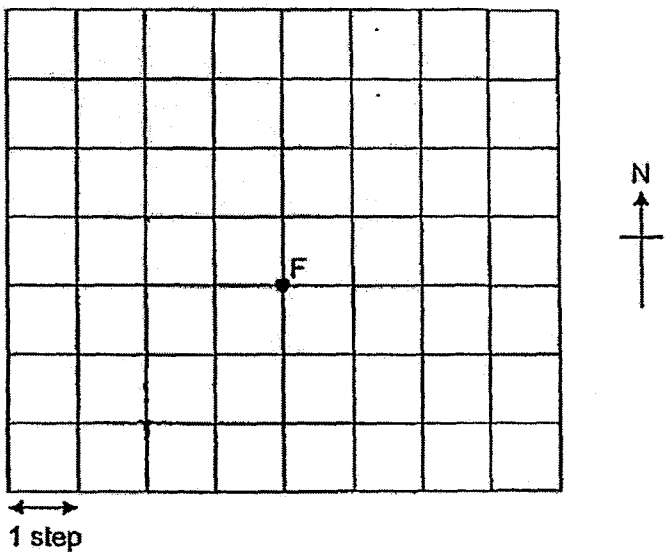
Answer: _____ min

Do not write in this space

29. Shawn was at a point. He followed the instructions in the following sequence.

(i) Walk 3 steps to the North
(ii) Walk 2 steps to the East
(iii) Walk 1 step to the South

He ended up at point F. Mark the point he started at with a cross (X) and name it S.



SCORE

30. Patrick bought 30 files with all his money. When the price of each file was decreased by $2, he could buy 12 more files. How much did each file cost before the decrease in price?

Do not write in this space

Answer: $ _____

End of Paper

Set by : Mdm Hoi Wan Hua, Ms Jennifer Foo, Mrs Eileen Sew, Ms Joyce Ng

SCORE

PRELIMINARY EXAMINATION, 2017

MATHEMATICS

PAPER 2

Time: 1 h 40 min

Name : _____ ( )

Class : Primary 6 ___

Date : 2 August 2017

Parent's Signature: _____

Paper 1 (Booklet A)	/20
Paper 1 (Booklet B)	/20
Paper 2	/60
TOTAL	/100

INSTRUCTIONS TO CANDIDATES

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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 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)

Do not write in this space

1. 5 books and 2 pens cost $41.65. Each book costs 3 times as much as a pen. How much does a pen cost ?

Answer: $ _____

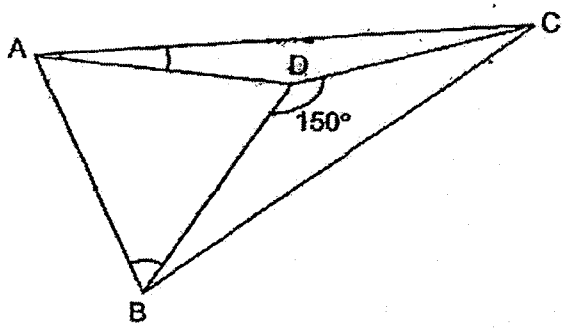
2. Container A had 6530 ml of water at first. Some of its water was poured equally into 15 bottles. In the end, 0.5 ℓ of water was left in the container. What was the volume of water in each bottle?

Answer: _____ ml

SCORE

3. In the figure beloe, ABC is a triangle. ABD is an equilateral triangle. AD = DC and $\angle CDB = 150°$. Find $\angle DAC$.

Do not write in this space



Answer: _____°

4. Albert and Benny had \$2640 altogether.
When Albert gave $\frac{1}{6}$ of his money to Benny, they had the same amount of money.
How much money did Albert have at first?

Answer: \$_____

SCORE

5. When Sheryl was 6k years old, she was twice as old as her brother. How old will Sheryl be when her brother is 18 years old ? Express your answer in terms of k.

Do not write in this space

Answer: _____ years old

SCORE

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)

Do not write in this space

6. Alice bought $\frac{3}{5}$ kg of flour. She used $\frac{1}{4}$ kg of it to bake some cupcakes.

She then gave $\frac{1}{3}$ of the remaining flour to her neighbour. How much flour had she left? Express your answer as a fraction in its simplest form.

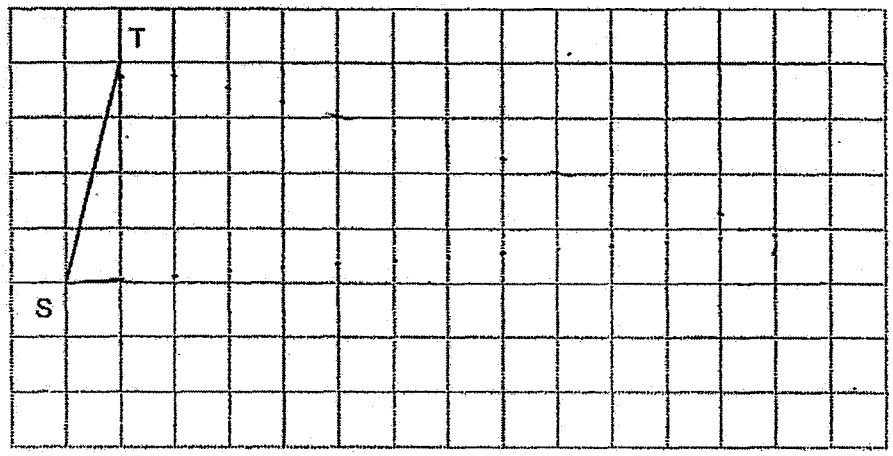
Answer: _____ [3]

SCORE

7. In the square grid, one side of a right-angled triangle STU has been drawn.

(a) Measure the length of ST.

(b) Line TU is three times the length of ST. ∠STU is a right angle. Complete the drawing of triangle STU within the grid. [2]



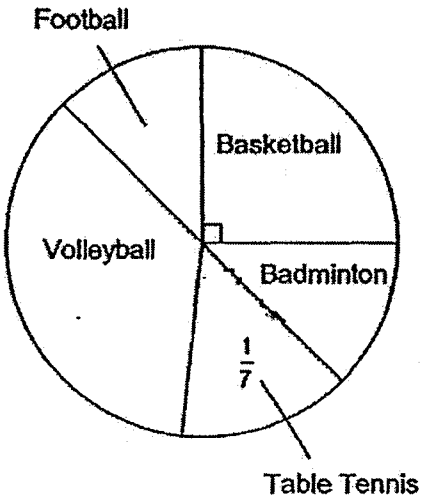
Answer: (a) _____ [1]

Do not write in this space

SCORE

8. During a survey, some pupils were asked to name their favourite sport. The pie chart represents their choices.

Do not write in this space



(a) 84 pupils chose basketball as their favourite sport. How many pupils took part in the survey altogether?

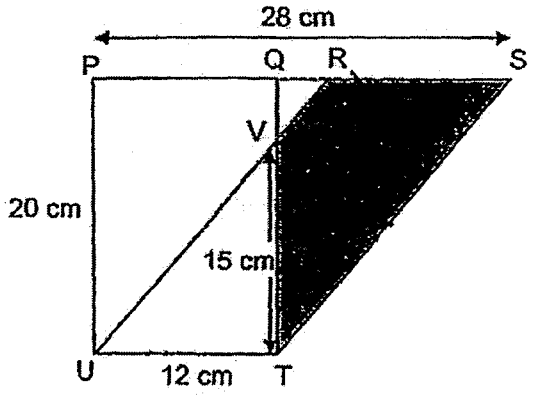
(b) How many pupils chose volleyball as their favourite sport?

Answer: (a) _____ [1]

(b) _____ [2]

SCORE

9. The diagram below shows a rectangle PQTU and a parallelogram RSTU.



(a) Find the length of QR.

(b) Find the area of the shaded part.

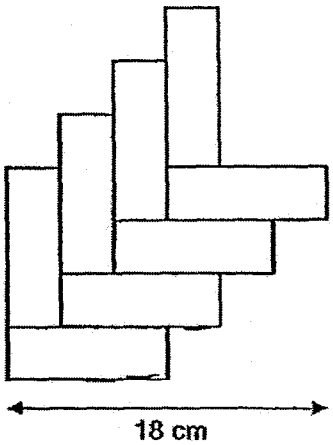
Answer: (a) _____ [2]

(b) _____ [2]

Do not write in this space

SCORE

10. The figure below is made up of 8 identical rectangles.



(a) Find the area of 1 rectangle.

(b) Find the perimeter of the figure.

Answer: (a) _____ [2]

(b) _____ [2]

Do not write in this space

SCORE

11. Luke had $\frac{1}{6}$ as many stamps as Kenny. After Kenny gave 306 stamps to Luke, the ratio of the number of stamps Luke had to the number of stamps Kenny had was 2 : 3.

(a) How many stamps did Kenny have in the end?

(b) If Kenny wanted Luke to have the same number of stamps as him, how many more stamps must Kenny give to Luke?

Do not write in this space

Answer: (a) _____ [2]

(b) _____ [2]

SCORE

12. At 09 00, a lorry started from Town P and travelled towards Town Q at a speed of 55 km/h for the whole journey. At 11 00, a car started from Town Q and travelled towards Town P. The speed of the car remained the same throughout the journey. The car passed the lorry at 13 00 and at this point, the lorry had travelled $\frac{5}{9}$ of the journey.

(a) How far was the lorry from Town P at 13 00?

(b) At what time did the car reach Town P?

Do not write in this space

Answer: (a) _____ [2]

(b) _____ [2]

SCORE

13. Sun Ne bought some books at an average price of $27. After buying another 6 books for $39 each, the average price of all the books increased to $31.80. How many books did she buy altogether?

Do not write in this space

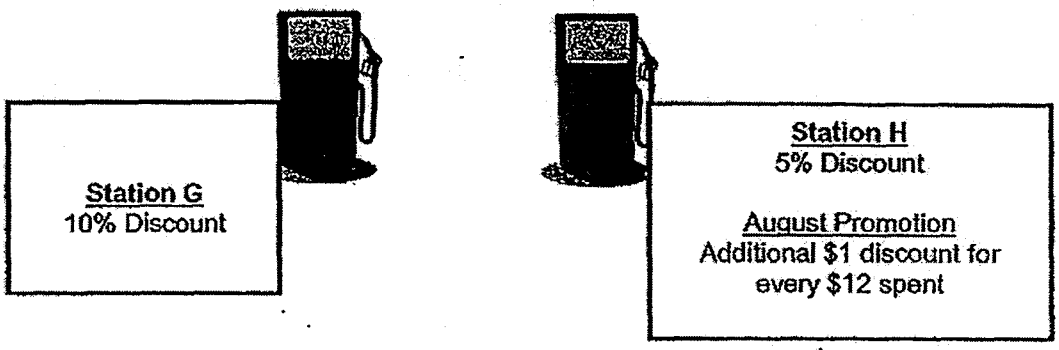
Answer: _____ [3]

SCORE

14. The petrol price at Stations G and H was at $2.40 per litre. Station G gave a 10% discount while Station H gave a 5% discount. For the month of August, Station H had a promotion where an additional $1 discount was given for every $12 spent on petrol.
In August, Mr Kang went to Station G and paid for 38 litres of petrol.

(a) How much did Mr Kang pay for his petrol at Station G?

(b) How much would Mr Kang save if he had gone to Station H for the same amount of petrol in August?



Answer: (a) _____ [1]

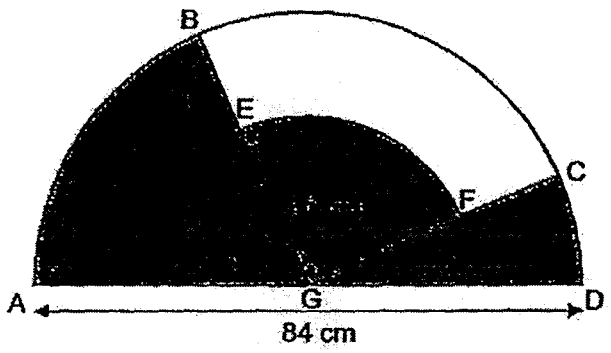
(b) _____ [3]

Do not write in this space

SCORE

15. The figure below shows a semicircle with a diameter of 84 cm and a quarter circle EFG with a radius of 28 cm. G is the midpoint of AD. BEG and CFG are straight lines.

Do not write in this space



(a) Find the area of the shaded part.

(b) Find the perimeter of the shaded part.
(Take $\pi = \frac{22}{7}$)

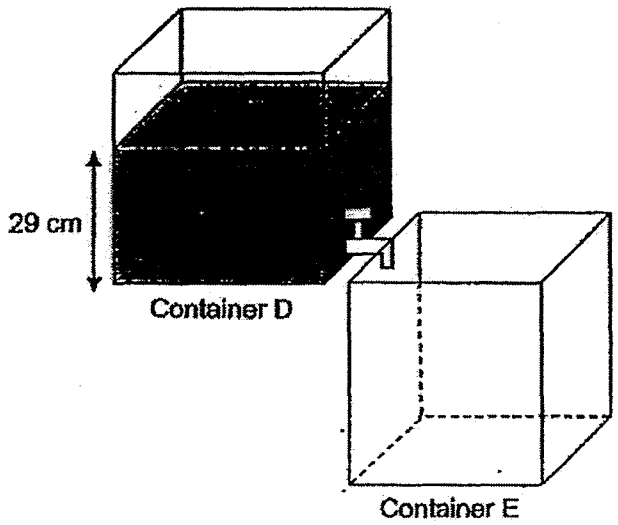
Answer: (a) _____ [2]

(b) _____ [2]

SCORE

16. Container D had a base area of 650 cm^2 and was filled with oil to a height of 29 cm. The oil flowed out of a tap in Container D into an empty Container E which had a base area of 400 cm^2. The tap was turned off immediately when the height of the oil in Container E was twice that of the height of the oil left in Container D.
What was the volume of oil in Container E in the end?

Do not write in this space



Answer: _____ [4]

SCORE

17. Kitty, Leng Leng and Nora shared the cost of a present. 25% of Kitty's share was \$18 more than 60% of Leng Leng's share. Nora paid 25% of what Kitty had paid. Leng Leng paid \$28 more than Nora for the present.

(a) How much did Leng Leng pay for the present?

(b) How much more did Kitty pay for the present than Nora?

Do not write in this space

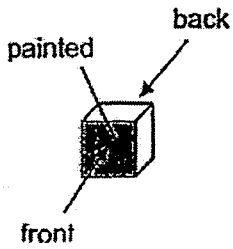
Answer: (a) _____ [3]

(b) _____ [2]

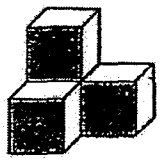
SCORE

Do not write in this space

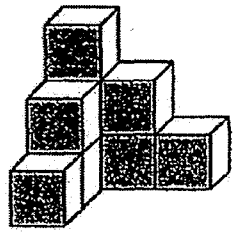
18. Jay used identical cubes to form the following patterns. For each pattern, the cubes were glued together to form a solid. The front and the back of the solid were painted.



Pattern 1



Pattern 2



Pattern 3

The number of cubes used and the number of faces painted for each solid were recorded in the table below.

Pattern	Number of cubes used	Number of faces painted
1	1	2
2	2	6
3	3	12
4		

(a) Complete the table above for Pattern 4. [1]

(b) What was the number of faces painted for Pattern 18?

(c) 1406 faces were painted for a solid. How many cubes were used to form the solid?

Answer: (b) _____ [2]

(c) _____ [2]

End of Paper

SCORE

Set by : Mdm Hoi Wan Hua, Ms Jennifer Foo, Mrs Eileen Sew, Ms Joyce Ng

ANSWER SHEET

EXAM PAPER 2017 (P6)

SCHOOL : PEI CHUN

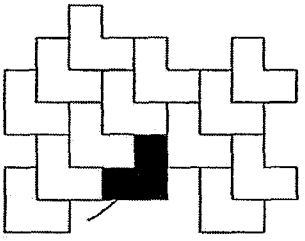
SUBJECT : MATHEMATICS

TERM : PRELIM

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

16)6 17)5070 18)2/25 19)13.14 20)4a+ 13

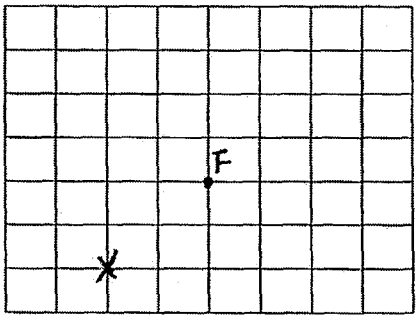
21)2 cm 22)ED and FG 23)3 24)



25)10h 30min 26)3/32

27)600Π 28)54min

29) 30)$7



Paper 2

1)total units→3 x 5 =15

1 pen→41.65 ÷ 17 = $2.45

2)0.5L = 500ml

15 bottles→6530 – 500 = 6030

1 bottle→6030 ÷ 15 = 402

3) $\angle ADC = 360° - 150° - 60° = 150°$

$\angle ACD = 180° - 150° = 30°$

$\angle DAC = 30° \div 2 = 15°$

4)units→5 x 2 = 10

1unit→2640/10 = 264

Albert→264 x 6 = 1584

5)6k/2 = 3k

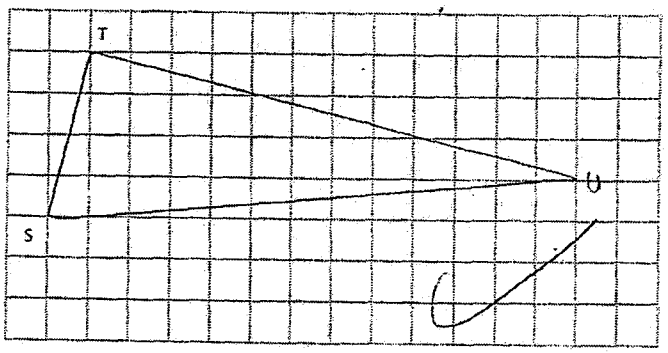
(18+ 3k)

6)Remaining →3/5 – ¼ = 7/20

Left→7/20 x 2/3 = 7/30kg

7)a)3.4cm

b)



8)a)1 unit→84/7 = 12

Total→ 12 x 28 = 336

b)Volleyball→ 12 x 10 = 120

9)a)QR→ 28 – 12 – 12 = 4cm

b)QV→20 – 15 = 5

shaded →20 x 16 x ½ - 5 x 4 x ½ = 150cm2

10)Breadth→18 ÷ 6 = 3

Length→ 3 x 3 = 9

a)Area →9 x 3 = 27cm2

b)Perimeter→26 x 3 = 78cm

11)9 units→306

1 unit→306/9 = 34

a)Kenny→21 x 34 = 714

b)Luke→34 x 14 = 1190

Give→714 – (1190/2) = 119

12)5/9 journey→4 x 55 = 220

4/9 lourney→220/5 x 4 = 176

(car)speed→176/2 = 88

Distance→220/5 x 9 = 396

Time→396 ÷ 88 = 4.5

4.5h = 4h 30min

a)220km

b)15 30

13)31.80 – 27 = 4.80

More→(39 – 31.80) x 6 = 43.2

Buy→43.20 ÷ 4.80 = 9

Total→9 + 6 =15

14)100% - 10% = 90%

1 litre (G discounted price) →2.40 x 90% = 2.16

a)paid→2.16 x 38 = $82.08

b)1 litre (H discounted price)→2.40 x 95% = 2.28

38 litres→2.28 x 38 – 86.64

? group→86.64 ÷ 12 = 7R 2.64

7 x 1 = 7

Paid→86.64 – 7 = 79.64

Save→82.08 – 79.64 = 2.44

15)a)Area→28 x 28 x 22/7 x ¼ + 42 x 42 x 22/7 x ¼ = 2002cm2

b)Perimeter→28 x 22/7 x 2 x ¼ + 14 + 14 + 42 x 22/7 x 2 x ¼ + 84 = 222cm

16)oil→29 x 650 = 18850

Total base area→400 + 400 + 650 = 1450

? group→18850 ÷ 1450 = 13

E (height)→13 x 2 = 26

Oil (E)→26 x 400 = 10400cm2

17)a)40%-->18 + 28 = 46

LengLeng →46/4 x 10 =$115

b)60% x 4 = 240%

240% - 60% = 180%

More→46/4 x 18 + 18 x 3 = $261

18)a)16 / 20

b)Painted→18 x 19 = 342

1406 = 37 x 38

c)pattern No→37

used→37 x 37 = 1369

PEI HWA PRESBYTERIAN PRIMARY SCHOOL
PRELIMINARY EXAMINATION

PRIMARY 6
MATHEMATICS PAPER 1
(BOOKLET A)

22 AUGUST 2017

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.

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.

You are <u>not</u> allowed to use a calculator. (20 marks)

---

1 6 hundreds, 5 tenths and 4 thousandths is _____.

(1) 600.054

(2) 600.504

(3) 600.540

(4) 650.004 ( )

2 The value of $\frac{3}{5} \div \frac{1}{2}$ is the same as _____.

(1) $\frac{5}{3} \times \frac{1}{2}$

(2) $\frac{3}{5} \times \frac{1}{2}$

(3) $\frac{3}{5} \times 2$

(4) $\frac{5}{3} \times 2$ ( )

3 Which of the following has the greatest value?

(1) 0.6

(2) 0.68

(3) 0.601

(4) 0.657 ( )

4 Timothy attended a sports carnival from 9.50 a.m. to 3.05 p.m.. How long was the sports carnival?

(1) 3 h 55 min

(2) 5 h 15 min

(3) 5 h 55 min

(4) 6 h 45 min ( )

5 Karis has 50 identical coins of the same value which amount to $25. What is the value of each coin?

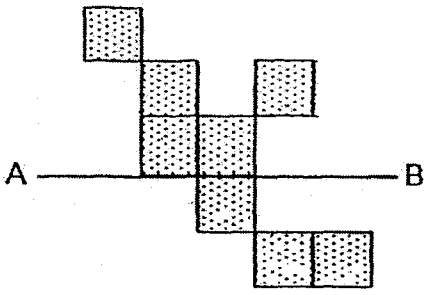
(1) 5 cents

(2) 10 cents

(3) 20 cents

(4) 50 cents ( )

6 The figure below shows 8 squares. What is the smallest number of squares that must be added so that line AB will be the line of symmetry?



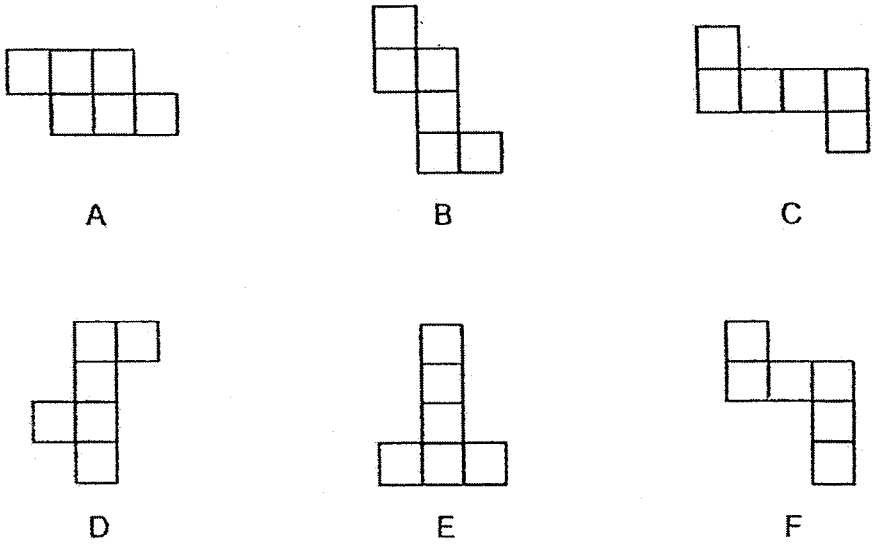
(1) 7

(2) 6

(3) 5

(4) 4 ( )

7 Which of the following figures are nets of a cube?



(1) A, B, C and D

(2) A, B, E and F

(3) B, C, D and E

(4) C, D, E and F ( )

8 Ahmad's savings is $3\frac{1}{5}$ times that of Bala's. Find the ratio of Ahmad's savings to Bala's savings.

(1) 9 : 5

(2) 5 : 9

(3) 16 : 5

(4) 5 : 16 ( )

9 Express 0.804 as a percentage.

(1) 0.804%

(2) 8.04%

(3) 80.4%

(4) 804% ( )

10 A motorist travelled at an average speed of 80 km/h and reached his destination in 120 min. Find the distance travelled by the motorist.

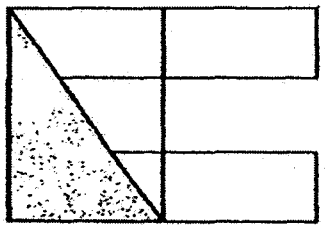
(1) 160 km

(2) 96 km

(3) 9600 km

(4) 40 km ( )

11 The figure below is made up of 5 identical rectangles. What fraction of the figure is shaded?



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

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

(3) $\frac{3}{10}$

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

12 The length of each side of a square is an odd number. What is a possible perimeter of the square?

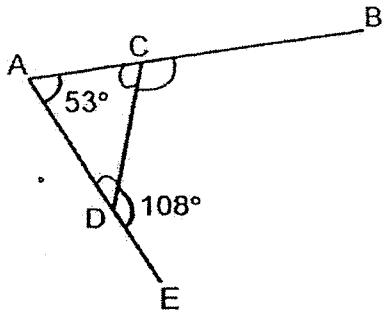
(1) 16 cm

(2) 20 cm

(3) 24 cm

(4) 32 cm ( )

13 In the figure below, ∠CAD is 53° and ∠CDE is 108°. Find ∠BCD.



(1) 72°

(2) 125°

(3) 127°

(4) 161° ( )

14 Hannah spent $\frac{4}{5}$ of her pocket money to buy 8 pens. She wanted to buy another 8 similar pens but found that she was short of \$12. What was the price of 1 pen?

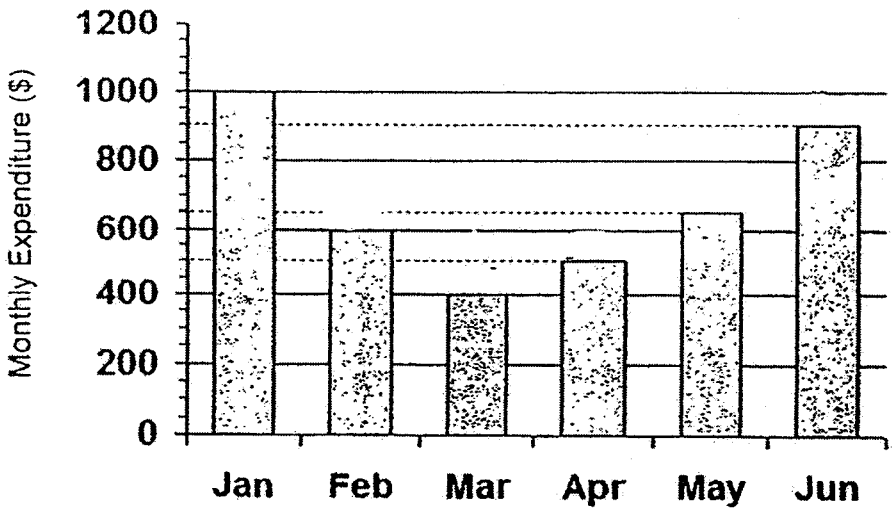
(1) \$1.20

(2) \$1.50

(3) \$2.00

(4) \$4.00 ( )

15 The bar graph below shows Debbie's expenditure on beauty products for the first half of the year.



In which month did she spend $\frac{3}{5}$ of her combined expenditure in January and April?

(1) February

(2) March

(3) May

(4) June ( )

– End of Booklet A –

PRELIMINARY EXAMINATION

PRIMARY 6
MATHEMATICS PAPER 1
(BOOKLET B)

22 AUGUST 2017

Parent's signature

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. 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 7 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)

Do not write in this space.

16 Express $9\frac{3}{8}$ as a decimal. Give your answer correct to 2 decimal places.

Ans: _____

17 Find the value of $(82 + 72 \div 9) - 30 \times 2$.

Ans: _____

18 0.3 of a number is 45. What is the number?

Ans: _____

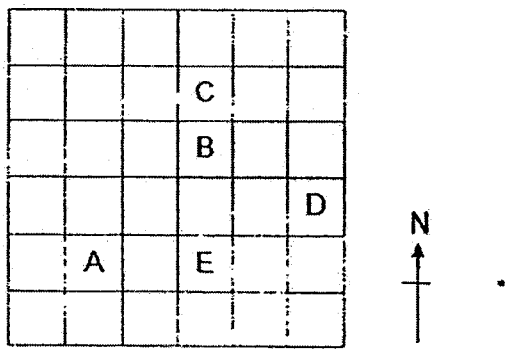
19 Express 60 ℓ 80 mℓ in millilitres.

Ans: _____ mℓ

20 The volume of a cube is 64 cm^3. Find the length of one side of the cube.

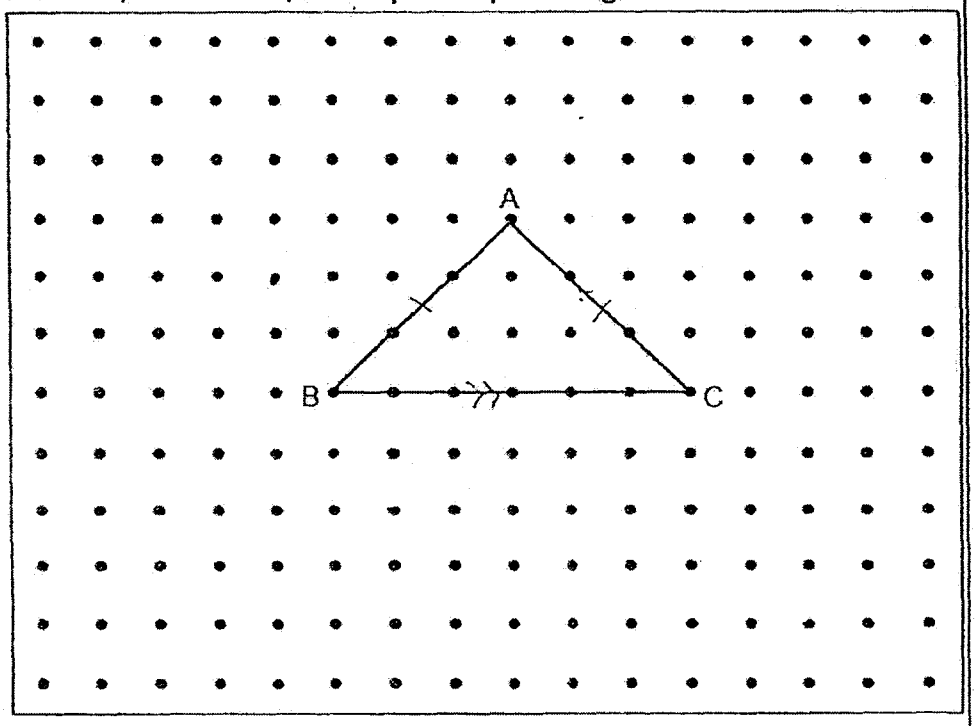
Ans: _____ cm

21 Refer to the square grid below and fill in the blanks with A, B, C, D or E.



Point _____ is north-east of Point _____.

22 ABC is an isosceles triangle. D is one of the dots inside the box. Draw two lines, AD and BD, to complete a parallelogram.



23 The usual price of a watch is $220. What is the price of the watch after a 30% discount?

Ans: $_____

24 The table below shows the number of board games borrowed by pupils in a month.

Number of board games borrowed	0	1	2	3	4
Number of pupils	5	16	5	7	3

How many pupils borrowed 2 or more board games in that month?

Ans: _____

25 Find the value of $5n - 4 + \frac{3n}{2}$ when $n = 4$.

Ans: _____

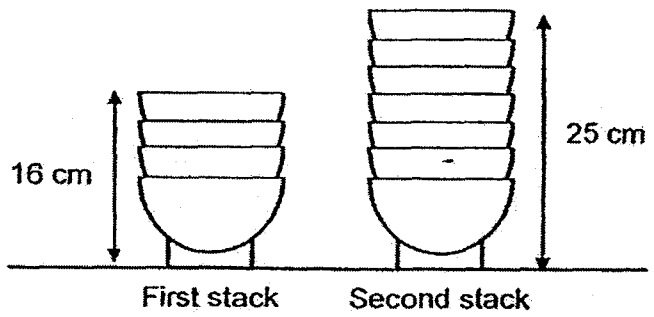
Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space.

26 There are 182 chickens and cows in a farm. For every 4 chickens, there are 3 cows. How many more chickens than cows are there?

Ans: _____

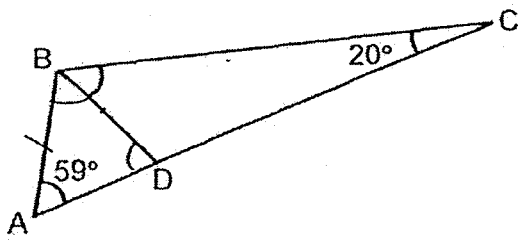
27 Some identical bowls are stacked vertically to save space. In the figure below, the height of the first stack of 4 bowls is 16 cm. The height of the second stack of 7 bowls is 25 cm. Find the height of one such bowl.



Ans: _____ cm

(Go on to the next page)

28 The figure below shows two triangles, ABD and BDC. ADC is a straight line. DA is equal to DB. ∠DAB is 59° and ∠BCA is 20°. Find ∠DBC.

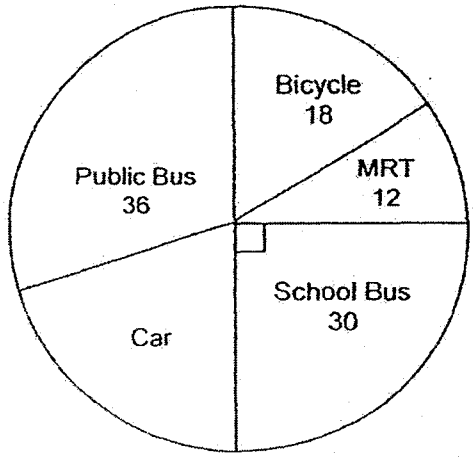


Ans: _____

29 There were 60 children on board a bus at first. 4 boys and 2 girls alighted from the bus. The ratio of the number of boys to the number of girls then became 4 : 5. Find the number of boys on board the bus at first.

Ans: _____

30 The pie chart below shows the number of pupils travelling to school by various modes of transport.



What percentage of the pupils travel by car?

Ans: _____ %

END OF PAPER 1

PRELIMINARY EXAMINATION

PRIMARY 6
MATHEMATICS
PAPER 2

22 AUGUST 2017

Parent's signature

Name: _____

Form Class / Register No. : 6R_____ / _____

Banded Class / Register No. : 6M_____ / _____

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 15 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)

Do not write in this space

1 Ali has \$840 more than Baba. If Ali gives $\frac{7}{9}$ of his money to Baba, Ali will have $\frac{1}{5}$ as much money as Baba. How much money does Ali have at first?

Ans: \$ _____

2 Gillian stood on a weighing machine with her school bag. The total mass is shown in Figure 1.

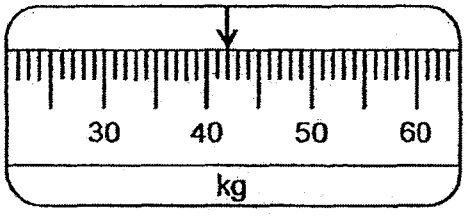


Figure 1

Gillian then put her bag on the floor. Her mass is shown in Figure 2.

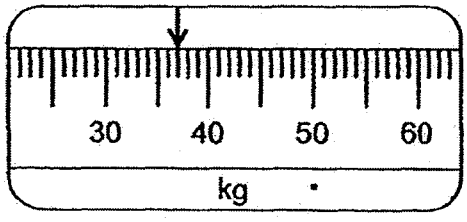


Figure 2

How heavy did Gillian's school bag weigh?

Ans: _____ kg

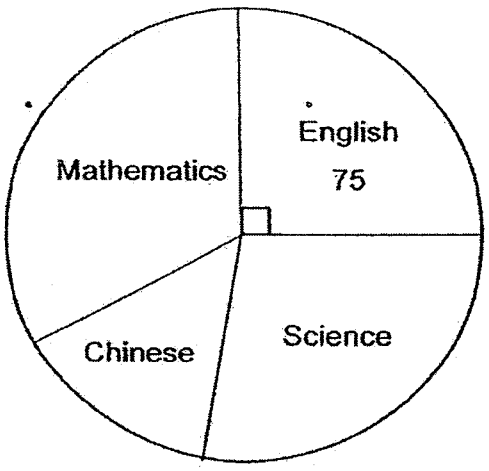
(Go on to the next page)

3 Mrs Fields used 20% of her flour to make some muffins and 60% of the remainder to bake some cookies. What percentage of the flour was left?

Do not write in this space

Ans: _____ %

4 Some pupils were asked to name their favourite subjects. The results were shown in the pie chart below.



33% of the pupils chose Science as their favourite subject. Find the total number of pupils who chose Chinese and Mathematics as their favourite subjects.

Ans: _____

(Go on to the next page)

5 In a candy store, sweets were packed in packets of 15 sweets each. Lynn bought $3c$ packets of sweets and gave 20 sweets away. How many sweets had Lynn left? Give the answer in terms of c in the simplest form.

Do not write in this space

Ans: _____

(Go on to the next page)

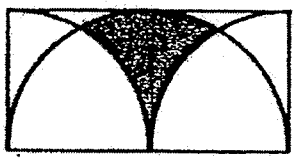
Questions **6** to **18** show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question. (50 marks)

Do not write in this space

6 The number of pupils in Team A is 4 more than the number of pupils in Team B. There are 46 boys in Team A and 18 boys in Team B. The number of girls in Team A is $\frac{4}{5}$ of the number of girls in Team B. What fraction of the pupils in Team A are girls? Express your answer in the simplest form.

Ans: _____ [3]

7 The figure below consists of a rectangle, a semicircle and two identical quadrants. The diameter of the semicircle is 35 cm. Find the perimeter of the shaded region. (Take $\pi = \frac{22}{7}$)

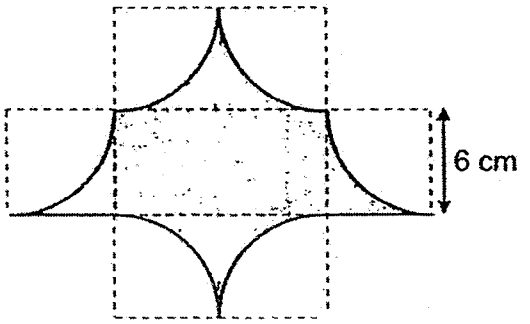


Ans: _____ [3]

(Go on to the next page)

8 The figure below is made up of 6 identical quadrants. The radius of the quadrant is 6 cm. Find the area of the shaded part. Round off the answer to 2 decimal places.

Do not write in this space

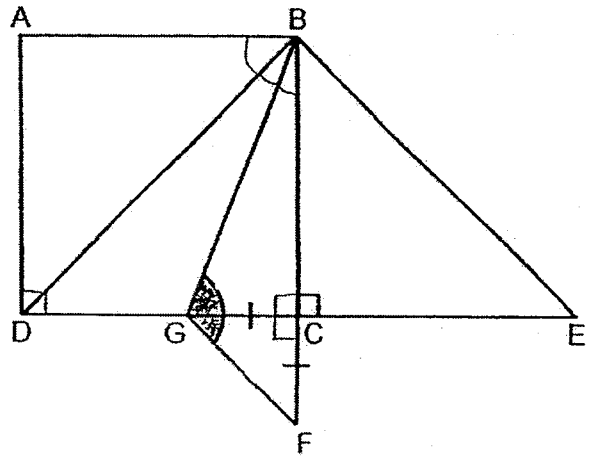


Ans: _____ [3]

(Go on to the next page)

9 The figure below consists of a square ABCD, a right-angled triangle BCE and an isosceles triangle GCF. GC is equal to CF. DCE and BCF are straight lines. ∠DBG is equal to ∠GBC. Find ∠BGF.

Do not write in this space

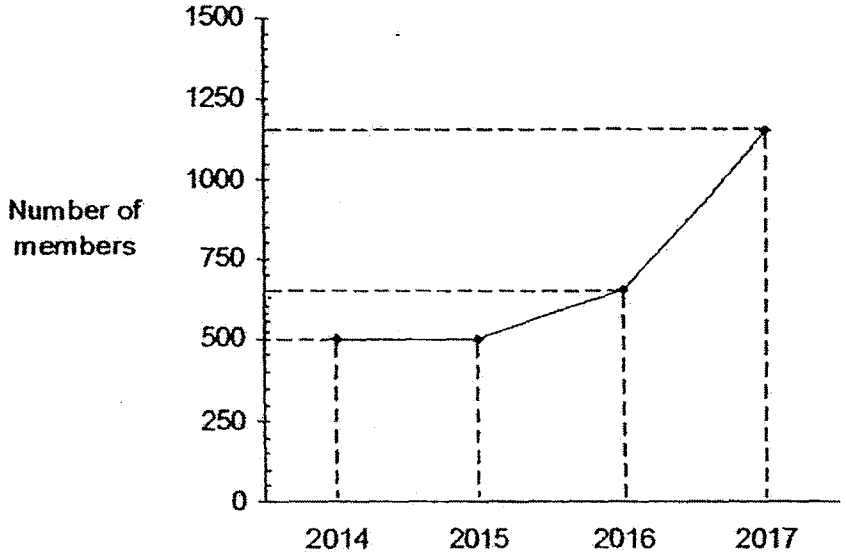


Ans: _____ [3]

(Go on to the next page)

10 The line graph shows the number of members a football club had each year from 2014 to 2017. What was the percentage increase in the number of members from 2015 to 2017?

Do not write in this space



Ans:_____ [3]

11 The total number of children at a National Day Parade was 3760. After 400 boys and $\frac{2}{5}$ of the girls left the parade, the ratio of the number of boys to the number of girls became 3 : 1. How many more boys than girls were there at first?

Do not write in this space

Ans: _____ [4]

12 Pails A, B and C contain 16 litres, 12 litres and 14 litres of water respectively.

$\frac{3}{8}$ of the water from Pail A was poured into Pail C.

Then, $\frac{1}{3}$ of the water from Pail B was poured equally into Pail A and C

In the end, $\frac{4}{11}$ of the water from Pail C was poured back into Pail A.

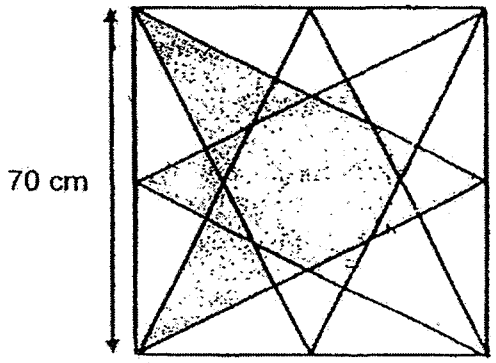
How many litres of water were in Pail C in the end?

Do not write in this space

Ans:_____ [4]

13 The figure below consists of a square and four identical isosceles triangles. Each side of the square is 70 cm. Find the area of the shaded region.

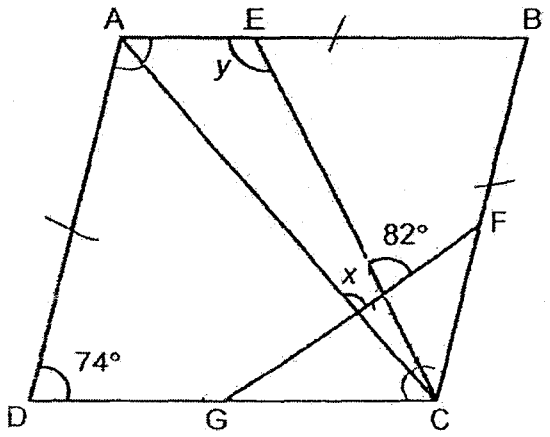
Do not write in this space



Ans: _____ [4]

14 The figure below shows a rhombus, ABCD. The rhombus is divided into 6 parts using three straight lines, namely AC, EC and FG. Find the sum of $\angle x$ and $\angle y$.

Do not write in this space



Ans:_____ [4]

(Go on to the next page)

15 A lorry was travelling from Town X towards Town Y at a constant speed of 60 km/h. At the same time, a car was travelling from Town Y towards Town X at a constant speed of 98 km/h. The two vehicles passed each other at a point 57 km from the midpoint between Town X and Town Y. What is the distance between Town X and Town Y?

Do not write in this space

Ans: _____ [4]

(Go on to the next page)

16 On the school's first fund-raising campaign, Class A raised 4 times as much money as Class B. On the second fund-raising campaign, Class A raised another $480 while Class B raised another $320. Class A raised three times as much money as Class B at the end of the two campaigns. What was the total amount of money raised by the two classes at the end of the two campaigns?

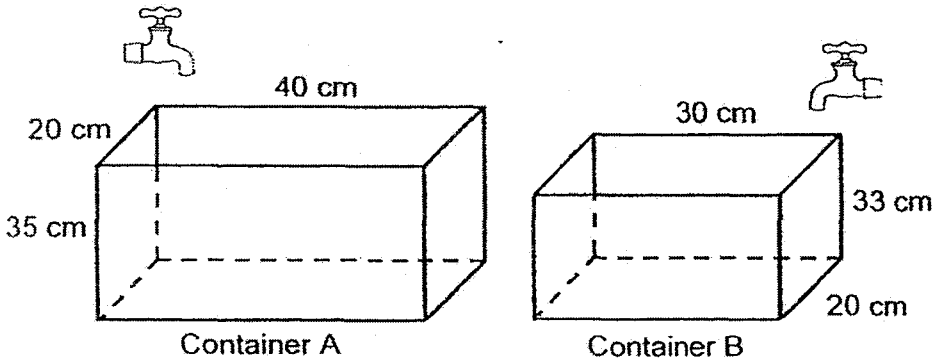
Do not write in this space

Ans: _____ [5]

(Go on to the next page)

17 The figure below shows 2 empty containers, A and B. Container A is filled with water flowing in at a rate of 0.96 ℓ/min. Container B is filled with water flowing in at a rate of 1.2 ℓ/min. The tap for Container A was turned on for 10 minutes before the tap for Container B was turned on. Both taps were turned off when the water levels in both containers are equal. Find the height of the water level when the taps were turned off.

Do not write in this space



Ans: _____ [5]

(Go on to the next page)

18 Muthu, Nora and Osman agreed to share the cost of a present for their friend. Muthu agreed to pay 35% of the cost of the present while Nora agreed to pay 20% of the remaining amount. The rest of the amount would be paid by Osman. However, when they went to buy the present, the price of the item had increased by 35%. As a result, Muthu paid $94.50 for his share.

(a) What was the original price of the present?

(b) How much did Osman pay in the end?

Do not write in this space

Ans: (a) _____ [3]

(b) _____ [2]

– End of Paper 2 –

PRELIMINARY EXAM PAPER 2017

SCHOOL : PEI HWA PRESBYTERIAN PRIMARY SCHOOL
SUBJECT : PRIMARY 6 MATH PAPER ONE BOOKLET A & B
TERM : PRELIMINARY EXAMINATION 2017

Booklet A:

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

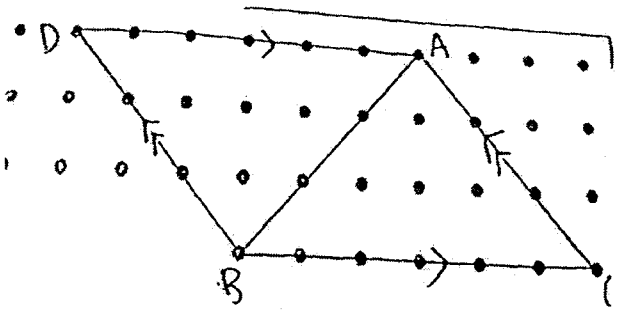
Q11	Q12	Q13	Q14	Q15
3	2	2	3	4

Booklet B:

Answer:

16) 9.38 17) 30 18) 150 19) 60 080 ml 20) 4 cm 21) Point B is north east of Point A

22)



23) $154 24) 15 25) 22 26) 26 27) 7cm 28) 42° 29) 28 30) 20%

PRELIMINARY EXAM PAPER 2017

SCHOOL : PEI HWA PRESBYTERIAN PRIMARY SCHOOL
SUBJECT : PRIMARY 6 MATH PAPER 2
TERM : PRELIMINARY EXAMINATION 2017

PAPER 2:
Answer:

1) After Before

A: B A: B–

1: 5 9: 3

2: 10

6u→ 840
1u→840 ÷ 6 = 140
9u→140 x9= 1260
Answer: $1260

2) 42kg – 37kg= 5kg
Answer: 5kg

3) $1 - \frac{1}{5} = \frac{4}{5}$

$\frac{4}{5} \times \frac{3}{5} = \frac{12}{25}$

$1 - \frac{1}{5} - \frac{12}{25} = \frac{8}{25}$

$\frac{8}{25} \times 100\% = 32\%$
Answer: 32%

4) $\frac{1}{4} \rightarrow 75$

$\frac{4}{4} \rightarrow 75 \times 4 = 300$

4/4= 100/100
1/100= 3
33/100 → 3x33= 99
Science: 99
C+M →300-99-75=126
Answer: 126

6) 5u+18+4= 4u+46
1u→46 -22 = 24
4u→24x4 = 96
G/total (A)= 96/142 = 48/71
Total (A) → 96+46= 142
Check
Girls in B → 120
96/120 = 4/5
Answer: 48/71

7) 35 ÷ 2 = 17.5
1/4 x 22/7 x 35 = 27.5
27.5 x 2 =55
Answer: 55cm

8)12 6 = 72
Area of boomerang → (6x6) – ¼ x π x 6x 6 = 7.7257
Area of boomerang → 7.7257x 6= 46.3542
Area of shaded part → (72 + 46.3542) = 118.35
Answer: 118.35cm^2

5) 1 packet → 15 sweets
bought 3c packets → 15 x 3c
= 45c sweets
Lynn gave away 20 sweets
left → 45c - 20
= 5(9c - 4) sweets

9)

$\angle CGF$ or $\angle CFG \rightarrow (180° - 90°) \div 2 = 45°$

$\angle ABD \rightarrow 90° \div 2 = 45$

$\angle GBC \rightarrow 45° \div 2 = 22.5$

$\angle BGC \rightarrow 180° - 22.5° - 90° = 67.5°$

$\angle BGF \rightarrow 45° + 67.5° = 112.5°$

Answer: 112.5°

10)

5 gaps → 750-500= 250

1 gap → 250 ÷ 5 = 50

2016 → 500 + 150 = 650

2017 → 1000+150 = 1150

Increase → 1150-500 = 650

Increase/2015 = 650/500

650/500 x 100% = 130%

Answer: 130%

11)

First- B:G, ?: 5

End- B: G, 3:1, 9: 3

5-2u= 3u

9u + 400 + 5u = 3760

9u + 5u = 14u

14u → 3760-400= 3360

1u → 3360 ÷ 14 = 240

5u → 240 x 5 = 1200 (no. of girls at first)

9u → 240 x 9 = 2160

2160 + 400= 2560 (no. of boys at first)

2160 -1200= 1360 (Diff)

Answer: 1360 more

12)

Step 1

3/8 x 16= 6

A→ 16-6 = 10

C → 14+6= 20

Step 2

1/3 x 12 = 4

4 ÷ 2 = 2

B →12 – 4= 8

A → 10 + 2 = 12

C → 20 + 2 = 22

Step 3

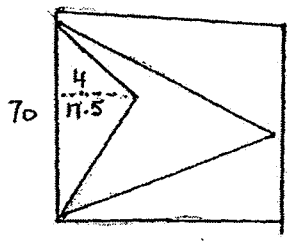
4/11 x 22= 8

C → 22- 8= 14

A → 12 + 8 = 20

Answer: 14L

13)



½ x 70 x70 = 2450

70 ÷ 4 = 17.5

½ x 70 x 17.5 = 1837.5

Answer: 1837.5 cm^2

14)

∠DCA or ∠DAC → (180° - 74°) ÷ 2 = 53°

∠Z → 180° - 82 ° = 98°

∠x + ∠y → 360° - 98°- 53° = 209°

Answer: 209°

15)

X |----------| Y

L |----------| C

60km/ h 57km 98km/h

Dist. Travelled by car more than lorry → 57x2= 114

Dist. Travelled by car more than lorry per hour → 98-60 = 38

114 ÷ 38 = 3 (time for car to travel extra dist.)

(98 + 60) x 3= 474

Answer: 474 km

16)

1p= 1u+320

3p= 3u+ 960

1u → 960-480 = 480

1p → 480+320= 800 (B-end)

3p → 800 x 3= 2400 (A-end)

Total: (A +B) → 2400+ 800= 3200

Answer: $3200

17)

Water level in A after 10min

→0.96x10x1000/ 20x 40 = 12

960/20 x40 = 1.2 (rise in water level in A per min)

1200/ 20x20= 2 (rise in water level in B per min)

2- 1.2= 0.8 (Every min, B catches up by 0.8cm)

12 ÷ 0.8 = 15 (no. of min for Tap B to turn on to catch up)

1200x 15/ 30x 20= 30

Answer: 30cm

18a)

1u X 13= 13u

7u X 5= 35u

13u X 5= 65u

20u X 5= 100u

47.25u → 94.5

1u → 94.5 ÷ 47.25 = 2

100u → 100x 2= 200

Answer (a): $200

18b)

Answer (b): 70.2u →2x 70.2 = 140.40

END

RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION
MATHEMATICS (PAPER 1)
PRIMARY 6

Name: _____ ( )

Form Class: P6 _____ Math Teacher: _____

Date: 24 Aug 2017 Duration: 50 min

Your Score	
Paper 1 (Out of 40 marks)	
Paper 2 (Out of 60 marks)	
Overall (Out of 100 marks)	
Parent's Signature	

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.

SECTION A (20 marks)

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 your answer (1, 2, 3 or 4) on the OAS provided. All diagrams are not drawn to scale.

---

1. The value of the digit 4 in 364 798 is _____.

   (1) 40 ones

   (2) 40 tens

   (3) 40 hundreds

   (4) 40 thousands

2. Round off 72 590 to the nearest hundred.

   (1) 72 000

   (2) 72 500

   (3) 72 600

   (4) 73 000

3. Which of the following fractions is equal to $4\frac{5}{8}$?

   (1) $\frac{28}{8}$

   (2) $\frac{32}{8}$

   (3) $\frac{37}{8}$

   (4) $\frac{45}{8}$

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

$$\frac{5}{3}, \quad 1\frac{5}{6}, \quad \frac{11}{9}$$

(1) $\frac{5}{3}, \frac{11}{9}, 1\frac{5}{6}$

(2) $\frac{11}{9}, \frac{5}{3}, 1\frac{5}{6}$

(3) $\frac{11}{9}, 1\frac{5}{6}, \frac{5}{3}$

(4) $1\frac{5}{6}, \frac{5}{3}, \frac{11}{9}$

5. 6 hundreds, 2 tenths and 4 thousandths is _____.

(1) 620.004

(2) 600.240

(3) 600.204

(4) 600.024

6. Which of the following fractions is nearest to $\frac{1}{7}$?

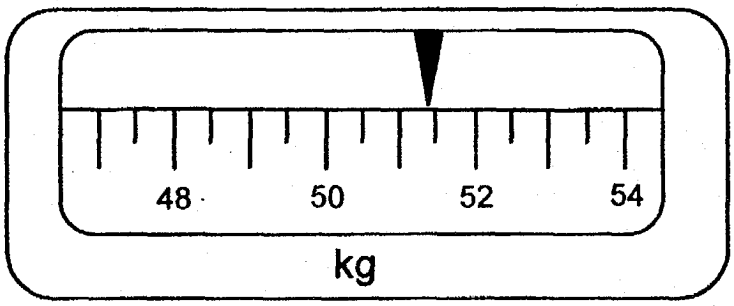
(1) $\frac{1}{4}$

(2) $\frac{1}{10}$

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

(4) $\frac{7}{50}$

7. Which of the following is closest to the reading shown on the weighing scale below?



(1) 50.75 kg

(2) 51.25 kg

(3) 51.45 kg

(4) 51.75 kg

8. Which of the following is the same as 7090 m?

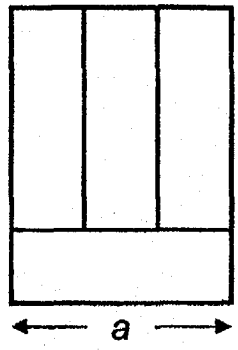
(1) 7 km 9 m

(2) 7 km 90 m

(3) 70 km 9 m

(4) 70 km 90 m

9. The figure below is made up of 4 identical rectangles. The perimeter of the figure is 28 cm. What is the length of *a*?



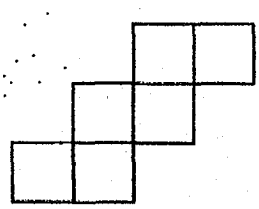
(1) 6 cm

(2) 2 cm

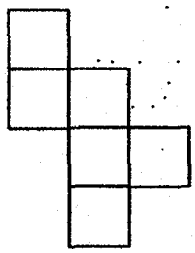
(3) 7 cm

(4) 8 cm

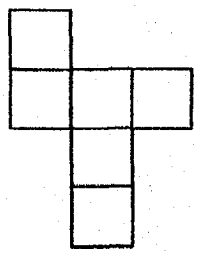
10. Which of the following is not a net of a cube?



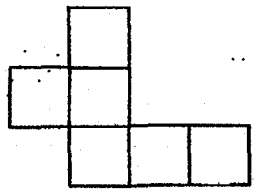
(1)



(2)

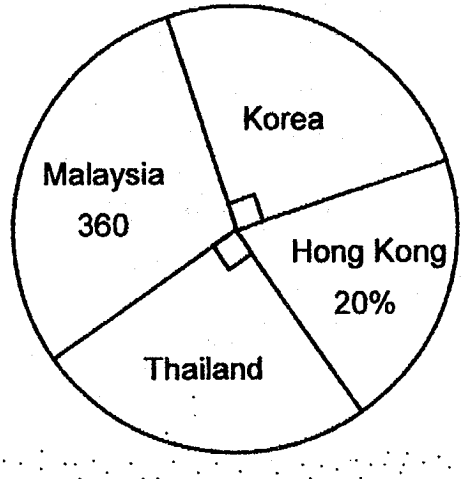


(3)



(4)

11. The pie chart represents the countries visited by a group of children during their school holiday. 20% of the children visited Hong Kong and 360 children visited Malaysia.



How many children visited Thailand?

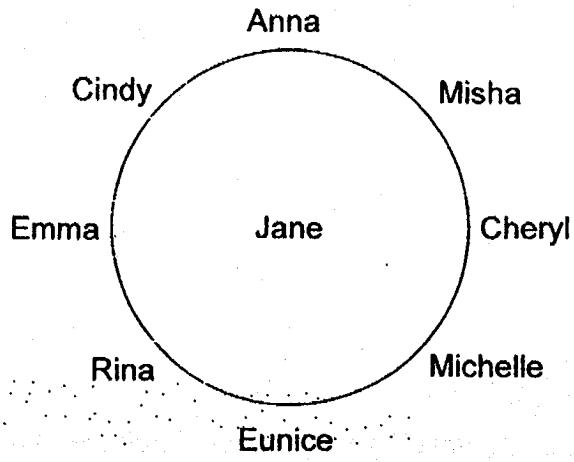
(1) 190

(2) 200

(3) 300

(4) 450

12. Jane stood at the centre of a circle. Her 8 friends stood around her and spaced themselves out equally as shown below. Jane made a 90° anticlockwise turn followed by a 135° clockwise turn. In the end, Jane was facing Emma. Who was Jane facing at first?



(1) Rina

(2) Cindy

(3) Anna

(4) Misha

13. Jimmy is baking some cookies. In 30 minutes, he can bake 10% of the cookies. After every 2 hours of baking, he stops to rest for 1 hour. How long will Jimmy take to bake 80% of the cookies?

(1) 5 h

(2) 2 h

(3) 7 h

(4) 4 h

14. Mary had 1360 yellow beads and some green beads at first. After buying 170 red beads, 20% of her beads were green and red. What percentage of the beads were red beads in the end?

(1) 7.5%
(2) 10%
(3) 12.5%
(4) 25%

15. Jenny bought a bag and a wallet during a sale. Each item was given a 10% discount. She paid $450 for the two items. Her savings for the bag was four times the savings on the wallet. What was the price of the bag before the sale?

(1) $40
(2) $50
(3) $100
(4) $400

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 largest to the smallest.

    796 800 , 789 604 , 798 600 , 789 406

    Ans : _____

17. $\frac{5}{7}$ of a number is 60. What is $\frac{1}{2}$ of the number?

    Ans : _____

18. $6.2 = 5.91 - 4.28 + \boxed{\ ?\ }$

    What is the number in the box?

    Ans : _____

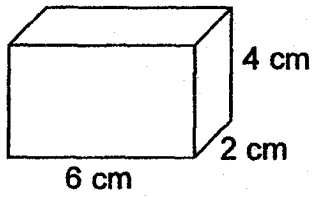
19. Find the value of 26.25 ÷ 300. Express your answer as a decimal.

Ans : _____

20. A movie started screening at 11.15 p.m. It lasted 2 h 20 min.
What time did the movie end?

Ans : _____ a.m.

21. What is the volume of the cuboid shown below?

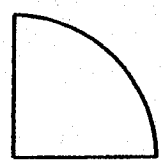


Ans : _____ cm^3

22. The average age of three pupils is 12 years old. The youngest pupil is 7 years old. What is the average age of the other 2 pupils?

Ans : _____

23. Find the area of the quarter circle below. Take $\pi = 3.14$.



4 cm

Ans : _____ cm^2

24. Mr Tan spent $\frac{2}{5}$ of his salary on food. He spent $\frac{1}{2}$ of his remaining salary on transport. Find the ratio of the amount Mr Tan spent on food to the amount he spent on transport.

Ans : _____

25. Kevin bought a burger set for lunch and paid $0.91 for 7% GST.
What was the cost of the burger set before GST?

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.

---

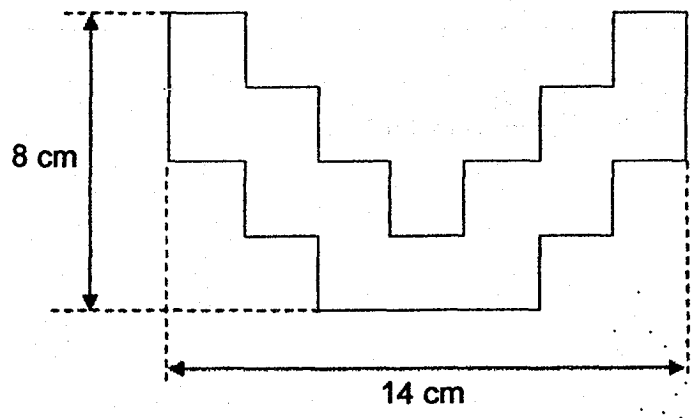
26. Find the value of $\frac{50+2a}{9} \div \frac{14a-3}{5}$ when $a = 2$.

Ans : _____

27. Hamid went shopping with a sum of money. After spending $\frac{1}{3}$ of his money on a watch and \$56 on a tie, he was left with $\frac{3}{8}$ of the sum of money he had at first. How much did Hamid spend altogether?

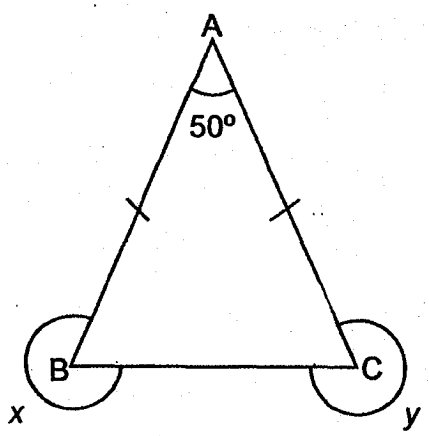
Ans : \$ _____

28. Thirteen square cards of identical size were placed without overlapping to form the composite figure shown below. Find the perimeter of the composite figure.



Ans : _____ cm

29. The figure below, ABC is an isosceles triangle. Find the sum of ∠ x and ∠ y.



Ans : _____ °

30. Steph and Angie went on a vacation with the same amount of money. Each day, Steph spent $230 while Angie spent $190.
At the end of their vacation, Steph had $240 left while Angie had $720 left.
How many days were they on vacation?

Ans : _____

End of Paper-
☺ Please check your work carefully ☺

Setters : Lim Li Shan, Jacqueline Seto, Seah Nam Sin

RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION
MATHEMATICS (PAPER 2)
PRIMARY 6

Name: _____ ( )

Form class: P6 _____ Math Teacher: _____

Date: 24 August 2017 Duration: 1 h 40 min

Your Paper 2 Score (Out of 60 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. 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.

For questions which require units, give your answers in the units stated.

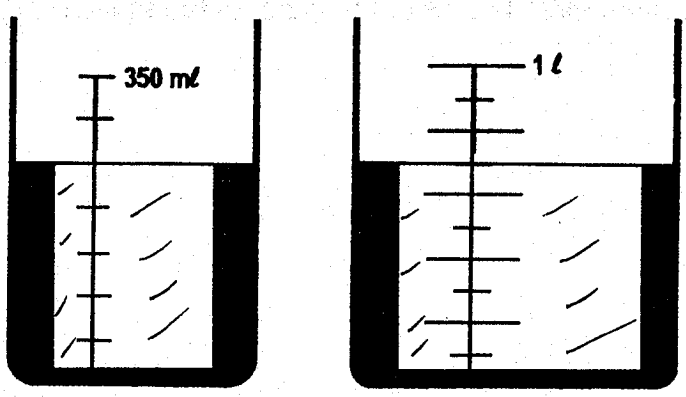
All diagrams are not drawn to scale. (10 marks)

---

1. Chloe bought $5n$ pens. She packed 8 pens into one box.
   After giving away 3 boxes, how many boxes of pens had she left?
   Give your answer in terms of n.

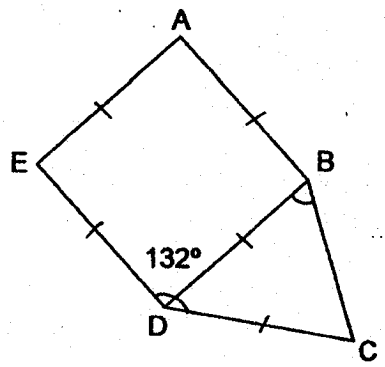
Ans : _____

2. Two containers with some water are shown below. Find the total volume of water in the two containers.



Ans : _____ mℓ

3. In the figure below, ABDE is a square and BCD is an isosceles triangle. Given that ∠ EDC = 132°, find ∠ DBC.

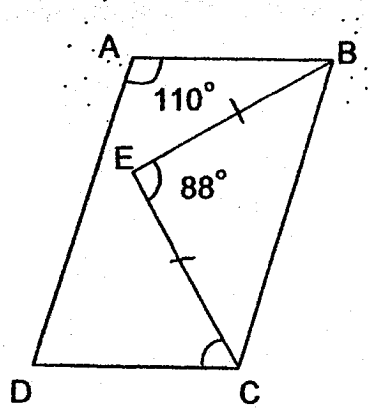


Ans : _____ °

4. Sally had some bottled drinks. 60% of the bottled drinks were coffee while the rest were tea. She bought more bottles of tea. In the end, 40% of the bottled drinks were coffee. What was the percentage increase in the number of bottles of tea when more bottles of tea were added to the bottled drinks?

Ans : _____%

5. ABCD is a parallelogram, $\angle BAD = 110^\circ$ and EB = EC.
Find $\angle ECD$ when $\angle BEC = 88^\circ$.



Ans : _____°

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)

---

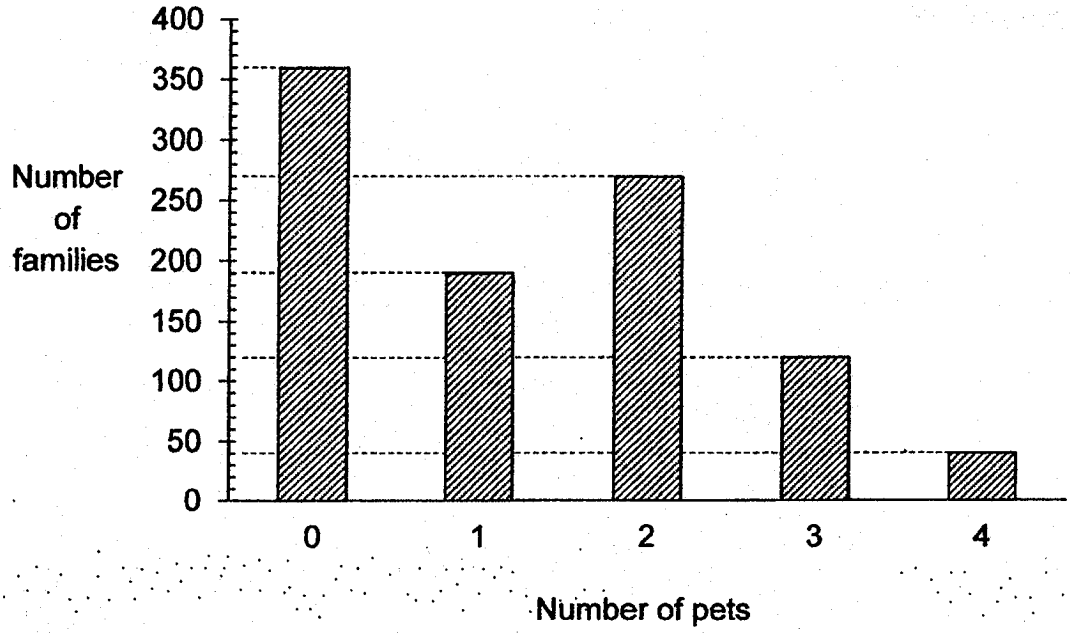
6. Three friends are folding paper butterflies to decorate the class noticeboard. To fold one paper butterfly, Carol takes 9 min, Diane takes 6 min and Edna takes only 4 min. They start folding at the same time. How many minutes will they take to fold 285 paper butterflies altogether?

Ans : _____ [3]

7. At a bakery, 70 more beef pies than chicken pies were baked for the day. After 450 beef pies and 121 chicken pies were sold, there were $\frac{5}{12}$ as many beef pies as chicken pies left. How many pies were baked altogether?

Ans : _____ [3]

8. The bar graph shows the number of pets owned by families in a neighbourhood.



(a) How many pets are there in the neighbourhood altogether?

(b) What fraction of the families who own pets, have at least 3 pets? Give your answer in the simplest form.

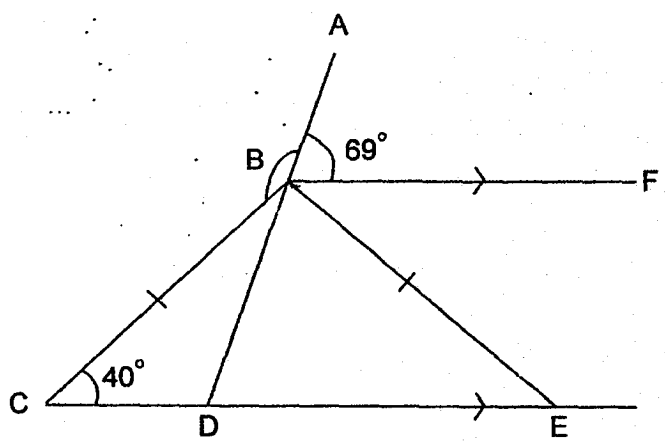
Ans : (a) _____ [1]

(b) _____ [2]

9. Adam had 110 more marbles than Ben. After Adam lost 129 marbles to Ben in a game, Ben had 5 times as many marbles as Adam. How many marbles did Ben have at first?

Ans : _____ [3]

10. In the figure below, BF is parallel to CE. ABD is a straight line and BCE is an isosceles triangle. Find ∠ ABC.



Ans : _____ [3]

11. Mrs Lee baked some cookies. She gave $\frac{1}{5}$ of them to her neighbours and packed $\frac{1}{3}$ of the remaining for her son's class party. When she baked another 594 cookies, she found that she now had twice the number of cookies she had baked at first. How many cookies did Mrs Lee give to her neighbours?

Ans : _____ [4]

12. At a funfair, the ratio of the number of adults to the number of children was 3 : 2. Among the children, the ratio of the number of girls to the number of boys was 4 : 5. Each adult ticket cost $10 and each child ticket cost $6. A total of $21 168 was collected from the ticket sale.

(a) What percentage of the people visiting the funfair were girls? Leave your answer as a fraction in its simplest form.

(b) How many boys visited the funfair?

Ans : (a) _____ [2]

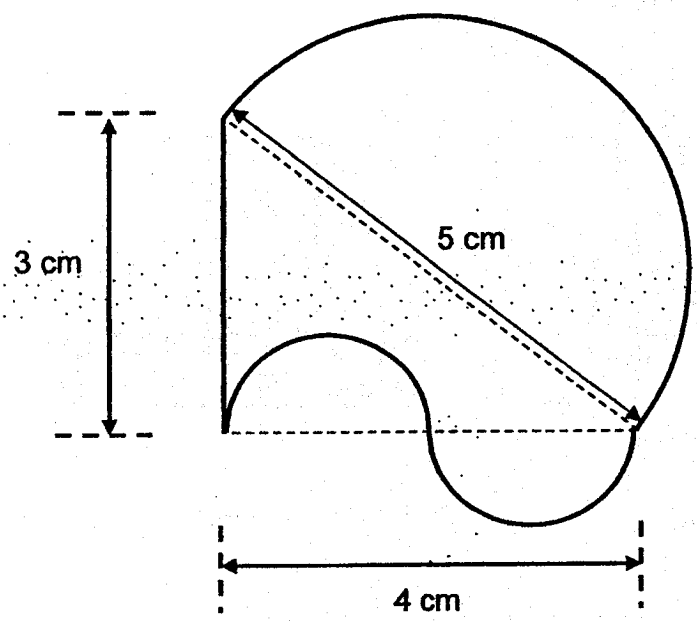
(b) _____ [3]

13. The figure below is formed by 1 large semicircle, 2 small identical semicircles and a straight line. The semicircles are formed along the edges of a right-angled triangle. The dimensions of the triangle are 3 cm, 4 cm and 5 cm.

(a) Find the perimeter of the figure.

(b) Find the area of the figure, correct to 2 decimal places.

(Take $\pi = 3.14$)



Ans : (a) _____ [2]

(b) _____ [3]

14. Figure A below shows a container of height 40 cm. It is made up of two portions. The top portion is a cuboid which has a square base of 4 cm and a height of 28 cm. The bottom portion is a cuboid with a rectangular base, measuring 25 cm by 8 cm. There are 2.656 litres of water inside the container.

(a) How much more water is needed to fill the container?

(b) The container, containing 2.656 litres of water, is toppled as shown in Figure B. Find the height of the water level in Figure B.

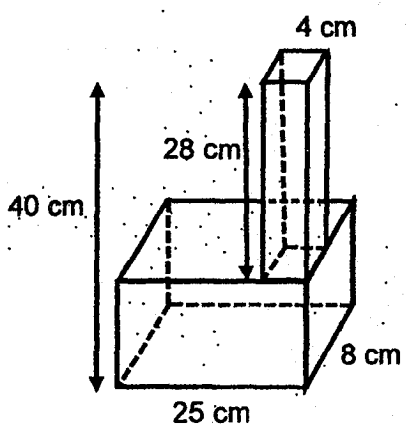


Figure A

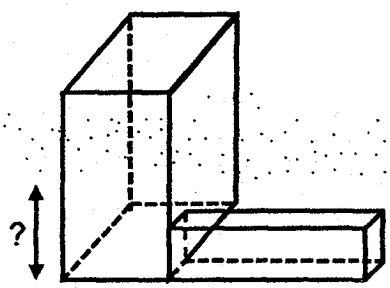


Figure B

Ans : (a) _____ [2]

(b) _____ [2]

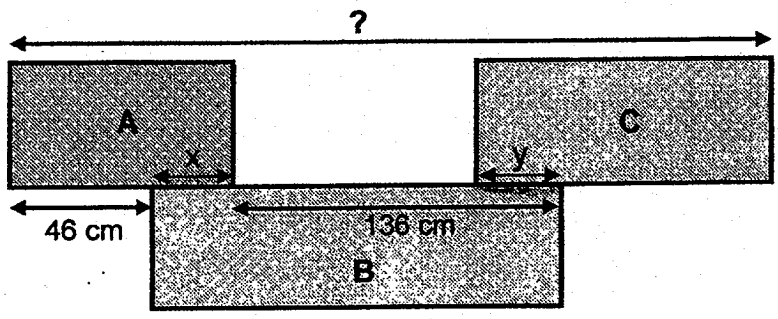
15. Tim and Ravi had $6894. Tim gave 20% of his money to Ravi. Ravi then spent 40% of his money. They had $5518 left in the end. How much money did Ravi have at first?

Ans : _____ [5]

16. Meena bought some pens, pencils, erasers and rulers with $1718.45. The amount of money spent on pens was twice the amount spent on pencils. The amount of money spent on erasers was 3 times the amount spent on rulers. The amount of money spent on pens was $213.20 more than the amount spent on rulers. How much money did Meena spend on rulersand erasers?

Ans : _____ [4]

17. Sammy drew a figure made up of 3 different rectangles with identical breadth as shown below. The length of rectangle A is $\frac{5}{11}$ the length of rectangle B. The length of rectangle C is $\frac{1}{2}$ of the total length of rectangle A and rectangle B. Length x is equal to length y. Find the length of the figure.



Ans : _____ [4]

18. A car was travelling from Town A to Town B. At the same time, a van was travelling from Town B towards Town A. After travelling for 120 km, the car went past Gem Market at 08 30. At 10 00, the van passed by the car at the midpoint between Gem Market and Town B. The van reached Gem Market at 12 30. Both the van and the car did not change their speeds for the entire journey. What was the difference between the speed of the car and the van?

Ans : _____ [4]

End of Paper-

Please check your work carefully ☺

Setters : Jacqueline Seto, Lim Li Shan, Seah Nam Sin

YEAR	:	2017
LEVEL	:	PRIMARY 6
SCHOOL	:	RAFFLES GIRLS' PRIMARY
SUBJECT	:	MATHEMATICS
TERM	:	PRELIMINARY EXAMINATION

Paper 1

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

Q16 798 600 , 796 800 , 789 604 , 789 406

Q17 42

Q18 4.57

Q19 0.0875

Q20 1:35 am

Q21 48 cm^3

Q22 14.5

Q23 12.56 cm^2

Q24 4 : 3

Q25 $13

Q26 $\frac{6}{5}$

Q27 $120

Q28 56 cm

Q29 590°

Q30 12 days

Paper 2

Q1 No. of boxes at first $\rightarrow \frac{5n}{8}$

No. of boxes left $\rightarrow \frac{5n}{8} - 3$

$\Rightarrow \frac{5n - 24}{8}$

Q2 Total vol. $\rightarrow$ 250 ml + 700 ml

$\Rightarrow$ 950 ml

Q3 $\angle BDC = 132° - 90° \rightarrow 42°$

$\angle DBC = (180° - 42°) \div 2 \Rightarrow 69°$

Q4 125 %

Q5 $\angle BAD = \angle BCD \rightarrow 110°$

$\angle BCE = (180° - 88°) \div 2 \rightarrow 46°$

$\angle ECD = 110° - 46° \Rightarrow 64°$

Q6 Total folded in 36 min $= (36 \div 4) + (36 \div 6) + (36 \div 9)$

$= 9 + 6 + 4$

$= 19$

No. of sets of 36 min $= 285 \div 19$

$= 15$

Total mins $= 15 \times 36$

$\Rightarrow$ 540 min

RAFFLES PRELIM

Q7

$1u + 70 - 450 = 5p$
$1u - 380 = 5p$
x 12 $\quad 1u - 121 = 12p$
$12u - 4560 = 60p$ x 5
$5u - 605 = 60p$

$12u - 4560 = 5u - 605$
$12u - 5u = 4560 - 605$
$7u \rightarrow 3955$

$1u \rightarrow \frac{3955}{7}$

$= 565$

At first $\rightarrow 2u + 70$
$= (2 \times 565) + 70$
$\Rightarrow$ <u>1200 pies</u>

Q8 (a) Total pets $= (1 \times 190) + (2 \times 270) + (3 \times 120) + (40 \times 4)$
$\Rightarrow$ <u>1250 pets</u>

(b) Total families with pets $= 190 + 270 + 120 + 40 \rightarrow 620$
Families with 3 or more $= 120 + 40 \rightarrow 160$
Fractions $\rightarrow \frac{160}{620} \Rightarrow \frac{8}{31}$

Q9 $5u - 129 + 110 = 1u + 129$
$5u - 19 = 1u + 129$
$5u - 1u = 129 + 19$
$4u \rightarrow 148$
$1u \rightarrow \frac{148}{4} = 37$
$(5u) \rightarrow 37 \times 5 = 185$
Ben at first $\rightarrow 185 - 129 \Rightarrow$ <u>56 marbles</u>

Q10 $\angle BCD = \angle BED = \angle EBF \rightarrow 40°$
$\angle DBE = 180° - (69° + 40°) \rightarrow 71°$
$\angle CBE = 180° - (40° \times 2) \rightarrow 100°$
$\angle CBD = 100° - 71° \rightarrow 29°$
$\angle ABC = 180° - 29° \Rightarrow \underline{151°}$

Q11 Neighbours $\rightarrow \frac{1}{5}$ of total

Remaining $\rightarrow 1 - \frac{1}{5}$

$= \frac{4}{5}$ of total

Son's class party $\rightarrow \frac{1}{3}$ o R

Left $\rightarrow \frac{2}{3}$ of R

$= \frac{2}{3} \times \frac{4}{5}$

$= \frac{8}{15}$ (of total)

At first $\rightarrow \frac{15}{15}$

After baking more $\rightarrow \frac{15}{15} \times 2 = \frac{30}{15}$

$\frac{30}{15} - \frac{8}{15} = \frac{22}{15}$

$\frac{22}{15} \rightarrow 594$

$\frac{1}{5} = \frac{3}{15}$

$\frac{3}{15} \rightarrow \frac{594}{22} \times 3 \Rightarrow$ <u>81 cookies</u>

RAFFLES PRELIM

Q12 (a)

	A	:	C
	3	:	2
x 9			
	27	:	18

Total (u) $\rightarrow 27u + 18u = 45u$

% Girls $\rightarrow \frac{8}{45} \times 100\% \Rightarrow 17\frac{7}{9}\%$

(b) (u) \$ collected from A $\rightarrow 27u \times 10 = 270u$
(u) \$ collected from G $\rightarrow 8u \times 6 = 48u$
(u) \$ collected from B $\rightarrow 10u \times 6 = 60u$
Total $\rightarrow 270u + 48u + 60u = 378u$
$378u \rightarrow 21168$

$1u \rightarrow \frac{21168}{378} = 56$

B (10u) $\rightarrow 56 \times 10 \Rightarrow$ <u>560 boys</u>

Q13 (a) Diameter of small semi $\rightarrow 2$

Perimeter of 2 small semi $\rightarrow \pi \times d$
$= 3.14 \times 2$
$= 6.28$

Perimeter of 1 big semi $\rightarrow \pi \times d \times \frac{1}{2}$

$= 3.14 \times 5 \times \frac{1}{2}$

$= 7.85$

Perimeter of figure $\rightarrow 7.85 + 6.28 + 3$
$\Rightarrow$ <u>17.13 cm</u>

(b) $\triangle \rightarrow \frac{1}{2} \times 3 \times 4 = 6$

$5 \div 2 = 2.5$

Semi $\rightarrow \pi \times r \times r \times \frac{1}{2}$

$= 3.14 \times 2.5 \times 2.5 \times \frac{1}{2} = 9.8125$

≈ 9.81

Total area $\rightarrow 6 + 9.81 \Rightarrow$ <u>15.81 cm²</u>

Q14 (a) Height of bottom cuboid $\rightarrow 40 - 28 = 12$
Water in bottom cuboid $\rightarrow 12 \times 25 \times 8 = 2400\ cm^3$
Capacity of top $\rightarrow 28 \times 4 \times 4 = 448\ cm^3$
Total capacity $\rightarrow 2400 + 448 = 2848\ cm^3$
$2.656\ \ell = 2656\ m\ell$
Water to be filled $\rightarrow 2848 - 2656 \Rightarrow$ <u>192 cm³</u>

(b) $2656 - 448 = 2208$ (in bottom cuboid)
Base of bottom $\rightarrow 8 \times 12 = 96$
$2208 \div 96 \Rightarrow$ <u>23 cm</u>

RAFFLES PRELIM

Q15 T at first → 100u
R at first → 100p
100u + 100p → 6894
T gave → 20u
T left → 80u
R now → 100p + 20u
R spent → 40p + 8u
R left → 60p + 12u

80u + 60p + 12u = 5518
92u + 60p = 5518
100u + 100p = 6894 x 5
460u + 300p = 27590
300u + 300p = 20682 x 3
160u → 6908

$100u \rightarrow \frac{6908}{160} \times 100$

= 4317.50

R at first (100p) → 6894 – 4317.50 ⇒ $2576.50

Q16 R → 2u
E → 6u
Pen → 2u + 213.20
Pencil → 1u + 106.60
2u + 6u + 2u + 213.20 + 1u + 106.60 = 1718.45
11u + 319.80 = 1718.45
11u → 1398.65
1u → 127.15
2u + 6u = 8u
8u → 127.15 x 8 ⇒ $1017.20

Q17 $11u - 5u = 6u$

$6u \rightarrow 136 - 46 = 90$

$1u \rightarrow \frac{90}{6} = 15$

Overlapped $\rightarrow (15 \times 5) - 46 = 29$

A B C $\rightarrow 24 \times 15 = 360$

Length $\rightarrow 360 - 29 - 29 \Rightarrow$ <u>302 cm</u>

Q18

	Car	:	Van
Time	3	:	5
Speed	5	:	3
Distance	5	:	3

2u of distances $\rightarrow$ 120 km

$3u \rightarrow \frac{120}{2} \times 3 = 180$

Van speed $\rightarrow 180 \div 2\frac{1}{2} = 72$ km/h

Difference $\rightarrow (72 \div 3) \times 2 \Rightarrow$ <u>48 km/h</u>

End

Word Problem Worksheet

& Solutions

Raffles Paper

P6 Mathematics SA2 2017

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. Three friends are folding paper butterflies to decorate the class notice board. To fold one paper butterfly, Carol takes 9 min, Diane takes 6 min and Edna takes only 4 min. They start folding at the same time. How many minutes will they take to fold 285 paper butterflies altogether?

Ans: _____

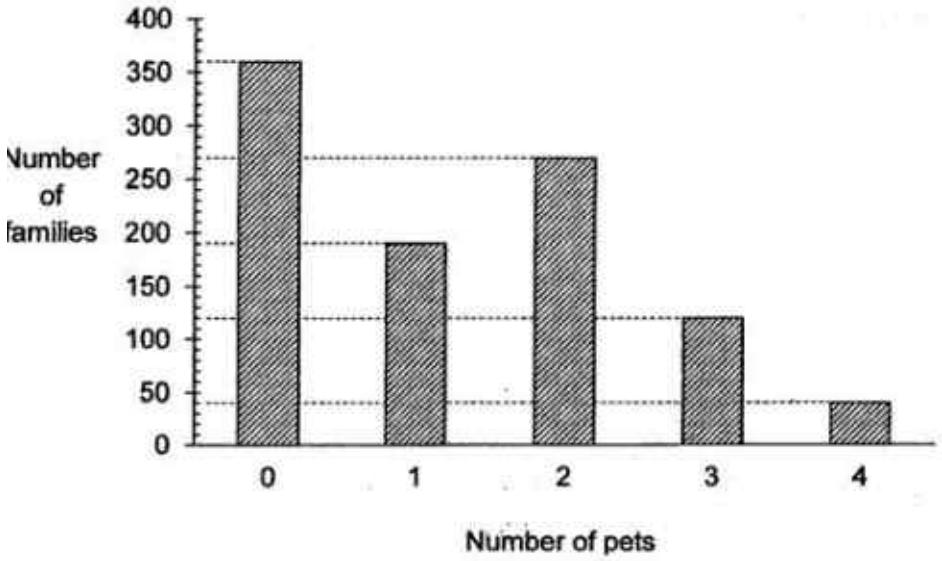
---

7. At a bakery, 70 more beef pies than chicken pies were baked for the day. After 450 beef pies and 121 chicken pies were sold, there were $\frac{5}{12}$ as many beef pies as chicken pies left. How many pies were baked altogether?

Ans: _____

---

8. The bar graph shows the number of pets owned by families in a neighbourhood.



(a) How many pets are there in the neighbourhood altogether?

(b) What fraction of the families who own pets, have at least 3 pets? Give your answer in the simplest form.

Ans: (a) _____

(b) _____

9. Adam had 110 more marbles than Ben. After Adam lost 129 marbles to Ben in a game, Ben had 5 times as many marbles as Adam. How many marbles did Ben have at first?

Ans: _____

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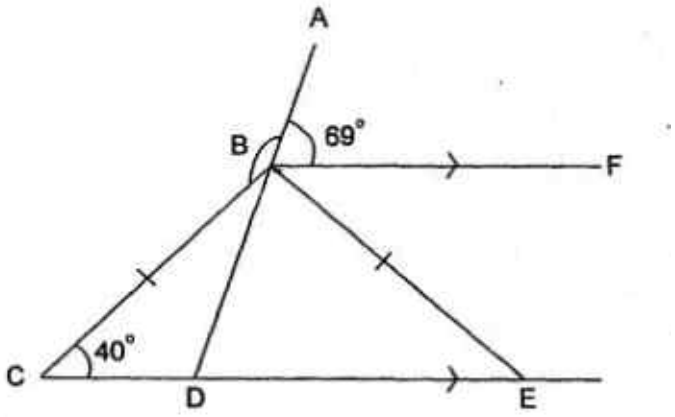
10. In the figure below, BF is parallel to CE. ABD is a straight line and BCE is an isosceles triangle. Find ∠ ABC.



Ans: _____

---

11. Mrs Lee baked some cookies. She gave $\frac{1}{5}$ of them to her neighbours and packed $\frac{1}{3}$ of the remaining for her son's class party. When she baked another 594 cookies, she found that she now had twice the number of cookies she had baked at first. How many cookies did Mrs Lee give to her neighbours?

Ans: _____

12. At a funfair, the ratio of the number of adults to the number of children was 3 : 2. Among the children, the ratio of the number of girls to the number of boys was 4 : 5. Each adult ticket cost $10 and each child ticket cost $6. A total of $21 168 was collected from the ticket sale.

(a) What percentage of the people visiting the funfair were girls?
Leave your answer as a fraction in its simplest form.

(b) How many boys visited the funfair?

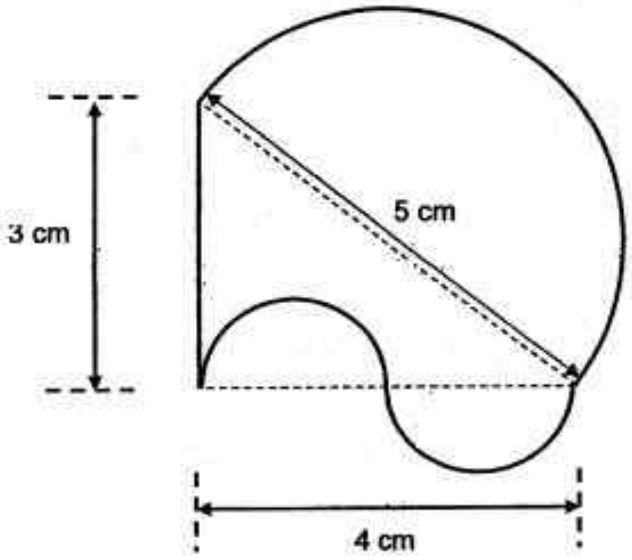
Ans: (a) _____

(b) _____

13. The figure below is formed by 1 large semicircle, 2 small identical semicircles and a straight line. The semicircles are formed along the edges of a right-angled triangle. The dimensions of the triangle are 3 cm, 4 cm and 5 cm.

(a) Find the perimeter of the figure.

(b) Find the area of the figure, correct to 2 decimal places. (Take π = 3.14)



Ans: (a) _____

(b) _____

14. Figure A below shows a container of height 40 cm. It is made up of two portions. The top portion is a cuboid which has a square base of 4 cm and a height of 28 cm. The bottom portion is a cuboid with a rectangular base, measuring 25 cm by 8 cm. There are 2.656 litres of water inside the container.

(a) How much more water is needed to fill the container?
(b) The container, containing 2.656 litres of water, is toppled as shown in Figure B. Find the height of the water level in Figure B.

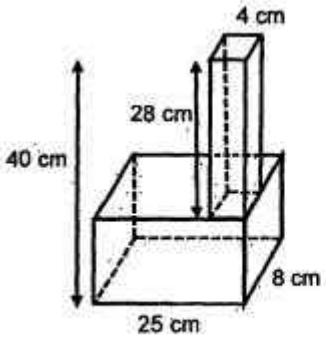


Figure A

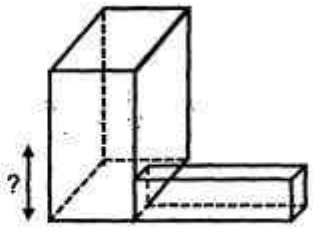


Figure B

Ans: (a) _____

(b) _____

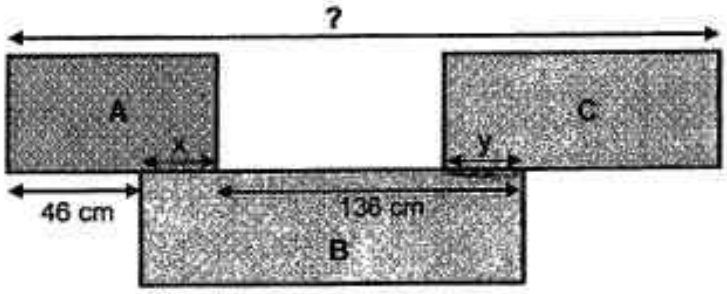
15. Tim and Ravi had $6894. Tim gave 20% of his money to Ravi. Ravi then spent 40% of his money. They had $5518 left in the end. How much money did Ravi have at first?

Ans: _____

16. Meena bought some pens, pencils, erasers and rulers with $1718.45. The amount of money spent on pens was twice the amount spent of pencils. The amount of money spent on erasers was 3 times the amount spent on rulers. The amount of money spent on pens was $213.20 more than the amount spent on rulers. How much money did Meena spend on rulers and erasers?

Ans: _____

17. Sammy drew a figure made up of 3 different rectangles with identical breadth as shown below. The length of rectangle A is $\frac{5}{11}$ the length of rectangle B. The length of rectangle C is $\frac{1}{2}$ of the total length of rectangle A and rectangle B. Length x is equal to length y. Find the length of the figure.



Ans: _____

18. A car was travelling from Town A to Town B at 07 30. At the same time, a van was travelling from Town B towards Town A. After travelling for 120 km, the car went past Gem Market at 08 30. At 10 00, the van passed by the car at the midpoint between Gem Market and Town B. The van reached Gem Market at 12 30. Both the van and the car did not change their speeds for the entire journey. What was the difference between the speed of the car and the van?

Ans: _____

Answer Key

Subject: Primary 6 Maths – Word Problem Solutions
Paper: SA2 2017 Raffles

6. 9 hours
7. 1200 pies
8. a) 1250 pets b) $\frac{8}{31}$
9. 56 marbles
10. 151 °
11. 81 cookies
12. a) $17\frac{7}{9}$ % a) 560 boys
13. a) 17.13 cm b) 15.81 cm^2
14. a) 0.192 litres b) 23 cm
15. $2576.50
16. $1017.20
17. 302 cm
18. 48 km/h

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. Three friends are folding paper butterflies to decorate the class notice board. To fold one paper butterfly, Carol takes 9 min, Diane takes 6 min and Edna takes only 4 min. They start folding at the same time. How many minutes will they take to fold 285 paper butterflies altogether?

In 36 minutes,
Carol makes 4 paper butterflies
Diane makes 6 paper butterflies
Edna makes 9 butterflies
Total in 36 min = 4 + 6 + 9 = 19

Number of blocks of 36 minutes to fold 285 paper butterflies = 285 ÷ 19 = 15

Time taken = 15 x 36 = 540 min = 9 hours

Ans: 9 hours

---

7. At a bakery, 70 more beef pies than chicken pies were baked for the day. After 450 beef pies and 121 chicken pies were sold, there were $\frac{5}{12}$ as many beef pies as chicken pies left. How many pies were baked altogether?

Difference in beef pies and chicken pies baked = 70

Difference in beef pies and chicken pies at the end = 70 – 450 + 121 = -259

Ratio of beef pies vs chicken pies → 5 : 12 → 5u : 12u

12u – 5u = 259
7u = 259
u = 259 ÷ 7 = 37

Total pies baked = 12u + 5u + 450 + 121 = 17u + 571 = 17 x 37 + 571 = 1200

Ans: 1200 pies

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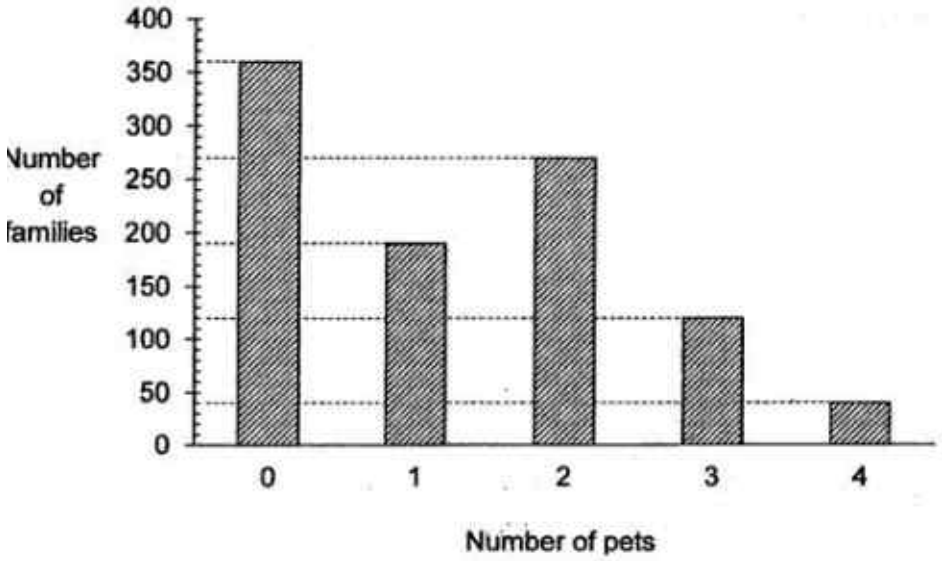
8. The bar graph shows the number of pets owned by families in a neighbourhood.



(a) How many pets are there in the neighbourhood altogether?

(b) What fraction of the families who own pets, have at least 3 pets?
Give your answer in the simplest form.

(a) Total number of pets = 190 x 1 + 270 x 2 + 120 x 3 + 40 x 4 = 1250

(b) Number of families who own at least 3 pets = 120 + 40 = 160
Total number of families = 190 + 270 + 120 + 40 = 620

Fraction of families who owned at least 3 pets = $\frac{160}{620} = \frac{8}{31}$

Ans: (a) <u>1250 pets</u>

(b) $\frac{8}{31}$

9. Adam had 110 more marbles than Ben. After Adam lost 129 marbles to Ben in a game, Ben had 5 times as many marbles as Adam. How many marbles did Ben have at first?

Let u = number of marbles Adam had in the end
5u = number of marbles Ben had in the end

At first,
Number of marbles Ben had + 110 = Number of marbles Adam had

5u - 129 + 110 = u + 129
4u - 19 = u + 129
4u = 129 + 19 = 148
u = 148 ÷ 4 = 37

Number of marbles Ben had at first = 5u – 129 = 5 x 37 – 129 = 56

Ans: 56 marbles

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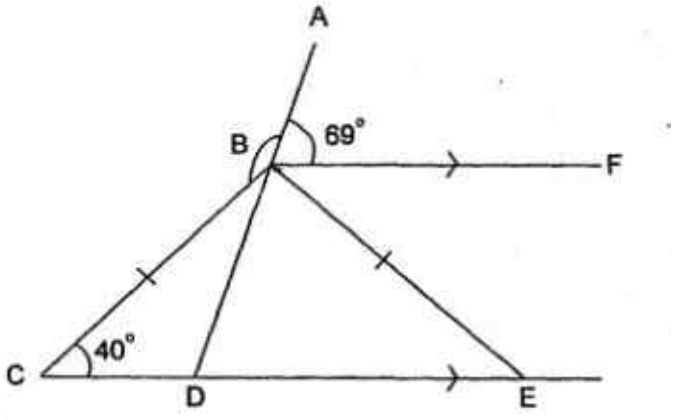
10. In the figure below, BF is parallel to CE. ABD is a straight line and BCE is an isosceles triangle. Find ∠ ABC.



∠ CBF = 180 – 40 = 140 °
∠ ABC = 360 – 69 – 140 = 151 °

Ans: 151 °

---

11. Mrs Lee baked some cookies. She gave $\frac{1}{5}$ of them to her neighbours and packed $\frac{1}{3}$ of the remaining for her son's class party. When she baked another 594 cookies, she found that she now had twice the number of cookies she had baked at first. How many cookies did Mrs Lee give to her neighbours?

Let number of cookies baked at first = 15u
Number of cookies given to her neighbours = 15u ÷ 5 = 3u
Number of cookies given to son = (15u – 3u) ÷ 3 = 4u
Remainder = 15u – 3u – 4u = 8u

8u + 594 = 2 x 15u
30u – 8u = 594
22u = 594
u = 594 ÷ 22 = 27

Number of cookies given to neighbours = 3u = 3 x 27 = 81

Ans: 81 cookies

12. At a funfair, the ratio of the number of adults to the number of children was 3 : 2. Among the children, the ratio of the number of girls to the number of boys was 4 : 5. Each adult ticket cost \$10 and each child ticket cost \$6. A total of \$21 168 was collected from the ticket sale.

(a) What percentage of the people visiting the funfair were girls?
Leave your answer as a fraction in its simplest form.

(b) How many boys visited the funfair?

(a)
Ratio of number of adults to number of children → 3 : 2 → 3u : 2u
Ratio of adult ticket cost to children ticket cost → 3 x 10 x u : 2 x 6 x u → 30u : 12u
30u + 12u = 42u = \$21 168
u = 21 168 ÷ 42 = 504

Number of children = 2u = 2 x 504 = 1008
Total number of people at funfair = 5u = 5 x 504 = 2520

Ratio of number of girls to number of boys → 4 : 5 → 8 : 10 → 8p : 10p
Number of children = 8p + 10p = 18p = 1008
p = 1008 ÷ 18 = 56
Number of girls = 8p = 8 x 56 = 448

Percentage of girls in funfair = $\frac{448}{2520}$ x 100% = $\frac{8}{45}$ x 100% = $17\frac{7}{9}$ %

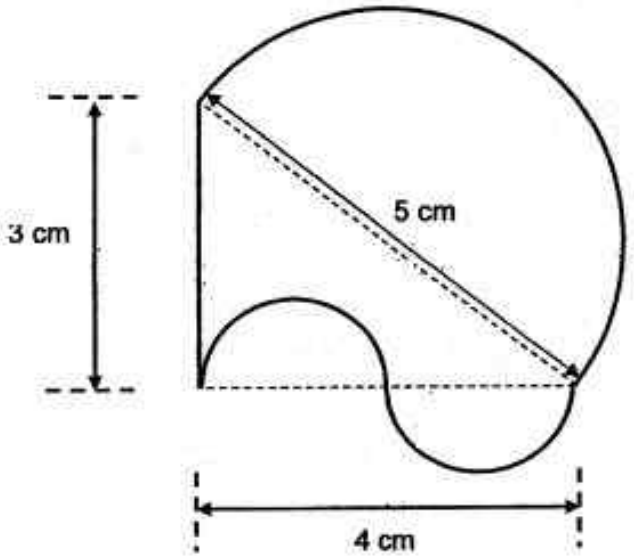
(b)
Number of boys = 10p = 10 x 56 = 560

Ans: (a) $17\frac{7}{9}$ %
(b) 560 boys

13. The figure below is formed by 1 large semicircle, 2 small identical semicircles and a straight line. The semicircles are formed along the edges of a right-angled triangle. The dimensions of the triangle are 3 cm, 4 cm and 5 cm.

(a) Find the perimeter of the figure.

(b) Find the area of the figure, correct to 2 decimal places. (Take π = 3.14)



(a) Perimeter of large semicircle = 3.14 x 5 ÷ 2 = 7.85 cm

Perimeter of 2 small semicircles = 3.14 x 2 = 6.28 cm

Total perimeter = 7.85 + 6.28 + 3 = 17.13 cm

(b) Area of large semicircle = 3.14 x 2.5 x 2.5 ÷ 2 = 9.81 cm^2

Area of triangle = 3 x 4 ÷ 2 = 6 cm^2

Total area = 9.81 + 6 = 15.81 cm^2

Small semicircle protruding out is used to cover the other semicircle that curved in.

Ans: (a) 17.13 cm

(b) 15.81 cm^2

14. Figure A below shows a container of height 40 cm. It is made up of two portions. The top portion is a cuboid which has a square base of 4 cm and a height of 28 cm. The bottom portion is a cuboid with a rectangular base, measuring 25 cm by 8 cm. There are 2.656 litres of water inside the container.

(a) How much more water is needed to fill the container?
(b) The container, containing 2.656 litres of water, is toppled as shown in Figure B. Find the height of the water level in Figure B.

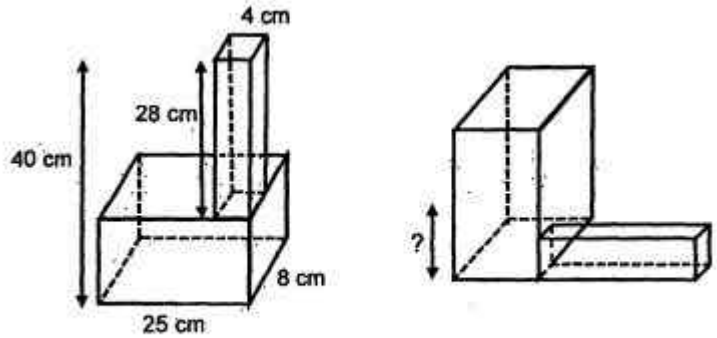


Figure A Figure B

(a)
Height of bottom portion = 40 – 28 = 12 cm
Volume of bottom portion = 25 x 8 x 12 = 2400 cm^3
Volume of top portion = 4 x 4 x 28 = 448
Total volume of Fig A = 2400 + 448 = 2848 cm^3 = 2.848 litres

Additional water to fill the container = 2.848 – 2.656 = 0.192 litres

(b)
Volume of lower portion at 4 cm mark of fig B = 448 + 12 x 8 x 4 = 0.832 litres
Remaining water above 4 cm mark = 2.656 – 0.832 = 1.824 litres
Height of water above 4 cm mark = 1824 ÷ (8 x 12) = 19 cm

Height of water level in Figure B = 4 + 19 = 23 cm

Ans: (a) <u>0.192 litres</u>

(b) <u>23 cm</u>

15. Tim and Ravi had $6894. Tim gave 20% of his money to Ravi. Ravi then spent 40% of his money. They had $5518 left in the end. How much money did Ravi have at first?

Let
Amount Tim had at first = 100u
Amount Ravi had at first = 100p
100u + 100p = 6894

Amount Tim had left after giving 20u = 80u

Amount Ravi had = 100p + 20u
Amount Ravi had left after spending 40p + 8u = 60p + 12u
Total at the end = 80u + 60p + 12u = 5518

92u + 60p = 5518	(1)
460u + 300p = 27590	(2) = (1) x 5
100u + 100p = 6894	(2)
300u + 300p = 20682	(3) = (2) x 3
160u = 6908	(4) = (2) – (3)

100u = 6908 ÷ 160 x 100
= 4317.50

At first, amount Ravi had = 6894 – 4317.50 = $2576.50

Ans: $2576.50

16. Meena bought some pens, pencils, erasers and rulers with \$1718.45. The amount of money spent on pens was twice the amount spent of pencils. The amount of money spent on erasers was 3 times the amount spent on rulers. The amount of money spent on pens was \$213.20 more than the amount spent on rulers. How much money did Meena spend on rulers and erasers?

Let u = amount spent on rulers

Amount spent on erasers = 3 x u = 3u

Amount spent on pens = u + 213.20

Amount spent on pencils = $\frac{1}{2}$ u + 106.60 (pens is twice of pencils)

Total = u + 3u + u + 213.20 + $\frac{1}{2}$ u + 106.60 = 1718.45

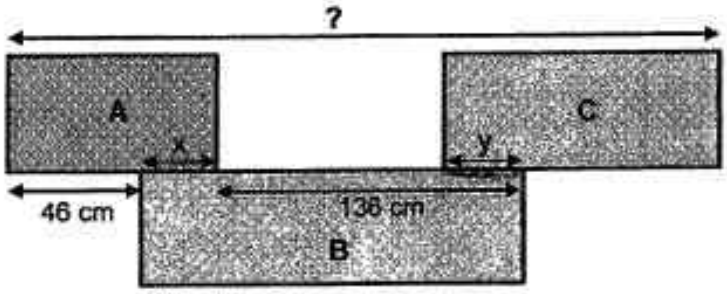
$5\frac{1}{2}$ u = 1718.45 – 213.20 – 106.60 = 1398.65

u = 1398.65 ÷ 5.5 = 254.30

Amount spent on rulers and erasers = 3u + u = 4u = 4 x 254.30 = \$1017.20

Ans: <u>\$1017.20</u>

17. Sammy drew a figure made up of 3 different rectangles with identical breadth as shown below. The length of rectangle A is $\frac{5}{11}$ the length of rectangle B. The length of rectangle C is $\frac{1}{2}$ of the total length of rectangle A and rectangle B. Length x is equal to length y. Find the length of the figure.



Ratio of length A vs length B → 5 : 11 → 5u : 11u
Length of A & B = 5u + 11u = 16u
Length of C = 16 ÷ 2 = 8u

Difference between length B & A = 136 – 46 = 90 cm
11u – 5u = 90
u = 90 ÷ 6 = 15

x = 5u – 46 = 5 x 15 – 46 = 29

Length of figure = 16u + 8u – x – x = 24 x 15 – 58 = 302 cm

Ans: 302 cm

18. A car was travelling from Town A to Town B at 07 30. At the same time, a van was travelling from Town B towards Town A. After travelling for 120 km, the car went past Gem Market at 08 30. At 10 00, the van passed by the car at the midpoint between Gem Market and Town B. The van reached Gem Market at 12 30. Both the van and the car did not change their speeds for the entire journey. What was the difference between the speed of the car and the van?

Let u = Distance between Gem Market and midpoint between Gem Market and Town B
Time taken by car to travel u distance = 10 00 – 8 30 = 1.5 hr

Time taken by van to travel u distance = 12 30 – 10 00 = 2.5 hr

u = 1.5 x 120 = 180km
Speed of car = 180 ÷ 1.5 = 120 km/h
Speed of van = 180 ÷ 2.5 = 72 km/h
Difference in speed = 120 – 72 = 48 km/h

Ans: 48 km/h

慈学校

恭寬信敏

RED SWASTIKA SCHOOL

RED SWASTIKA SCHOOL

2017 PRELIMINARY ASSESSMENT

MATHEMATICS
PAPER 1

Name : _____ ( )

Class : Primary 6 / _____

Date : 23 August 2017

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 Round off 367.199 to the nearest hundredth.

(1) 367.19
(2) 367.20
(3) 370.199
(4) 400.199

2 Find the value of $30 - 3 \times 4 + 42 \div 6$.

(1) 11
(2) 25
(3) 26
(4) 35

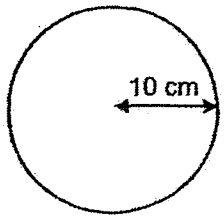
3 There are 30 marbles in Box A and 120 marbles in Box B. What is the ratio of the number of marbles in Box B to the total number of marbles in both boxes?

(1) 1 : 4
(2) 1 : 5
(3) 4 : 1
(4) 4 : 5

4 Which of the following is the same as 6.05 kg?

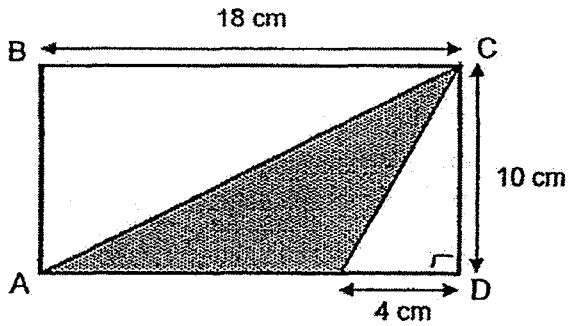
(1) 605 g
(2) 6005 g
(3) 6050 g
(4) 6500 g

5 The circle below has a radius of 10 cm. What is the circumference of the circle? (Take $\pi = 3.14$)



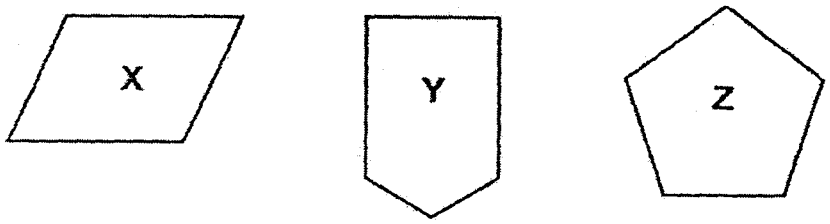
(1) 31.4 cm
(2) 62.8 cm
(3) 314 cm
(4) 1256 cm

6 In the figure below, ABCD is a rectangle. What is the area of the shaded part?



(1) 20 cm^2
(2) 40 cm^2
(3) 70 cm^2
(4) 90 cm^2

7 Which of the following shapes can be tessellated?



(1) X and Y
(2) X and Z
(3) Y and Z
(4) X, Y and Z

8 The table below shows the marks obtained by five students for their Mathematics test.

Name of students	Marks obtained
Ali	35
Brian	31
Chen Xi	42
Devi	45
Emma	27

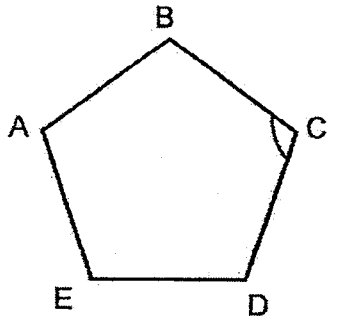
How many student(s) obtained more than the average mark for the group?

(1) 1
(2) 2
(3) 3
(4) 4

9 $\frac{9}{100} + 1\frac{2}{5} - \frac{7}{20} =$ _____
(Express your answer as a decimal.)

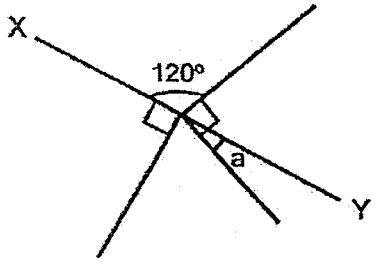
(1) 0.78
(2) 0.99
(3) 1.14
(4) 1.42

10 Figure ABCDE is a 5-sided figure which has all equal sides and angles. Find $\angle BCD$.



(1) 36°
(2) 72°
(3) 108°
(4) 144°

11 In the figure below, XY is a straight line. Find $\angle a$.

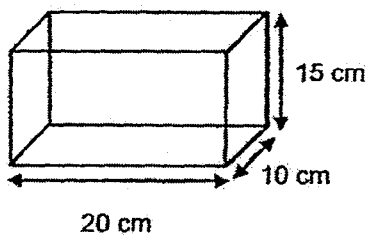


(1) 15°
(2) 30°
(3) 60°
(4) 90°

12 John drove from Town K to Town L at an average speed of 90 km/h. He left Town K at 8.45 a.m. and reached Town L at 9.15 a.m. Find the distance driven by John.

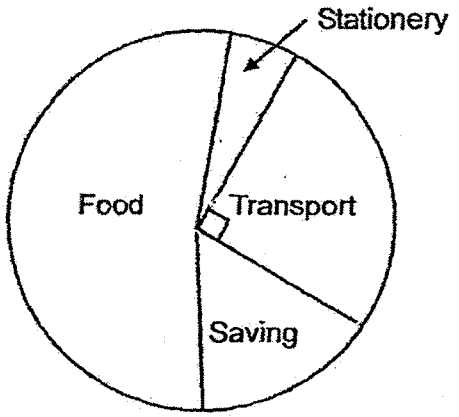
(1) 45 km
(2) 90 km
(3) 135 km
(4) 180 km

13 Tom used a piece of wire to form the outline of a cuboid 20 cm by 10 cm by 15 cm. What was the length of wire used by Tom?



(1) 45 cm
(2) 90 cm
(3) 135 cm
(4) 180 cm

14 The pie chart below shows how Jane spent her monthly allowance.



The amount she spent on transport was twice as much as the amount she saved. The amount she spent on stationery was half of the amount she saved. If she spent $180 on food, how much did she save?

(1) $20
(2) $40
(3) $60
(4) $90

15 In a class, $\frac{1}{2}$ of the students wear spectacles. $\frac{1}{3}$ of those who wear spectacles are boys and $\frac{1}{4}$ of those who do not wear spectacles are girls. What fraction of the students are girls?

(1) $\frac{11}{24}$

(2) $\frac{17}{24}$

(3) $\frac{19}{40}$

(4) $\frac{31}{40}$

2017 PRELIMINARY ASSESSMENT

MATHEMATICS
PAPER 1

Name : _____.( )

Class : Primary 6 / _____

Date : 23 August 2017

BOOKLET B

15 Questions
20 Marks

In this booklet, you should have the following:
(a) Page 7 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)

---

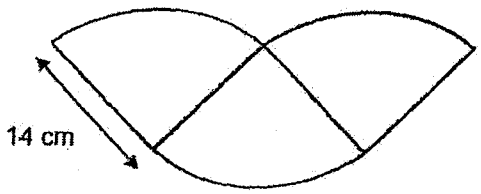
16 Evaluate $4\frac{1}{4} - 1\frac{5}{6}$.

(Express your answer as a mixed number in its simplest form.)

Ans: _____

---

17 The figure below is made up of 3 identical quadrants with radius of 14 cm. Find the area of the figure. (Take $\pi = \frac{22}{7}$)



Ans: _____ cm^2

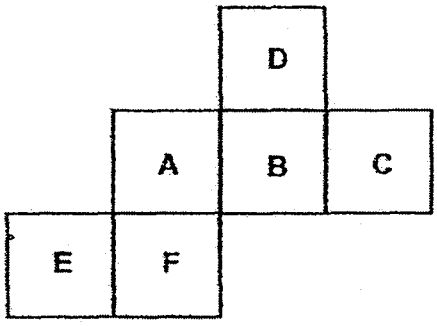
2

18 The area of each face of a cube is 49 cm^2. What is the volume of the cube?

Ans: _____ cm^3

---

19 The figure below shows the net of a cube. The net is folded to make a cube. Which letter is opposite of the letter "F"?



Ans: _____

---

20 The table below shows the time taken by four girls in a swimming competition.

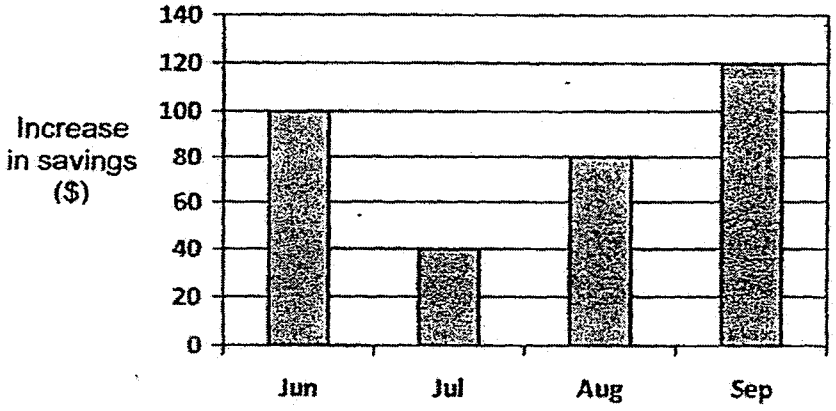
Name of girls	Time taken in seconds
Wendy	63
Jia Ling	66
Yoges	70
Zarina	68

Who is the fastest swimmer?

Ans: _____

3

Sarah records the increase in her savings at the end of every month. The bar graph below shows her records from June to September. She saved $400 at the end of September. Use the information to answer Questions 21 and 22.



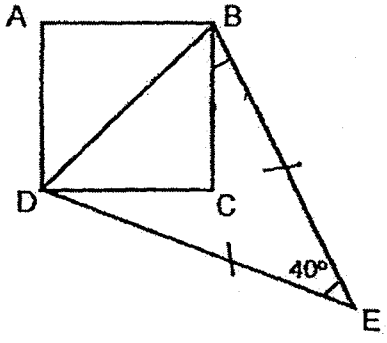
21 In which month was the least increase in savings recorded?

Ans: _____

22 Find the amount of her savings at the end of August.

Ans: $ _____

23 In the figure below, ABCD is a square and BE = DE. Find ∠CBE.



Ans: _____ °

3

24 Town A and Town B were 360 km apart. At 7 a.m., a car started travelling from Town A to Town B at a constant speed of 80 km/h. At the same time, a lorry started travelling from Town B to Town A at a constant speed of 70 km/h. At what time did the car pass the lorry?

Ans: _____ a.m.

---

25 Peter and Siti took part in a race. When Peter had completed the race in 20 minutes, Siti had only run $\frac{5}{8}$ of the distance. Peter's average speed for the race was 60 m/min faster than Siti. What was the distance of the race?

Ans: _____ m

2

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 The digits 7, 2, 3, 9, 6 are arranged to form the greatest odd number. What is the difference between the values of the digit '9' and digit '2'?

Ans: _____

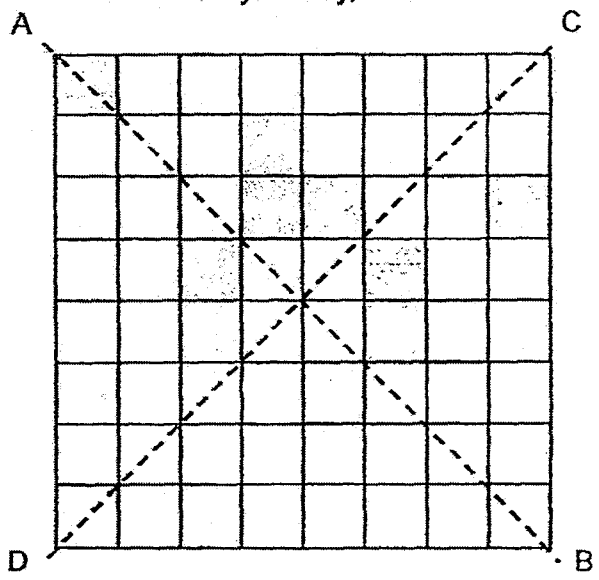
---

27 The mass of sugar in a bag is $\frac{5}{6}$ kg. It is repacked into packets of $\frac{2}{9}$ kg each. What is the maximum number of packets of sugar repacked?

Ans: _____

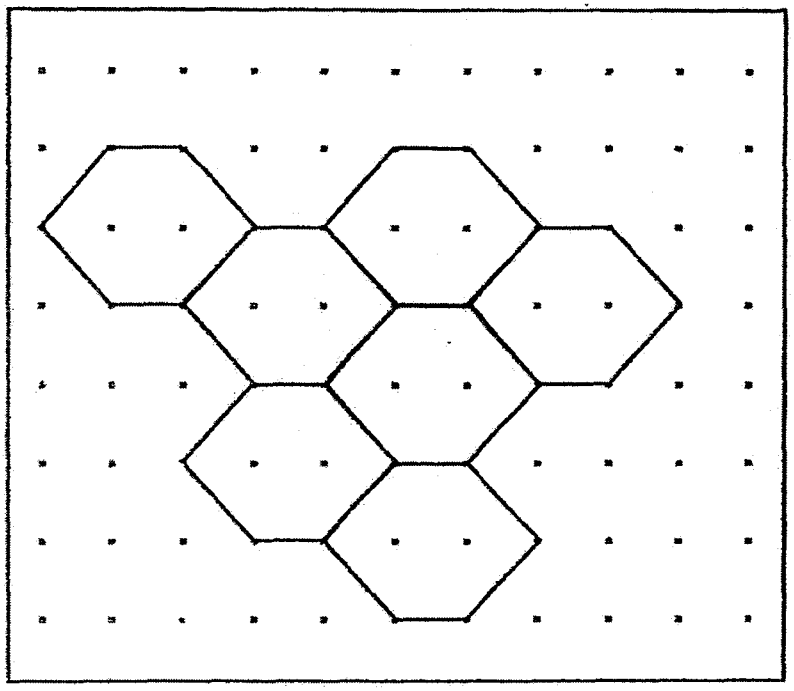
---

28 The figure below is made up of squares. Shade **three** more squares so that the figure has two lines of symmetry, AB and CD.



6

29 The pattern in the box below shows part of a tessellation. Extend the tessellation by drawing as many unit shapes as possible in the space provided within the box.



30 Max had $8y and Nick had $6y. Max spent twice as much as Nick. If they had $54 left, how much did Nick spend in terms of y?

Ans: $ _____

END OF PAPER

4

2017 PRELIMINARY ASSESSMENT

MATHEMATICS
PAPER 2

Name : _____ ( )

Class : Primary 6 /

Date : 23 August 2017

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 14
   (b) Questions 1 to 18
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 Gopal had 40 more cards than Wen Jie at first. Wen Jie gave 10 of his cards to Gopal. Gopal now has 4 times as many cards as Wen Jie. How many cards did Wen Jie have in the end?

Ans : _____

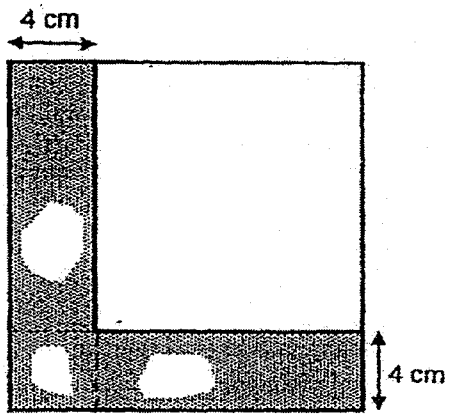
---

2 Anne wants to paste some square stickers of equal size onto a board measuring 32 cm by 24 cm. The board is to be completely covered with no overlapping or gaps between the stickers. What is the largest possible length of each side of the square sticker?

Ans : _____ cm

4

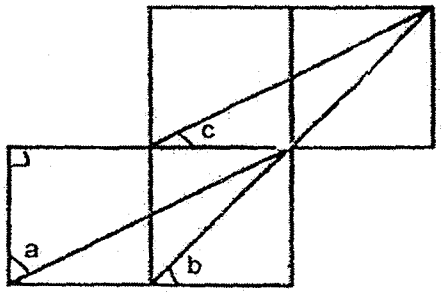
3 The figure below is made up of 2 overlapping squares. The area of the shaded part is 112 cm^2. What is the length of the smaller square?



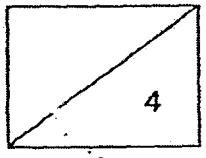
Ans : _____ cm

---

4 The figure below is made up of 4 identical squares. Find the sum of ∠a, ∠b and ∠c.



Ans : _____ °



5 Keith, Lucy and Mandy shared to buy a Father's Day gift. Keith paid $2n. Lucy paid twice as much as Keith and $8 more than Mandy.

(a) Find the cost of the gift in terms of n.

(b) If n = 5, find the amount paid by Mandy.

Ans : (a) $ _____ [1]

(b) $ _____ [1]

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 available is shown in brackets [ ] at the end of each question or part-question. (50 marks)

---

6 At a candy shop, lollipops are sold at \$0.40 each or 4 lollipops for \$1.50. What is the most number of lollipops that Miss Chan can buy with \$13?

Ans : _____ [3]

---

7 Farah bought 144 red, green and blue beads to make a necklace. The number of green beads was twice the number of blue beads. $\frac{1}{3}$ of the red beads was 18 more than the total number of green beads. How many green beads did Farah buy?

Ans : _____ [3]

6

8 In an event, the adults are divided equally into two groups. In Group A, the ratio of the number of men to the number of women is 4 : 1. In Group B, the ratio of the number of men to the number of women is 1 : 3. What is the ratio of the number of men in Group A to the number of women in Group B?

Ans : _____ [3]

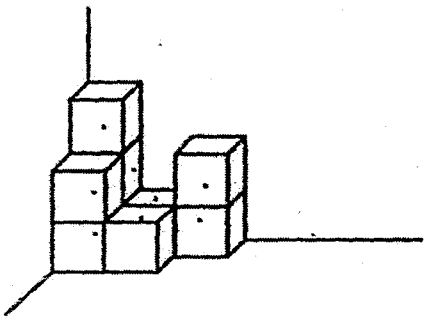
---

9 In 2016, 40% of the students in the school were girls and the rest were boys. There were 124 more boys than girls. In 2017, some boys transferred to another school, reducing the number of boys by 25%. What is the total number of students at the end of 2017?

Ans : _____ [3]

---

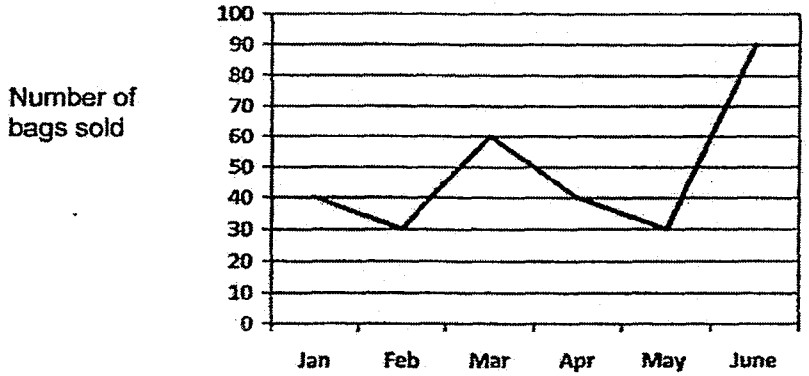
10 Susan arranges some 3-cm cubes as shown below. How many more such cubes will she need if she wants to form a bigger cube with a volume of 3375 cm^3?



Ans : _____ [3]

3

11 The line graph below shows the number of bags sold in a shop from January to June.



(a) What was the percentage increase in the number of bags sold from May to June?

(b) In order to meet the sales target of 700 bags per year, how many more bags must be sold in the second half of the year?

Ans : (a) _____ [2]

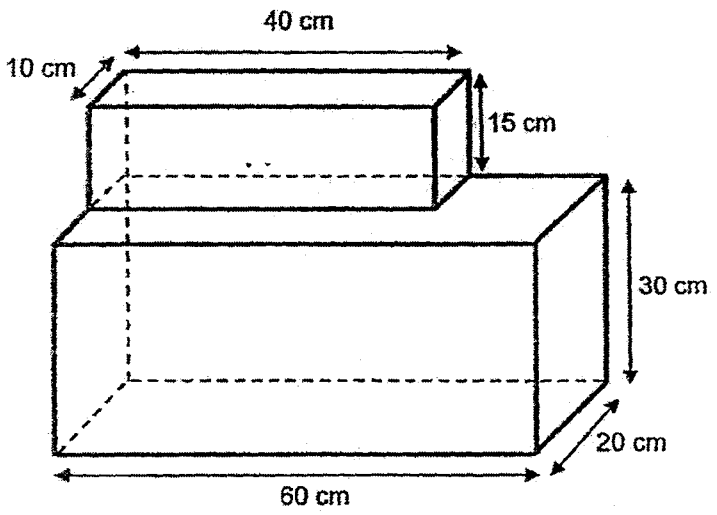
(b) _____ [2]

4

12 Miss Lim filled the container shown below with water to a height of 25 cm at first.

(a) What was the volume of water in the container at first?

(b) How much more water must Miss Lim add so that the amount of water in the end is $\frac{3}{4}$ of the capacity of the container?

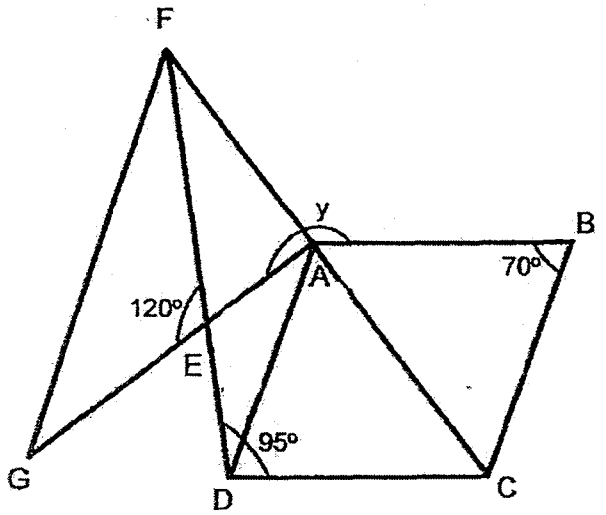


Ans : (a) _____ [2]

(b) _____ [3]

5

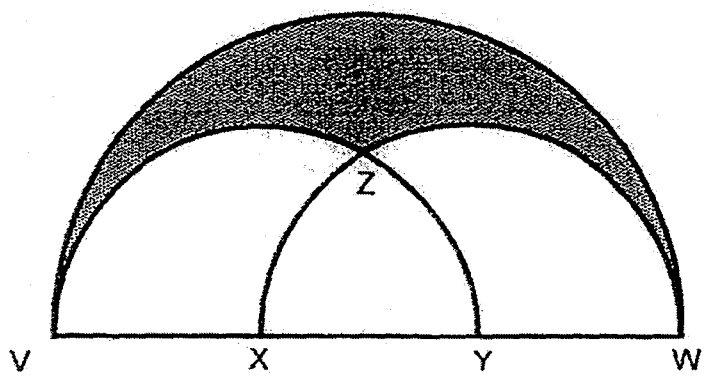
13 In the figure below, ABCD is a rhombus and CAF, AEG and DEF are straight lines. Find $\angle y$.



Ans : _____ [3]

3

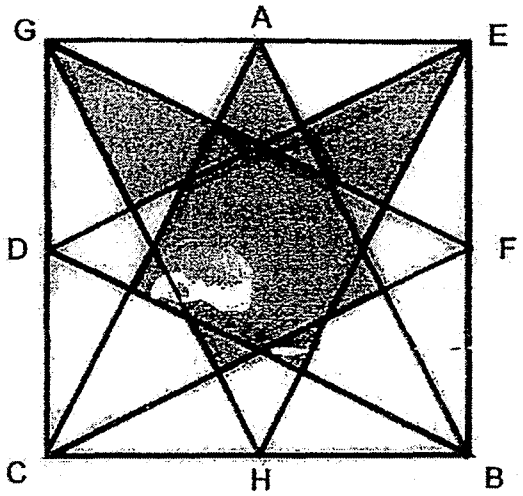
14 The figure below is made up of a big semi-circle and 2 identical smaller semi-circles. The length of VW is 18 cm and VX = XY = YW. The overlapping part of the 2 smaller semi-circles, Part XYZ, has a perimeter of 18.56 cm. Find the perimeter of the shaded part. (Take $\pi = 3.14$)



Ans : _____ [4]

4

15 The figure below is formed by drawing 4 identical isosceles triangles ABC, BDE, CFG and EGH inside a square of side 20 cm. A, D, F and H are mid-points of the sides of the square. Find the total area of the shaded parts.



Ans : _____ [4]

4

16 Tom had 60 more stamps than Jerry at first. Tom gave $\frac{1}{4}$ of his stamps to Jerry. Then Jerry gave $\frac{2}{5}$ of his stamps to Tom. Tom's uncle also gave 87 stamps to Tom. In the end the number of stamps Tom had was twice the number of stamps he had at first.

(a) Find the number of stamps Jerry gave to Tom.

(b) Find the number of stamps Tom had in the end.

Ans : (a) _____ [3]

(b) _____ [2]

5

17 Daisy brought some money for shopping. She bought 3 dresses and 2 skirts for $425 and had some money left. She wanted to buy another dress but she was short of $50. If she decided to buy another skirt instead, she would still be short of $15.

(a) How much did one dress cost?

(b) How much did Daisy bring for shopping?

Ans (a) _____ [3]

(b) _____ [2]

5

18 Mr Ong bought 120 sets of laptop. He sold 20% of them at the price he had paid for them. He sold $\frac{3}{4}$ of the remaining laptops at \$850 each and the rest at a 12% discount off the selling price of \$850. In the end, Mr Ong earned \$3792. How much did Mr Ong pay for one laptop?

Ans : _____ [5]

END OF PAPER

5

ANSWER SHEET

EXAM PAPER 2017 (P6)

SCHOOL : RED SWASTIKA

SUBJECT : MATHEMATICS

TERM : PRELIM

ORDER CALL :

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

16)25/12

17)462 cm2

18)343cm3

19)D

20)Wendy

21)July

22)$280

23)25°

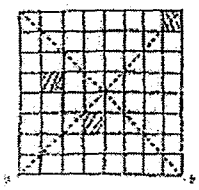
24)9:24 am

25)3200m

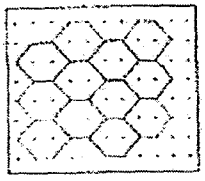
26)89980

27)3

Q28



Q29



Q30 $\left(\frac{14y-54}{3}\right)$

Paper 2

Q1 $3u \rightarrow 40 + 10 + 10 = 60$
$1u \rightarrow 60 \div 3 \Rightarrow 20$

Q2 $32 \div 8 \rightarrow 4$
$32 \div 8 \rightarrow 3$
Ans $\Rightarrow$ 8 cm

Q3 A $\rightarrow 4 \times 4 = 16$
$112 - 16 = 96$
A/B $\rightarrow 96 \div 2 = 48$
Length $\rightarrow 48 \div 4 \rightarrow 12cm$

Q4 $\angle b \rightarrow 45°$
$\angle a + \angle c \rightarrow 90°$
Sum $\rightarrow 90° + 45° \Rightarrow$ ***135°***

Q5 (a) Lucy $\rightarrow 4n$
Mandy $\rightarrow 4n - 8$
Total $\rightarrow 2n + 4n + 4n - 8 \Rightarrow$ **$(10n-8)**

(b) $4 \times 5 - 8 \Rightarrow$ **$12**

Q6 Grps of 4 → 13 ÷ 1.50 ≈ 8
8 x 1.50 = 12
13 – 12 = 1
1 ÷ 0.40 ≈ 2
8 x 4 = 32
Most no. → 2 + 32 ⇒ <u>34 lollipops</u>

Q7 9u → 144 – (18 x 3) = 90
1u → 90 ÷ 9 = *10*
G → 2u → 2 x *10* = *20 green beads*

Q8

M : W	M : W
(4 : 1) x 4	(1 : 5) x 5
= *16* : 4	= *5 : 15*

Ratio ⇒ <u>16 : 15</u>

Q9 *2016* Diff → *(60 - 40)% = 20%*
20% → 124
1% → 124 ÷ *20 = 6.2*
Girls → 40% -->*6.2 x 40 = 248*
Boys → 60% -->*6.2 x 60 = 372*
boys →*75/100 x 375 =279*
→ *279 + 248 ⇒527 students*

Q10 *1 cube → 3 x 3 x 3 = 27*
No. cubes needed -->3375 ÷ 27 = 125
More -->125 – 9 ⇒ 116 cubes

Q11 (a) *Increase → 90 - 30 = 60*
% *increase* → $\frac{60}{30}$ x *100% = 200%*

(b) 700 – 290 ⇒ *410 bags*

Q12 (a) Vol $\rightarrow 60 \times 20 \times 25 \Rightarrow$ **30 000 cm^3**

(b) Capacity $\rightarrow (60 \times 20 \times 30) + (10 \times 40 \times 15) = 42\ 000$

Vol. end $\rightarrow \frac{3}{4} \times 42\ 000 = 31\ 500$

Diff $\rightarrow 31\ 500 - 30\ 000 \Rightarrow$ **1500 ml**

Q13 $\angle EDA \rightarrow 95 - 70 = 25$

$\angle EAD \rightarrow 180 - 120 - 25 = 35$

$\angle DAB \rightarrow (360 - 70 - 70) \div 2 = 110$

$\angle y \rightarrow 360 - 110 - 35 \Rightarrow$ ***215°***

Q14 $VX \rightarrow 18 \div 3 = 6$

$ZX = ZY \rightarrow (18.56 - 6) \div 2 = 6.28$

$ZV = ZW \rightarrow (\frac{1}{2} \times 3.14 \times 12) - 6.28 = 12.56$

$VW \rightarrow \frac{1}{2} \times 3.14 \times 18 = 28.26$

$P \rightarrow 28.26 + 12.56 \rightarrow 53.38$ cm

Q15 1 tri $\rightarrow \frac{1}{2} \times 20 \times 20 = 200$

$20 \div 4 = 5$

$\frac{1}{2} \times 20 \times 5 = 50$

Shaded $\rightarrow 200 - 50 \Rightarrow$ ***150cm2***

Q16 (a)

Tom	*Jerry*
$4u + 60$	$4u$

$1u + 15$

$\frac{1}{4} \times 60 = 15$ $\quad$ $60 - 15 \times 45$

Tom	Jerry
3u + 45	5u + 15

2u + 6

$\frac{2}{5}$ x 5u = 2u

$\frac{2}{5}$ x 15 = 6

End 5u + 51 + 87 3u + 9

So *(4u*+ 60) x 2 = *5u* + 51 + 87

8u + 120 = *5u* + 138

8u – 5u = 138 – 120

3u =*18*

1u → 18 ÷ *3* = *6*

2u + 6 = *2 x 6 + 6 --> 18 stamps*

(b) 5u + 51 + *87 = 5 x 6 + 51 + 87 = 168 stamps*

Q17 (a) 50 – 15 = *35*

1D → *1u + 35*

1S → *1u*

35 x 3 = *105*

5u → *425 - 105 = 320*

1u → *320* ÷ *5* = 64

Cost *of dress*→ 64 + *35* = *$99*

(b) *99 – 50 -->49*

425 +*99 - 50 = $474*

Q18 Remaining laptops → $\frac{80}{100}$ x 120 = 96

No. sold at $850 → $\frac{3}{4}$ x 96 = 72

No. sold *(discount)* → 96 – *72 = 24*

Discounted *price*→ $\frac{88}{100}$ x 850 = 748

Amt ($850 each) → 72 x 850 = *61200*

Amt ($748) → 24 x 748 =17925

Total collected → 61200 + 17952 = 79152

Cost of 96 laptops → 79152 – 3792 = 75360

1 laptop → 75360 ÷ 96 ⇒ <u>$785</u>