WSW / GAL / AS / AT / CC

Index
No

SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2017

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET A

Name : _____ ( )

Class : Primary 6 SY/C/G/SE/P **23 August 2017**

		Marks attained	Max Mark
Paper 1	Booklet A		20
	Booklet B		20
Paper 2			60
Total Marks			100

Parent's Signature

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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)**

---

1. Which of the following is likely to be the mass of this Examination Booklet A you are using now?

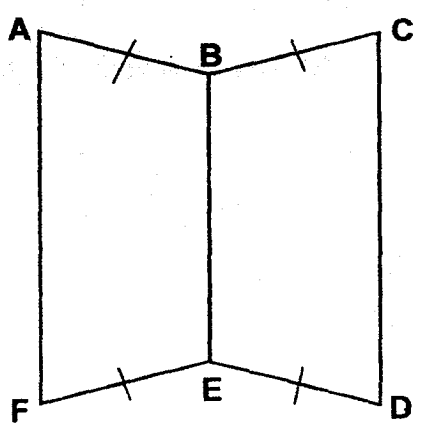
   (1) 2 g
   (2) 20 g
   (3) 200 g
   (4) 2000 g

2. Round off 37.952 to the nearest tenth.

   (1) 37.0
   (2) 37.9
   (3) 38.0
   (4) 40.0

3. The figure is made up of two identical trapeziums, ABEF and BCDE. AB = BC = FE = ED. Which of the following pairs of lines are parallel?

   (1) AB // FE
   (2) BC // FE
   (3) AF // BC
   (4) AB // CD



4. Express 5080 cm in m.

(1) 5.08 m
(2) 5.8 m
(3) 50.8 m
(4) 508 m

5. 6 : 10 = ☐ : 35. What is the missing number in the box?

(1) 15
(2) 21
(3) 24
(4) 31

6. What is the value of 50 ÷ 2000?

(1) 40
(2) 0.40
(3) 0.25
(4) 0.025

7. Mabel paid $4 for 20 packets of stickers. How much did each packet of stickers cost?

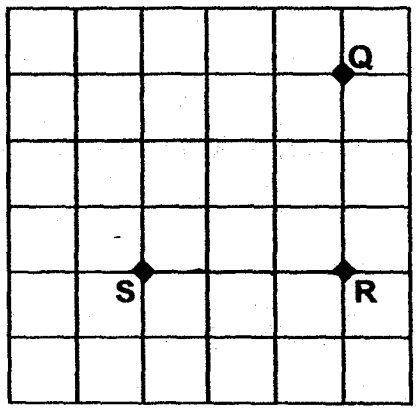
(1) 50¢
(2) 20¢
(3) 5¢
(4) 2¢

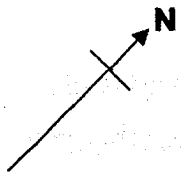
8. What is the value of $m + \frac{9m}{20} - 2$ when $m = 4$?

(1) 0
(2) 1.9
(3) 3.8
(4) 5.8

9. In the square grid below, **Q**, **R** and **S** represent three landmarks in a town. In which direction is **R** from **S**?

(1) E
(2) SW
(3) NW
(4) NE



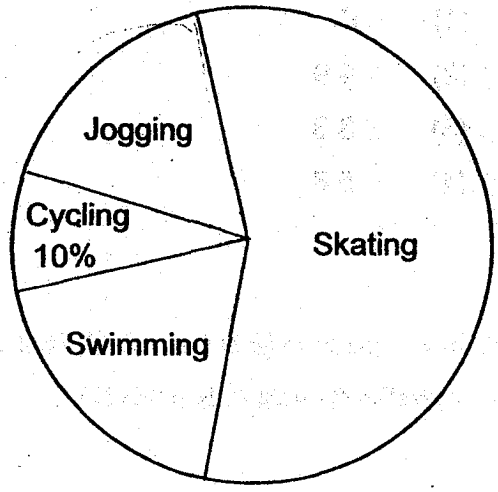


10. Which one of the following decimals is closest to 1%?

(1) 0.006
(2) 0.012
(3) 0.5
(4) 1.1

11. The pie chart shows the favourite activities of a group of children. 70 children indicated cycling as their favourite activity. How many children like jogging most?

(1) 105
(2) 175
(3) 280
(4) 560

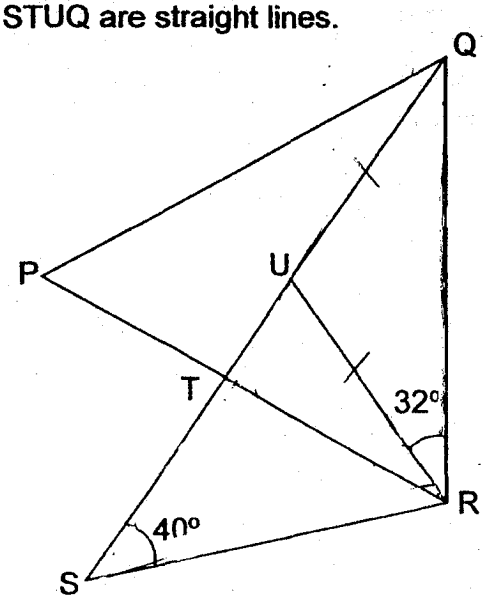


12. Stanley is (5p + 12) years old. His sister is 9 years younger than him. Find their total age 3 years ago.

(1) (5p + 3) years
(2) (5p + 9) years
(3) (10p + 9) years
(4) (10p + 12) years

13. In the figure below, PQR and RSU are triangles. PQR is an equilateral triangle, UQ = UR and $\angle URQ = 32^\circ$. PTR and STUQ are straight lines. Find $\angle TRS$.

(1) 32°
(2) 40°
(3) 48°
(4) 68°



14. The table below shows the test scores of 150 students.

Score	Number of students
35 - 44	24
45 - 54	36
55 - 64	26
65 - 74	42
Above 75	22

60% of the students passed the test. What is the lowest score that a student must obtain in order to pass the test?

(1) 35
(2) 45
(3) 55
(4) 65

15. A tank contains 5 litres of water. 40% of the water in the tank is poured into a 24-litre container which is already 25% filled with water. What fraction of the container is filled with water at the end?

(1) $\frac{1}{12}$
(2) $\frac{1}{6}$
(3) $\frac{1}{4}$
(4) $\frac{1}{3}$

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SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2017

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET B

Name : _____ ( )

Class : Primary 6 SY/C/G/SE/P

23 August 2017

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

Name:_____( ) **Class:** P6 SY / C / G / SE / P

Do not write in this column

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

16. Express 207% as a decimal.

Ans: _____

17. What is the quotient of 4056 ÷ 8?

Ans: _____

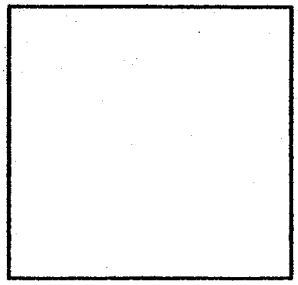
18. Find the value of $66 \div \frac{1}{6}$.

Ans: _____

19. Each of the following shapes was folded using a piece of identical square paper. Which two figures are likely to have the same perimeter as the original piece of square paper?

Do not write i this column

Original square piece of paper



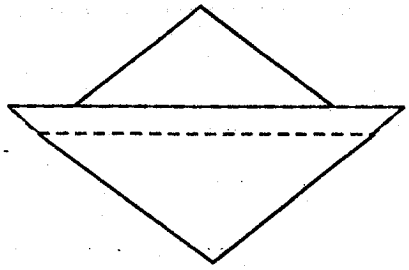


Figure A

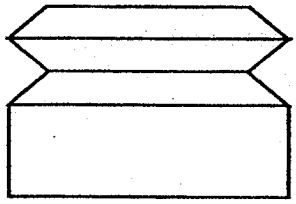


Figure B

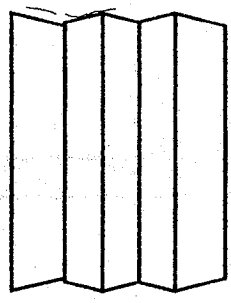


Figure C

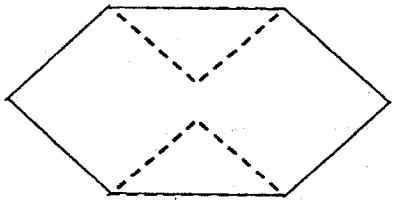


Figure D

Ans: Figures _____ and _____

1

Do not write this column

20. Use all the digits **2, 3, 4, 8** to form a number closest to 4000.

Ans: _____

---

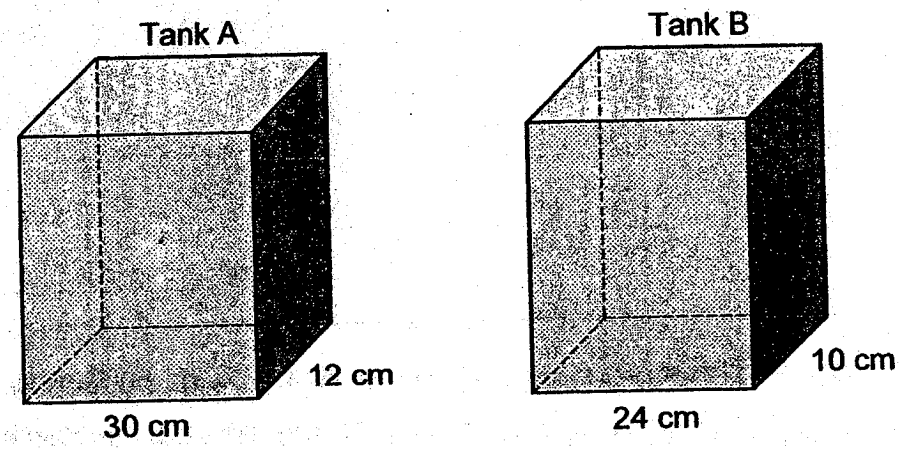
21. A train left Town J on Sunday and reached Town K at 4.10 a.m. on Monday. It took 6 h 45 min to travel from Town J to Town K. At what time did the train leave Town J on Sunday?

Ans: _____ p.m.

---

22. Both tanks are empty at first. Lydia then poured water into Tank A and Tank B until both tanks are filled to their brim. If both tanks have the same height, how much more water did Lydia pour into Tank A than Tank B? (Express your answer in percentage)

Do not write i this column



Ans: _____ %

23. James walked at a speed of 70 m/min. How far did he walk in $\frac{1}{3}$ h?

Ans: _____ m

2

Do not write in this column

24. A car uses 8 litres of petrol to travel a distance of 104 km. How far can the car travel on 30 litres of petrol?

Ans: _____ km

---

25. Four different odd numbers add up to 24 and none of them is greater than 13. The 2 smallest odd numbers add up to 6. What are the four odd numbers?

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 spaces provided.
For questions which require units, give your answers in the units stated. **(10 marks)**

Do not write in this column

26. Mrs Goh had some rice. She stored $\frac{3}{5}$ of the rice in a container and packed half of the remaining rice into 3 bags. Each bag of rice weighed 4 kg. How much rice did Mrs Goh have at first?

Ans: _____ kg

27. Last week, Ah Seng sold a total of (8d + 90) kg of durians during the weekdays. He sold a total of (6d – 43) kg of durians during the weekend. What is the average mass of durians sold last week?

Ans: _____ kg

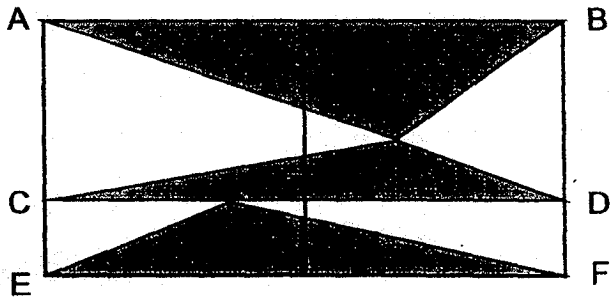
Do not write in this column

28. The following shows a sequence of numbers starting with 8. What is the value of the 80th number of the sequence?

8, 11, 14, 17, 20, ...

Ans: _____

29. The rectangle is made up of two 12-cm squares. AB // CD // EF. Find the area of the shaded parts of the rectangle.



Ans: _____ cm^2

30. Mr Yap has 65 bicycles and tricycles in his shop. The wheels of all the bicycles and tricycles add up to 174.

How many tricycles are there in Mr Yap's shop?

Do not write in this column

Ans:

End of Paper 1

Please check your work thoroughly.

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SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2017

PRIMARY 6

MATHEMATICS

PAPER 2

Name : _____ **( )**

Class : Primary 6 SY/C/G/SE/P **23 August 2017**

	Mark	Max Mark
Paper 2		**60**

Parent's Signature

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

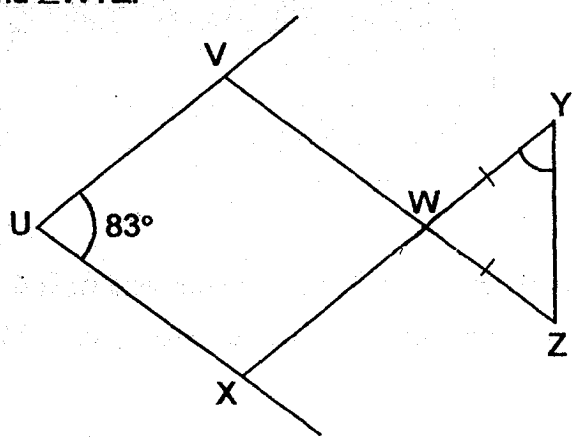
Questions **1** to **5** carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. **(10 marks)**

Do not write in this column

1 Eleven workers are needed to sew 176 pieces of garments. When the number of pieces of garments is increased by 96, how many more workers are needed to sew all the garments within the same time, presuming the rate of sewing by each worker remains the same?

Ans: _____

2 In the figure, XY and VZ are straight lines. UVWX is a rhombus and WYZ is an isosceles triangle. $\angle XUV = 83°$. Find $\angle WYZ$.



Ans: _____ °

3. The figure below shows a trapezium divided into three parts A, B and C. The ratio of A to B is 2 : 5 and the ratio of B to C is 3 : 2.

What is the ratio of A to B to C? (Give your answer in the simplest form)

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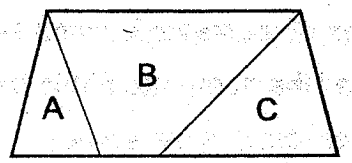


Ans: _____

4. The table below shows the rate of water charges for homes. Part of the table was accidentally torn off.

Water Charges Rate for Homes	
First 40 m^3	\$1.19 per m^3
Above 40 m^3	

Mrs Chan used 73 m^3 of water and paid \$95.78 last month. What is the water charges rate for the use of water above 40 m^3?

Ans: \$ _____

5. If Zoe adds another 65 stalks of carnations to a basket of flowers, the fraction of carnations in the basket will increase from $\frac{1}{4}$ to $\frac{3}{7}$. How many stalks of carnations did Zoe have at first?

Do not write in this column

Ans: _____

2

For questions **6** to **18**, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks awarded is shown in brackets [ ] at the end of each question or part-question. **(50 marks)**

Do not write in this column

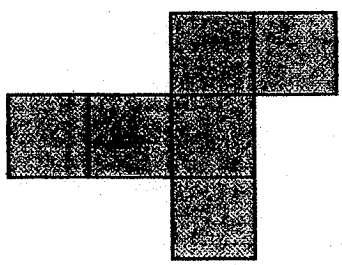
6. Pete, Mark and Jim were given some funfair tickets to sell. Each ticket cost $5.

Pete sold $\frac{2}{5}$ of the tickets. Mark and Jim sold the remaining tickets in the ratio 1:3.

Pete sold 115 tickets more than Mark. How much money did they collect altogether?

Ans: [3]

7. The net of the cube shown below has a perimeter of 98 cm. Find the volume of the cube.



Ans: _____ [3]

Do not write in this column

8. Hamzah drove from Town A to Town B. He took $1\frac{1}{3}$ hours to drive $\frac{4}{5}$ of the distance at a speed of 96 km/h. At what speed must he continue to drive in order to cover the remaining distance in $\frac{2}{5}$ hour? (Leave your answer in mixed number)

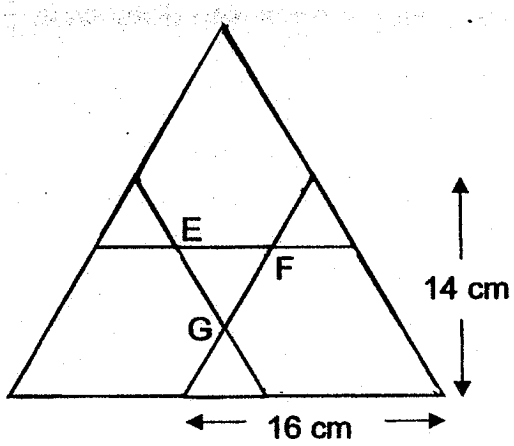
Ans: _____ [3]

9. Gopal packed 10 identical vases into Box A. He packed 8 such vases into Box B, in addition to 5 jugs, each weighing 1.2 kg. The total mass of the vases and jugs in Box B was 3.8 kg less than the mass of the vases in Box A.
What was the total mass of all the vases and jugs?

Ans: _____ [3]

10 The figure below, not drawn to scale, shows 3 overlapping identical triangles, with three overlapped areas of the same size, as indicated by the shaded portions. The area of triangle EFG is 11 cm^2 and the area of the whole figure is 323 cm^2, what is the area of each shaded part?

Do not write in this column



Ans: _____ [4]

11. Tank X and Tank Y each contain some water. If Tank X drains water at a rate of 102 litres per hour, and Tank Y drains water at a rate of 34 litres per hour, Tank X would be left with 420 litres of water by the time Tank Y is fully drained.
If Tank X drains water at a rate of 34 litres per hour, and Tank Y drains water at a rate of 102 litres per hour, Tank X would be left with 1176 litres of water by the time Tank Y is fully drained.
How much more water is there in Tank X than in Tank Y?

Do not write in this column

Ans: _____ [4]

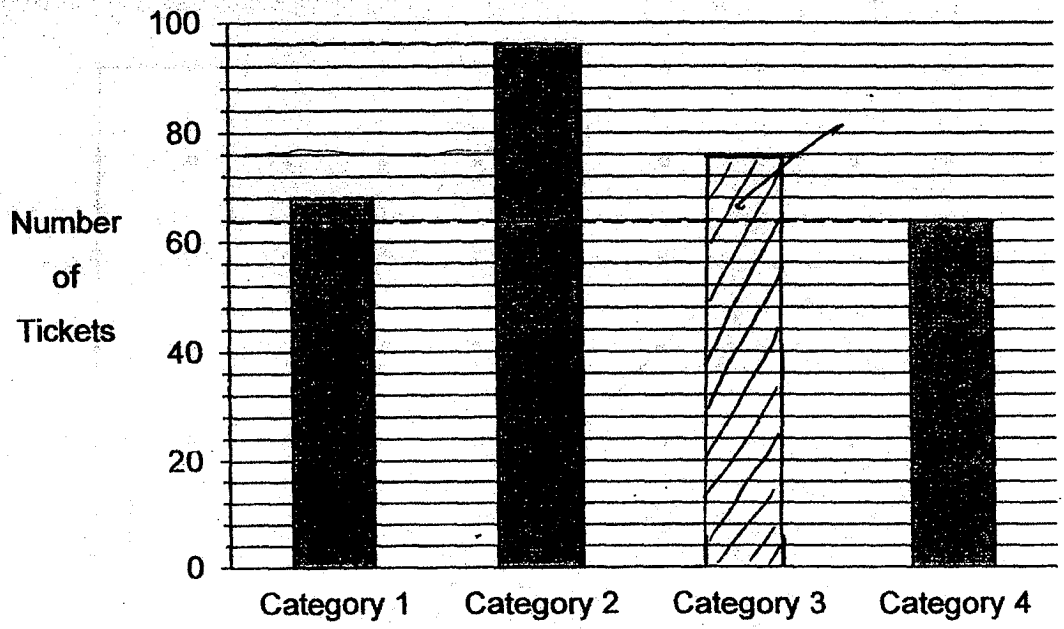
12. A packet of sugar weighs 1.5 kg. A packet of rice weighs 1.7 kg more than a packet of sugar. A shopkeeper has 22 more packets of sugar than rice in his shop. The total mass of sugar and rice in his shop is 225.7 kg. How many packets of sugar does the shopkeeper have?

Do not write in this column

Ans: _____ [4]

13. The bar graph shows the number of concert tickets sold for the various seat categories, **except Category 3.**

Do not write in this column



The table shows the prices of the tickets.

Type of Ticket	Price per Ticket
Category 1	$88
Category 2	$68
Category 3	$48
Category 4	$38

(a) The number of Category 3 tickets sold is equal to the average number of tickets sold for the other categories.
Complete the bar graph by drawing the bar to show the number of Category 3 tickets sold. [1]

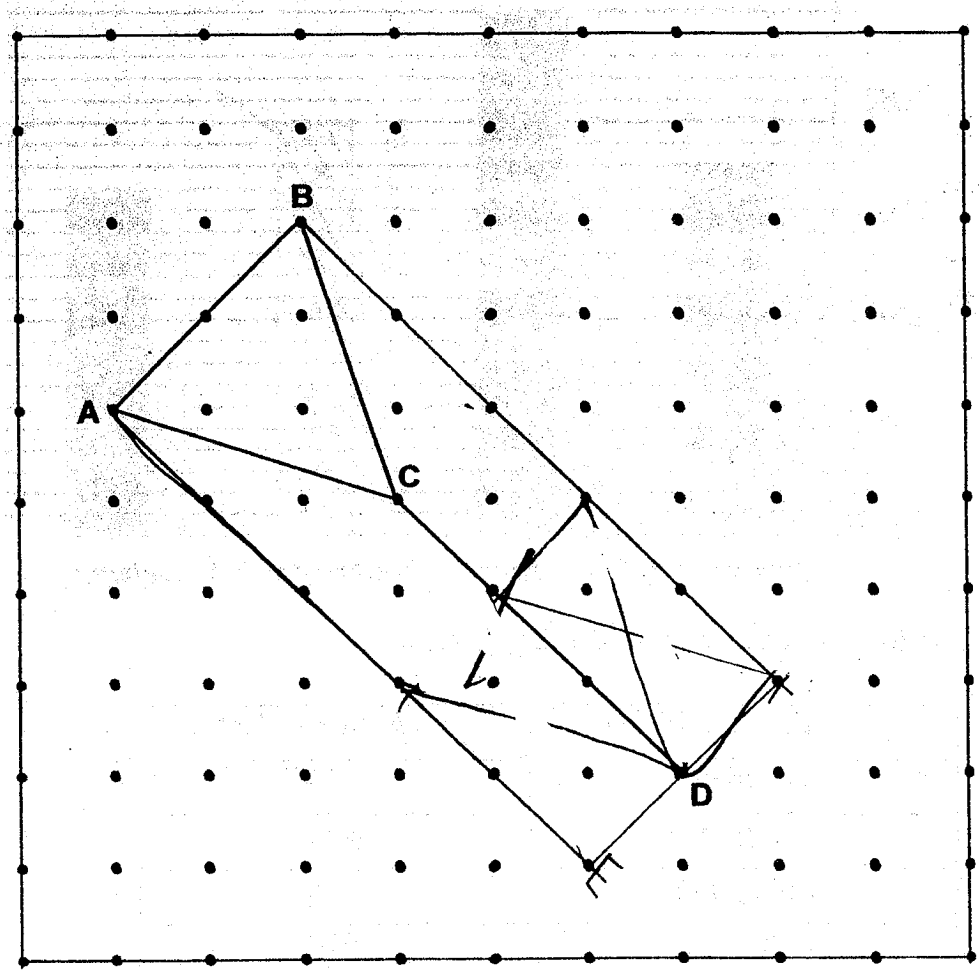
(b) Among the 4 categories, from which category was the most money collected? How much was collected from this category?

Ans: a) Category: _____ [1]

b) Amount: _____ [1]

14. The diagram in the grid is part of a solid figure. E and F are two dots in the grid. Complete the figure according to the instructions below.

Do not write in this column



(a) Draw two lines, AE and BF, such that they are both parallel to CD. [1]

(b) Clearly label and join the points D, E and F to form a triangle DEF that is identical to triangle ABC. [2]

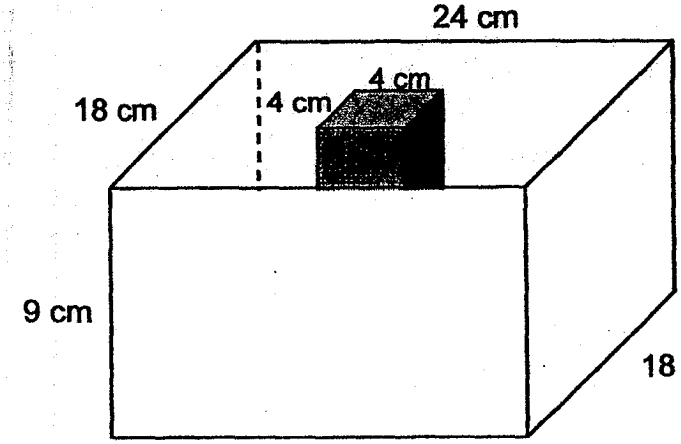
(c) Write down the name of the completed solid figure.

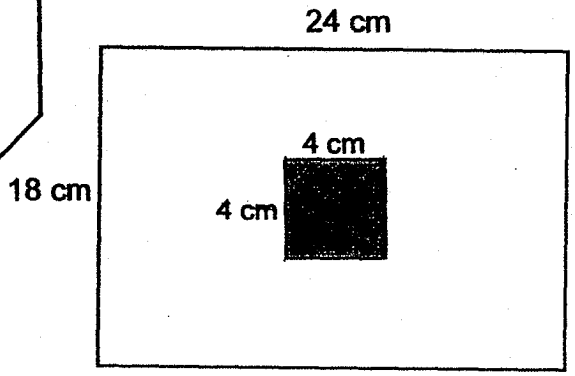
Ans: (c) _____ [1]

15. Meredith tried to fit some 3-cm cubes into the container below. The container has a dimension of 24 cm by 18 cm by 9 cm. A cuboid solid measuring 4 cm by 4 cm by 9 cm has been fixed to the exact centre of the container.

What is the maximum number of cubes Meredith was able to fit into the container?

Do not write in this column





Top View of Container

Ans: _____ [4]

4

16. There were 1600 blue and yellow marbles in a container. When the number of blue marbles decreased by 90 and the number of yellow marbles increased by 15%, the total number of marbles in the container increased by 4.5%.
How many blue marbles were there in the container at first?

Do not write in this column

Ans: _____ [5]

5

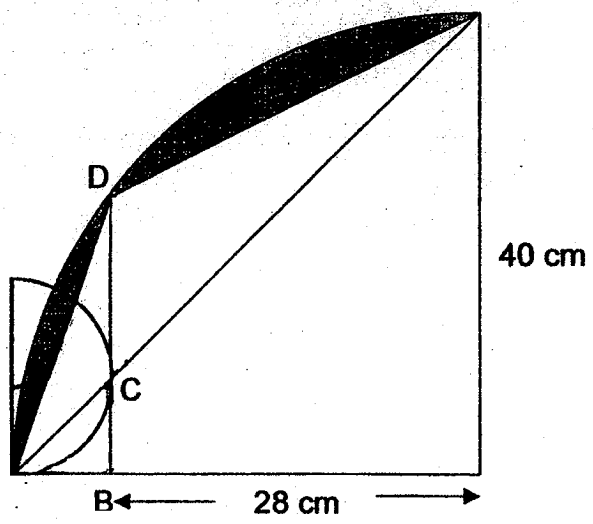
17. Mrs Othman has some butter cookies and chocolate cookies. If she bakes another 20 butter cookies, 40% of her cookies are butter cookies. However, if she bakes another 33 chocolate cookies, 75% of her cookies are chocolate cookies.
How many cookies does she have?

Do not write in this column

Ans: _____ [5]

5

18. The figure is made up of a quadrant and a semi-circle. C is the mid-point of the arc of the semi-circle. The ratio of the length of BC to the length of CD is 2 : 3. Using the π value of the calculator, find the area of the shaded parts of the figure. (Leave your answer correct to two decimal places)



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Ans: _____ [5]

End of Paper
— Please check your work thoroughly —

YEAR	:	2017
LEVEL	:	PRIMARY 6
SCHOOL	:	SINGAPORE CHINESE GIRLS'
SUBJECT	:	MATHEMATICS
TERM	:	PRELIMINARY EXAMINATION

Paper 1

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

Q16 2.07

Q17 507

Q18 396

Q19 Figures B and C

Q20 3842

Q21 9:25 pm

Q22 50%

Q23 1400 m

Q24 390 km

Q25 1, 5, 7, 11

Q26 60 kg

Q27 $\left(\frac{14d + 47}{7}\right)$

Q28 245

Q29 144 cm^2

Q30 44 tricycles

Paper 2

Q1 11 workers → 176 pieces of garments
176 + 96 = 272
176 ÷ 11 = 16
272 ÷ 16 = 17
17 – 11 ⇒ 6 workers

Q2 $\frac{180° + 83°}{2} \Rightarrow 48.5°$

Q3 A: B : C
6 : 15 : 10

Q4 73 – 40 = 33
1.19 x 40 = 47.6
95.78 – 47.6 = 48.18
48.18 ÷ 33 ⇒ $1.46

Q5 5u → 65
1u → 65 ÷ 5 = 13
13 x 4 ⇒ 52 stalks

Q6 8 – 3 = 5
5u → 115
1u → 115 ÷ 5 = 23
20u → 23 x 20 = 460
460 x 5 ⇒ $2300

Q7 98 ÷ 14 = 7
7 x 7 x 7 ⇒ 343 cm^3

Q8 Distance → $\frac{4}{5} = 128$

$\frac{1}{5} = 128 \div 4 \rightarrow 32$

$32 \div \frac{2}{5} \Rightarrow$ 80 km/h

SCGS PRELIM

Q9 $1.2 \times 5 = 6$
$3.8 \div 6 = 9.8$
$10c - 8v = 2v$
$2v \rightarrow 9.8$
$1u \rightarrow 9.8 \div 2 = 4.9$
$18v \rightarrow 4.9 \times 18 = 88.2$
$88.2 + 6 \Rightarrow \underline{94.2 \text{ kg}}$

Q10 $323 - 11 = 312$
$312 \rightarrow 3u + 3p$
$112 \rightarrow 1u + 2p$
$336 \rightarrow 3u + 6p$
$336 - 312 = 24$
$3p \rightarrow 24$
$1p \rightarrow 24 \div 3 \Rightarrow \underline{8 \text{ cm}^2}$

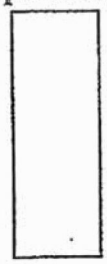
Q11 $8u \rightarrow 1176 - 420 = 756$
$1u \rightarrow 756 \div 8 = 94.5$
$X \rightarrow 94.5 + 1176 = 1270.5$
$Y \rightarrow 94.5 \times 3 = 283.5$
$1270.5 - 283.5 \Rightarrow \underline{987 \text{ litres}}$

Q12 Sugar $\rightarrow$ 1.5 kg
Rice $\rightarrow 1.7 + 1.5 = 3.2$ kg
$22 \times 1.5 = 33$ kg
No. of packets (S + R) $\rightarrow$ 225.7 kg
Mass of equal packets of S + R $\rightarrow 225.7 - 33 = 192.7$ kg
$1S + 1R \rightarrow 1.5 + 3.2 = 4.7$
$192.7 \div 4.7 = 41$
Sugar $\rightarrow 41 + 22 \Rightarrow \underline{63 \text{ packets}}$

Q13 (a) $68 + 96 + 64 = 228$

$228 \div 3 \Rightarrow \underline{76}$

Draw bar graph to show 76 no. of tickets



Category 3

(b) $68 \times 88 = 5984$ (Cat 1)

$68 \times 96 = 6528$ (Cat 2)

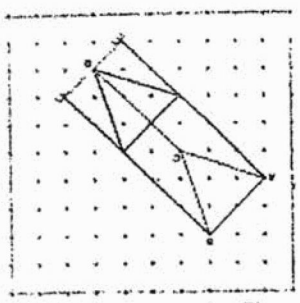
$48 \times 76 = 3648$ (Cat 3)

$64 \times 38 = 2432$ (Cat 4)

Category : 2

Amount : $6528

Q14 (a & b)



(c) Prism

Q15 $7 - 6 = 1$

$4 - 3 = 1$

$1 + 1 + 1 = 3$

$2 \times 3 = 6$

$6 \times 2 = 12$

1 layer $\rightarrow 16 + 16 + 12 = 44$

3 layers $\rightarrow 44 \times 3 \Rightarrow \underline{132 \text{ cubes}}$

SCGS PRELIM

Q16 ↓ 90B

T → 1600 – 90 = 1510

↑ 15% Y

T → 1672

15% → 1672 – 1510 = 162

1% → 162 ÷ 10.8

100% → 1080

1600 – 1080 ⇒ <u>520 marbles</u>

Q17 BC → 1p + 20 = 2u

CC → 3u + 33 = 3p

2u – 20 = 1p → x3

6u – 60 = 3p

3u + 33 = 6u – 60

6u – 3u = 3u

3u → 60 + 33 = 93

1u → 93 ÷ 3 = 31

Total → 31 x 5 – 20 ⇒ <u>135 cookies</u>

Q18 2u → 12

3u → $\frac{12}{2}$ x B = 18

$\frac{1}{4}$ x π x 40 x 140 = 400 π

400 π - 800 = half left

B → $\frac{1}{2}$ x 18 x 28 = 252

C → $\frac{1}{2}$ x 18 x 12 = 108

400 π – 800 - 108 – 152 ⇒ <u>96.64 cm^2</u>

End