SINGAPORE CHINESE GIRLS' SCHOOL
FIRST SEMESTRAL ASSESSMENT 2022

PRIMARY 5

MATHEMATICS

PAPER 1
(BOOKLET A)

Total Time for Booklets A and B: 1 h

Name : _____( ) **31 October 2022**

Class : Primary 5 SY / C / G / SE / P

Mathematics Teachers

Mrs [redacted] Leen Lau / Mrs Eng Ke Ying / Ms Goh Ai Ling / Mrs Kristene Ong / Ms Wong See Wan

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INSTRUCTIONS TO CANDIDATES

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Shade your answers in the Optical Answer Sheet (OAS) provided.
5. You are not allowed to use a calculator.

This booklet consists of 5 printed pages and 2 blank pages

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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) and shade your answer on the Optical Answer Sheet.

(20 marks)

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1. Round off 42 808 to the nearest hundred.

   (1) 42 000
   (2) 42 800
   (3) 42 900
   (4) 43 000

2. What is the value of 20 thousands, 12 hundreds and 5 tens?

   (1) 320 050
   (2) 210 205
   (3) 32 050
   (4) 21 250

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

   (1) 300.34%
   (2) 300.75%
   (3) 334%
   (4) 375%

4. There are 40 students in a class. 16 students wear glasses. What is the ratio of students who do not wear glasses to the total number of students?

   (1) 2 : 3
   (2) 2 : 5
   (3) 3 : 5
   (4) 3: 10

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

2.5	$\frac{3}{5}$	$\frac{3}{2}$

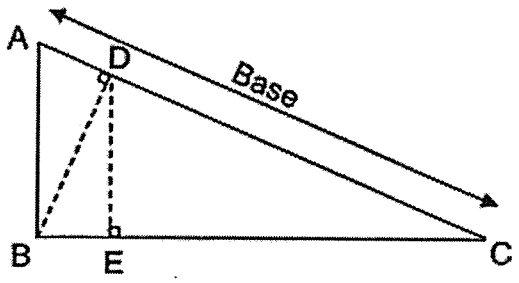
Largest				Smallest
(1) 2.5	,	$\frac{3}{5}$	,	$\frac{3}{2}$
(2) 2.5	,	$\frac{3}{2}$	,	$\frac{3}{5}$
(3) $\frac{3}{2}$	,	2.5	,	$\frac{3}{5}$
(4) $\frac{3}{5}$	,	$\frac{3}{2}$	,	2.5

6. 200 bags cost $7040. What is the cost of 1 bag?

(1) $3.52
(2) $7.40
(3) $35.20
(4) $70.40

7. Identify the height of Triangle ABC given that the base is AC.

(1) AB
(2) BC
(3) BD
(4) DE



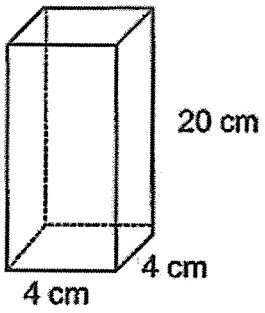
8. What is the volume of the cuboid?

(1) 80 cm^3

(2) 160 cm^3

(3) 320 cm^3

(4) 400 cm^3



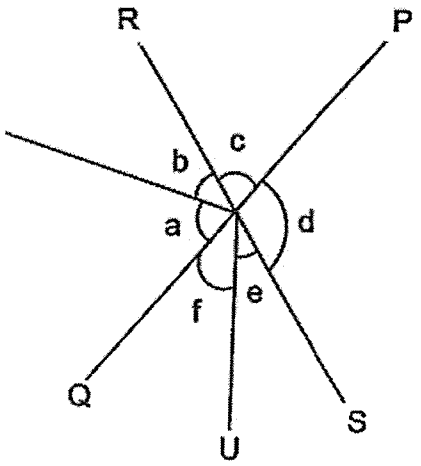
9. PQ and RS are straight lines. Which of the following is **false**?

(1) $\angle c = \angle e + \angle f$

(2) $\angle a + \angle b = \angle d + \angle e$

(3) $\angle a + \angle b + \angle c = 180°$

(4) $\angle c + \angle d = 180°$



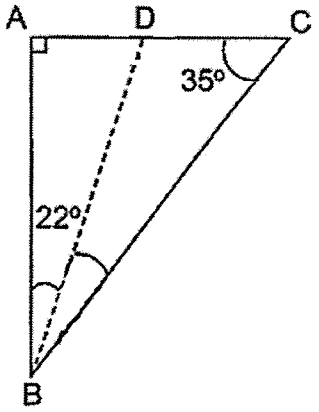
10. Figure ABC is a triangle. $\angle ABD$ is 22° and $\angle ACB$ is 35°. Find $\angle DBC$.

(1) 33°

(2) 55°

(3) 57°

(4) 68°



11. Peter made 12 bracelets in the morning and 24 bracelets in the afternoon. He sold all the bracelets at 2 for $12. Which number sentence represents the total amount of money collected by Peter?

(1) 12 + 24 ÷ 12 x 2
(2) (12 + 24) ÷ 2 x 12
(3) 12 + 24 ÷ 2 x 12
(4) (12 + 24) x 2 ÷ 12

12. A pattern is formed using the digits 1, 2 and 0. The first 17 digits are shown below. What is the sum of the first 35 digits?

1	2	0	0	1	1	1	2	0	0	1	1	1	2	0	0	1
1st		2nd		3rd												

(1) 25
(2) 29
(3) 35
(4) 39

13. A pencil is 5.4 cm long. A pen is 3 times as long as the pencil. What is the total length of the pen and pencil?

(1) 15.12 cm
(2) 16.2 cm
(3) 20.16 cm
(4) 21.6 cm

14. There are 42 cars and motorcycles in a carpark. Which of the following is <u>not</u> a possible ratio of the number of cars to the number of motorcycles in the carpark?

(1) 6 : 7
(2) 5: 2
(3) 3 : 4
(4) 3: 11

15. A salesman earns $0.50 for every 7 pens sold. He earns an extra $1 for every 20 pens sold. How much will he earn if he sold 142 pens?

(1) $7.00
(2) $8.00
(3) $10.00
(4) $17.00

End of Booklet A

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SINGAPORE CHINESE GIRLS' SCHOOL
FIRST SEMESTRAL ASSESSMENT 2022

PRIMARY 5

MATHEMATICS

PAPER 1
(BOOKLET B)

Total Time for Booklets A and B: 1 h

Name : _____( ) **31 October 2022**

Class : Primary 5 SY / C / G / SE / P

Mathematics Teachers

Mrs El Leen Lau / Mrs Eng Ke Ying / Ms Goh Ai Ling / Mrs Kristene Ong / Ms Wong See Wan

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INSTRUCTIONS TO CANDIDATES

1. Do not open this booklet 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.

	Max Mark	Marks attained
Booklet B	**25**	

This booklet consists of 7 printed pages and 2 blank pages.

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Booklet B

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Questions 16 to 20 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. **(5 marks)**

16. Express 1.05 as a mixed number in its simplest form.

Ans: _____

17. Use all the digits to form a number closest to 90 000.

7	8	9	2	1

Ans: _____

18. 5 boys shared 6 pizzas. What fraction of the pizzas did each boy get?

Ans: _____

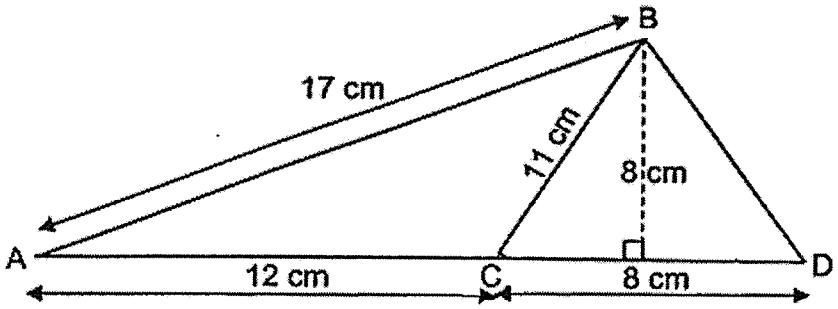
3

Do not write in this column

19. Mr Tan was given 124 sweets. He packed all of them into bags of 8 with some left over. How many sweets were not packed into the bags?

Ans: _____

20. The diagram below is not drawn to scale. Find the area of triangle ABC.



Ans: _____ cm^2

2

Questions 21 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. **(20 marks)**

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21a. Convert to grams.

3.085 kg = _____ g

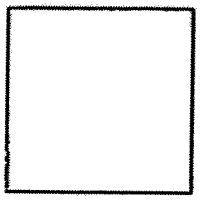
Ans: _____ g

21b. Convert to kilometres.

5020 m = _____ km

Ans: _____ km

22. Find the perimeter of square below. Give your answer as a mixed number in its simplest form.



$4\frac{1}{8}$ cm

Ans: _____ cm

4

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23. A tin of milk powder weighs 2.5 kg. Mrs Tan bought 10 tins of milk powder and Mrs Farhan bought 20 tins of milk powder. What is the total mass of the tins of milk bought by Mrs Tan and Mrs Fahan?

Ans: _____ kg

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24. A basket contains red, blue and yellow balls. The ratio of the number of red balls to the total number of balls is 2 : 5. The ratio of the number of blue balls to the number of yellow balls is 1 : 5. What is the ratio of the number of red balls to the number of blue balls?

Ans: _____

4

25. The three sides of a triangle are in the ratio 2 : 3 : 4. The perimeter of the triangle is 135 cm. What is the length of the shortest side of the triangle?

Do not write in this column

Ans: _____ cm

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26. 60 pupils took part in a Math Olympiad Competition. 24 of them won the gold award. What percentage of the students won the gold award?

Ans: _____ %

/4

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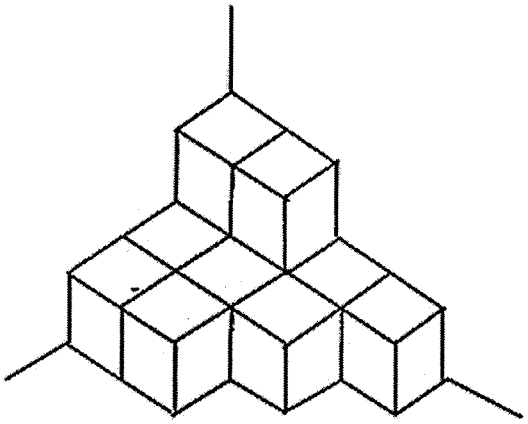
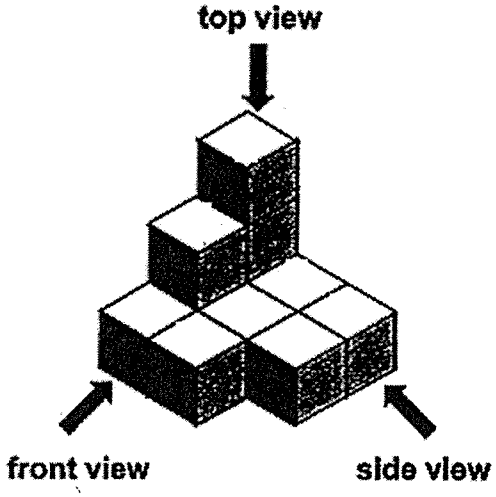
27. What is the least number of unit cubes that must be added to the figure below to form a cube?

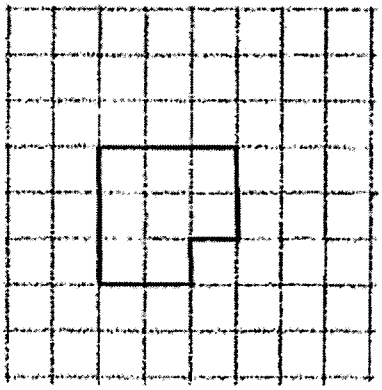


Ans: _____

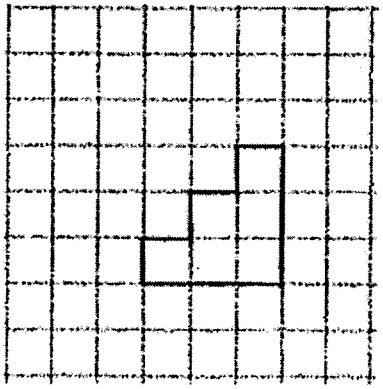
28. Oliver stacked 11 unit cubes to form the solid figure below.



Draw the top view and the side view of the solid on the grids below.



Top View



Side View

4

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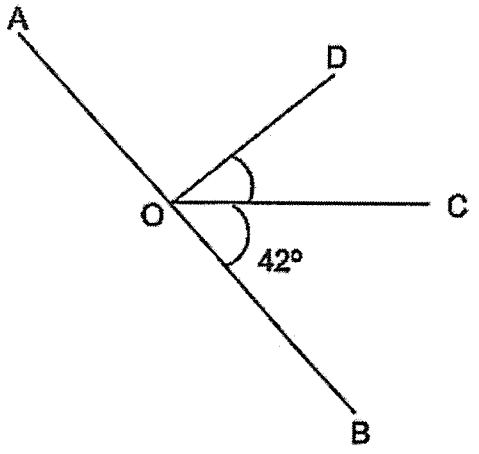
29. In the figure, not drawn to scale, AOB is a straight line.
∠AOD is 2 times of ∠DOC. Find ∠DOC.



Ans: _____ °

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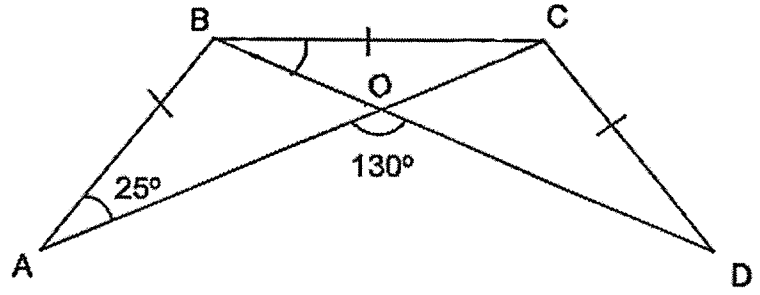
30. In the figure below, ABC and BCD are two identical triangles.
Given that AB = BC = CD, find ∠OBC.



Ans: _____ °

4

End of Booklet B

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SINGAPORE CHINESE GIRLS' SCHOOL
FIRST SEMESTRAL ASSESSMENT 2022

PRIMARY 5

MATHEMATICS

PAPER 2

Total Time for Booklets A and B: 1 h 30 min

Name : _____( ) **31 October 2022**

Class : Primary 5 SY / C / G / SE / P

Mathematics Teachers

Mrs Ei Leen Lau / Mrs Eng Ke Ying / Ms Goh Ai Ling / Mrs Kristene Ong Ms Wong See Wan

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INSTRUCTIONS TO CANDIDATES

5. Do not open this booklet until you are told to do so.
6. Follow all instructions carefully.
7. Answer all questions.
8. You are allowed to use a calculator.

		Max Mark	Marks attained
Paper 1	Booklet A	20	
	Booklet B	25	
Paper 2		55	
Total Marks		100	

Parent's Signature

This booklet consists of 13 printed pages and 2 blank pages.

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Questions 1 to 5 carry 2 marks each. Show your working clearly 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. What is the missing number in the equation below?

$\square \div 18 \times 5 \div 3 - 2 = 32$

Ans: _____

2. Kelly has a ribbon of length $\frac{5}{6}$ m. She used $\frac{1}{4}$ m to make a bow and $\frac{1}{2}$ of it to wrap a present. How much ribbon was left?

Ans: _____ m

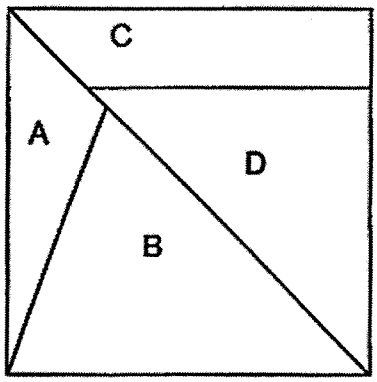
4

3. Mrs Jacobs is now 38 years old. In 4 years' time, she will be 6 times as old as her son. How old is her son now?

Do not write in this column

Ans: _____

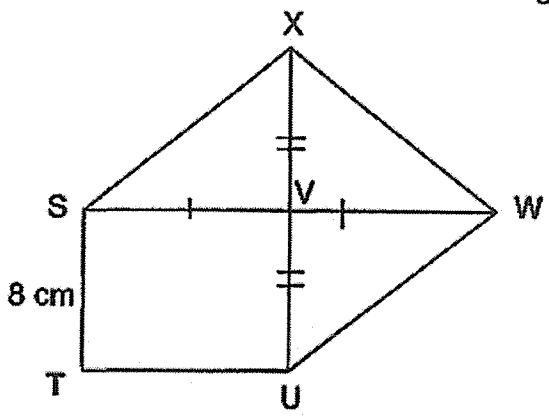
4. The diagram below shows a square. The ratio of area A to area B is 2 : 5.
The ratio of area C to area B is 3 : 5.
Find the ratio of area A to area D. (Give your answer in the simplest form.)



Ans: _____

4

5. The perimeter of rectangle STUV is 36 cm. XVU and SVW are straight lines. Line ST is 8 cm. Find the area of triangle SWX.



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Ans: _____ cm^2

2

For questions **6** to **17**, 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. **(45 marks)**

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6. Mr Ishak paid a total of $447.60 for 3 tables and 9 chairs. Each chair cost $15.20 less than a table. Find the cost of a chair.

Ans: $ _____ [3]

7. Ronny had some money. He spent $\frac{1}{5}$ of it on a watch and $\frac{3}{8}$ of the remainder on some books. He had $105 left.

How much money did he have at first?

Ans: _____ [3]

6

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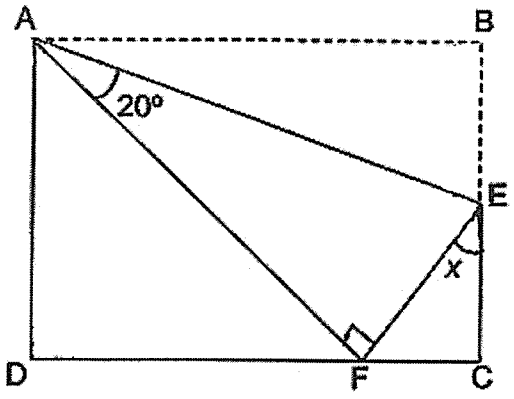
8. The figure below shows a rectangle ABCD. It is folded along line AE as shown below. Given that ∠EAF is 20°, find ∠x.



Ans: _____ [3]

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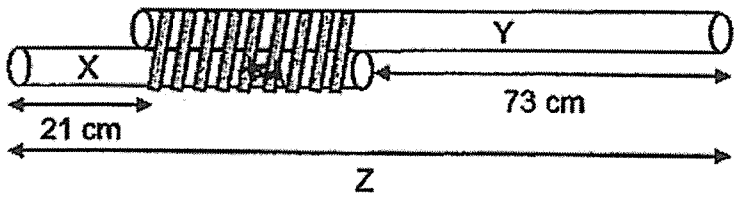
9. Two rods, X and Y were tied to form a longer rod, Z as shown below. The ratio of the length of Rod X to the length of Rod Y is 3 : 5.
Find the length of Rod Z.



Ans: _____ [3]

6

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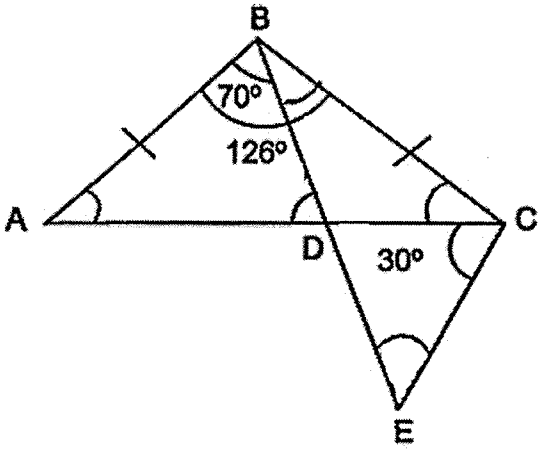
10. In the figure, not drawn to scale, ABC is an isosceles triangle.
BDE is a straight line. ∠ABC is 126°, ∠ABD is 70° and ∠DCE is 30°

(a) Find ∠BCD.



Ans: (a) _____ [1]

(b) Find ∠CED.

Ans: (b) _____ [2]

3

Do not write in this column

11. Anthony has 70 more toy cars than Bala. $\frac{1}{4}$ of Anthony's toy cars is 25 more than $\frac{1}{5}$ of Bala's toy cars. How many toy cars do they have altogether?

Ans: _____ [4]

4

12. The usual price of a dress is $118.75. Mrs Tan was given a 20% discount.

(a) How much is the discount?

Do not write in this column

Ans: (a) _____ [1]

(b) Mrs Tan paid an additional 7% of GST on the discounted price of the dress. How much did she pay for the dress including the GST?

(b) _____ [3]

4

13. The graph shows the number of patients visiting Tay's clinic on a certain week. The clinic was closed on Monday.

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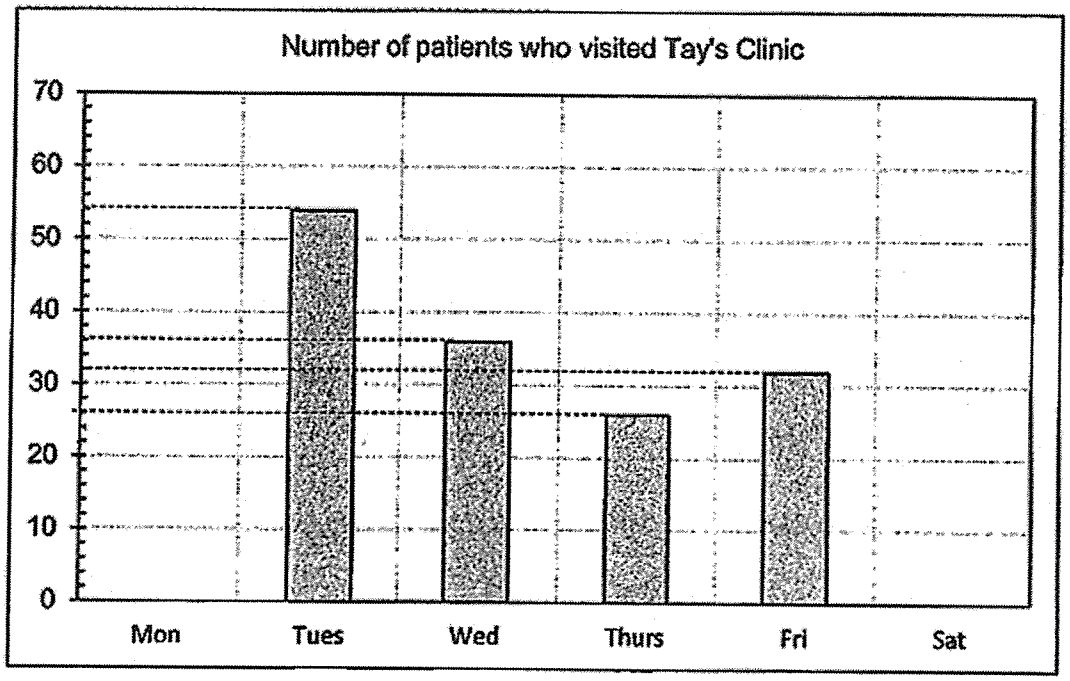


(a) What was the total number of patients from Tuesday to Friday?

Ans: _____ [2]

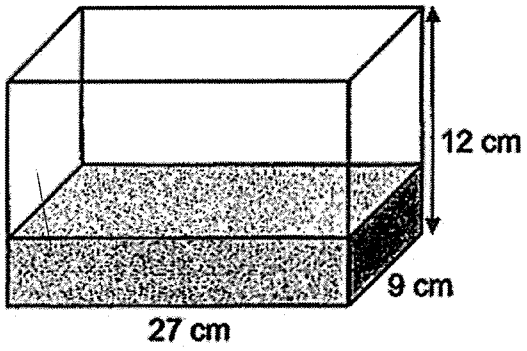
(b) Given that the average number of patients from Monday to Saturday is 34, how many patients were there on Saturday?

Ans: _____ [2]

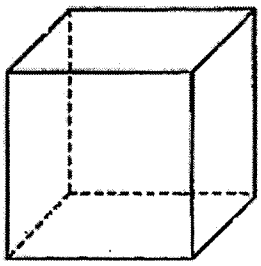
- 4

Do not write in this column

14. Tank A is 27 cm by 9 cm by 12 cm and it is $\frac{1}{4}$ - filled with water. All the water from Tank A is poured into container B and it filled container B to the brim. Given that all sides of container B are equal, what is the base area of container B?



Tank A



Container B

Ans: _____ [4]

4

15. In the figure, not drawn to scale, AB = AE and BD and BEC are straight lines.

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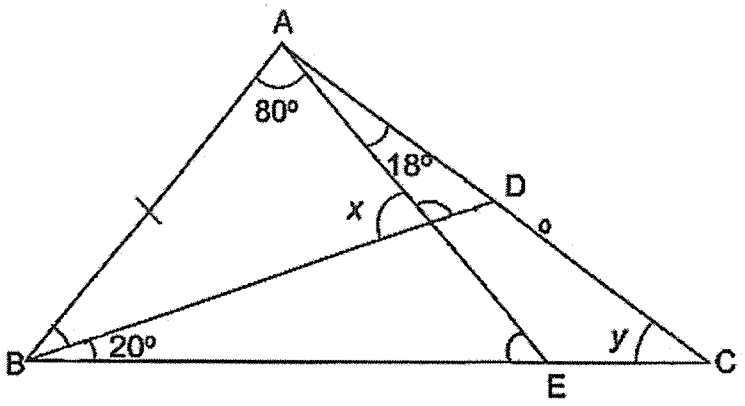

(a) Find $\angle x$.

Ans: _____ [2]

(b) Find $\angle y$.

Ans: _____ [2]

4

16. Janice and Kelly bought some cups from a stall. The cups are sold in sets of 2 and 3 cups as shown below.

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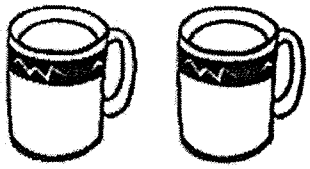
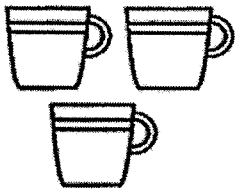
Large cups	Small cups
	
2 for $12	3 for $15

(a) Janice bought an equal number of large and small cups. She spent $24 more on large cups than small cups. How many cups did she buy altogether?

Ans: (a)_____ [3]

(b) Kelly bought 6 large cups and had $50 left. She bought as many small cups as she could with the remaining money. What fraction of the cups she bought were small cups?

Ans: (b)_____ [2]

5

Do not write in this column

17. Tory spent $\frac{1}{4}$ of her money on 5 books and 15 sheets of stickers. The cost of each book is 9 times the cost of each sheet of sticker. She bought more books with the remaining amount of money.

(a) How many books did she buy with the remaining amount of money?

Ans (a): _____ [2]

(b) Given that Tory spent $231 more on all the books than all the stickers. What is the cost of 1 sheet of sticker?

Ans (b): _____ [3]

5

End of Paper 2

~ Please check your work thoroughly. ~

Do not write in this column

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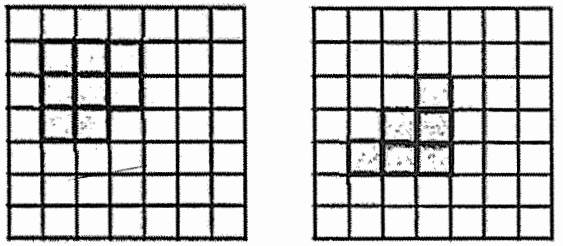
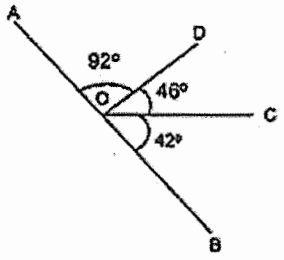
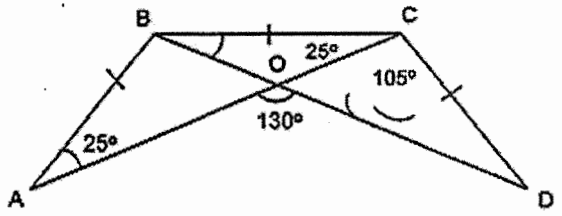
SINGAPORE CHINESE GIRLS' SCHOOL
PRIMARY 5 MATHEMATICS
2022 SEMESTRAL ASSESSMENT 2
Answer Key

Paper 1
Booklet A

1	2	4	3	7	3	10	1	13	4
2	4	5	2	8	3	11	2	14	1
3	4	6	3	9	2	12	2	15	4

Booklet B

16	$1\frac{1}{20}$
17	89 721
18	$\frac{6}{6}$ or $1\frac{1}{5}$
19	124 ÷ 8 = 15 R 4
20	48
21a	3085
21b	5.02 or 5.020
22	$4\frac{1}{8} \times 4 = 16\frac{1}{2}$ OR $4\frac{1}{8}+4\frac{1}{8}+4\frac{1}{8}+4\frac{1}{8}=16\frac{1}{2}$
23	2.5 x 30 = 2.5 x 3 x 10 = 7.5 x 10 = 75
24	R : Total: B+Y B: Y : B + Y 2 : 5 : 3 1 : 5 : 6 4 : 10 : 6 R : B 4 : 1 OR R : Total: B+Y B: Y : B + Y 2 : 5 : 3 0.5 : 2.5 : 3 R : B 2 : 0.5 4 : 1
25	Perimeter, 9u = 135 cm 1u = 135 ÷ 9 = 15 cm Shortest side, 2u = 15 cm x 2 = 30 cm

26	Percentage ------ $\frac{24}{60}$ x 100% = 40%
27	Total no of needed = 4 x 4 x 4 = 64 Least no of cubes needed = 64 – 11 = 53 OR Least no of cubes needed = 16 + 16 + 14 + 7 = 53
28	 Top View Side View
29	∠DOC = $\frac{180° - 42°}{3}$ = 46° 
30	∠OBC = 180° – 130° – 25° = 25° OR Indicate that ∠OBC = ∠BAO = ∠CDB 

Paper 2 : 60 marks

Mark Scheme

Q1)

_____ + 18 x 5 + 3 – 2 = 32

= _____ + 90 + 3 – 2 = 32

= _____ + 30 – 2 = 32

= _____ + 28 = 32

Missing number = 32 – 28 = <u>4</u>

Q2)

<u>Method 1</u>

Left after making bow = $\frac{5}{6} - \frac{1}{4} = \frac{7}{12}$

Wrap present = $\frac{1}{2} \times \frac{5}{6} = \frac{5}{12}$

Ribbon left = $\frac{7}{12} - \frac{5}{12} = \frac{1}{6}$ m

<u>Method 2</u>

Wrap present = $\frac{1}{2} \times \frac{5}{6} = \frac{5}{12}$

Total used = $\frac{1}{4} + \frac{5}{12} = \frac{2}{3}$

Ribbon left = $\frac{5}{6} - \frac{2}{3} = \frac{1}{6}$ m

Q3)

Mrs Jacobs (4 yrs time) —— 38 + 4 = 42

Son then ———— 42 ÷ 6 = 7

Son now ———— 7 – 4 = <u>3</u>

Q4)

A : B C : B

2 : 5 3 : 5

Area D = 7u – 3u = 4u

A : D

2 : 4

<u>1 : 2</u>

Q5)

SV = $\frac{36 - (8 \times 2)}{2}$ = 10 cm

Area of Triangle SWX = $\frac{1}{2}$ x 20 x 8 = <u>80 cm²</u>

Q6)

12 u = \$447.60 – (\$15.20 x 3) = \$402

1 chair = \$402 ÷ 12 = <u>\$33.50</u>

OR

12u = \$447.60 + (\$15.20 x 9) = \$584.40

1u = \$584.40 ÷ 12 = \$48.70

Chair = \$48.70 - \$15.20 = <u>\$33.50</u>

OR

3T + 9C = \$447.60

1T + 3C = \$447.60 ÷ 3 = \$149.20

4C = \$149.20 - \$15.20 = \$134

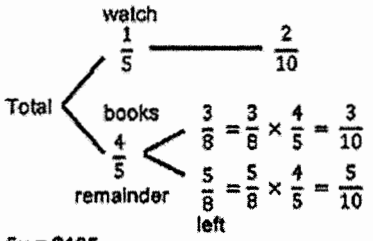
1C = \$134÷4 = <u>\$33.50</u>

1u = \$584.40 ÷ 12 = \$48.70

Chair = \$48.70 - \$15.20 = <u>\$33.50</u>

Q7)

Method 1:

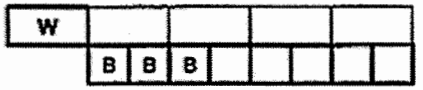


5u = \$105

1u = \$105 ÷ 5 = \$21

At first, 10u = 21 x 10 = <u>\$210.00</u>

OR



Method 2:

$\frac{5}{8}$ of the remainder = \$105

$\frac{1}{8}$ of the remainder = \$105 ÷ 5 = \$21

Remainder = \$21 x 8 = \$168

$\frac{4}{5}$ of the total = \$168

$\frac{1}{5}$ of the total = \$168 ÷ 4 = 42

Total = \$42 x 5 = <u>\$210</u>

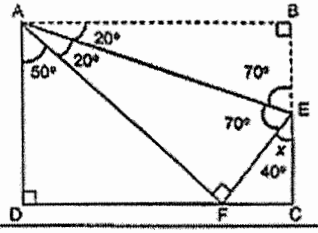
Q8)

$\angle EAF = \angle BAE = 20°$

$\angle BEA = 180° - 90° - 20° = 70°$

$\angle BEA = \angle AEF = 70°$

$\angle x = 180° - 70° - 70° = 40°$



Q9)

Difference in length, $2u = 73 - 21 = 52$

$1u = 52 \div 2 = 26$ cm

Rod Y, $5u = 26 \times 5 = 130$

Rod X, $3u = 26 \times 3 = 78$

Rod Z = 130 cm + 21 cm = <u>151 cm</u>

OR

Rod Z = 78 cm + 73 cm = <u>151 cm</u>

OR

Rod Z = 57 cm + 73 cm + 21 cm = <u>151 cm</u>

Q10)

(a) $\angle BCD = \frac{180° - 126°}{2} = \underline{27°}$

(b) $\angle DBC = 126° - 70° = 56°$

$\angle CED = 180° - 56° - 30° - 27° = \underline{87°}$

OR

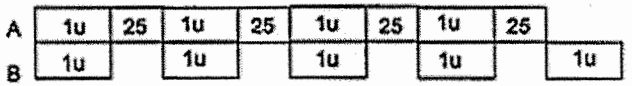
$\angle DBC = 126° - 70° = 56°$

$\angle BDC = 180° - 56° - 27° = 97°$

$\angle CDE = 180° - 97° = 83°$

$\angle CED = 180° - 83° - 30° = \underline{87°}$

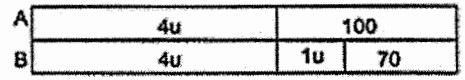
Q11)



A = 4u + 100

B = 5 u

If I add 70 to B, they will have the same number of toy cars



$1u = 100 - 70 = 30$

Total number of cars = 9u + 100 = 30 x 9 + 100 = <u>370</u>

Q12)

(a) Price after discount = $\frac{20}{100}$ x \$ 118.75 = <u>\$23.75</u>

(b) Price after discount = \$118.75 - \$23.75
= \$95.00

GST = $\frac{7}{100}$ x \$ 95 = \$ 6.65

Amount payable = \$95 + \$6.65 = <u>\$101.65</u>

OR

Amount payable = $\frac{107}{100}$ x \$ 95 = \$101.65

Q13a) Total (Tues to Friday) = 54 + 36 + 32 + 26 = <u>148</u>

Q13b) Total for 6 days = 34 x 6 = 204
No of patients on Sat = 204 – 148 = <u>56</u>

Q14)

Amount of water in A = $\frac{1}{4}$ x 27 x 9 x 12 = 729 cm^3

OR

Amount of water in A = 3 x 27 x 9 = 729 cm^3

Volume of Cubical container B = 729 <u>cm^3</u>

Dimension of cubical container B = $\sqrt[3]{729}$ = 9 cm

Base Area = 9 x 9 = <u>81 cm^2</u>

Q16)
(a)
1 set (difference) = 1 large cup - 1 small cup = $6 - $5 = $1
No of sets = $24÷$1 = 24
Total number of cups = 24 x 2 = 48

OR
Equal number of cups – 6 small and 6 larger
1 set (difference) = 6 large cups - 6 small cups
= $36 - $30
= $6
No of sets = $24÷$6 = 4
Total number of cups = 4 x 12 = 48

OR using the following multiples with correct cost

Large Cups	Cost	Small Cups	Cost	Diff
12	$72	12	$60	$12
18	$108	18	$90	$18
24	$144	24	$120	$24

24 x 2 = 48

OR Using Guess and Check

(b)
No of small cups = $50 ÷ $15 = 3 R $5
Total number of cups = 3 x 3 + 6 = 15
Fraction of cups that are small = $\frac{9}{15}$

Q17)
(a) 1 sheet of sticker = 1u
1 book = 9u

$\frac{1}{4}$ of money = 5 x 9u + 15 x 1u = 45u + 15u = 60u
$\frac{3}{4}$ of money spent on books = 60u x 3 = 180u
Since 1 book is 9 u,
No of books (from remaining money) = 180u ÷ 9u = 20 books

OR
$\frac{1}{4}$ of money = 5 x 9u + 15 x 1u = 45u + 15u = 60u
With 60u, one can buy --- 6 books + 6 stickers
Since $\frac{3}{4}$ of money spent on books,

Can buy --- 6 books x 3 = 18 books
6 stickers x 3 = 18 stickers

And 18 stickers = 2 books
No of books (from remaining money) = 18 books + 2 books = 20 books

(b)
Total units spent on books = 180u + 45u = 225u
Total units spent on stickers = 15u
Difference = 225u – 15u = 210u
210u = $231
1 sheet of sticker, 1u = $231 ÷ 210 = $1.10