



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

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)

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

Smallest

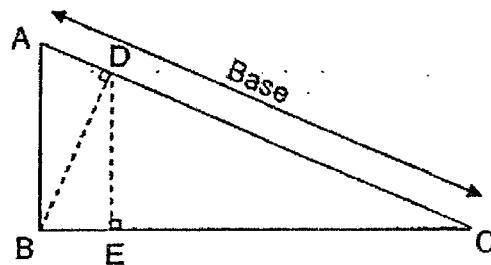
- (1) 2.5 , $\frac{3}{5}$, $\frac{3}{2}$
 (2) 2.5 , $\frac{3}{2}$, $\frac{3}{5}$
 (3) $\frac{3}{2}$, 2.5 , $\frac{3}{5}$
 (4) $\frac{3}{5}$, $\frac{3}{2}$, 2.5

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

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

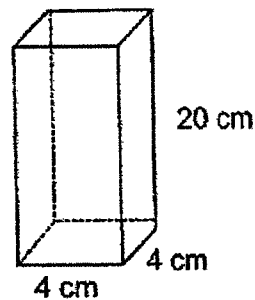
7. Identify the height of Triangle ABC given that the base is AC.

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



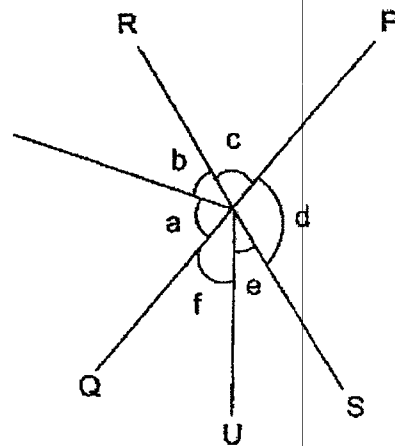
8. What is the volume of the cuboid?

- (1) 80 cm^3
 (2) 160 cm^3
 (3) 320 cm^3
 (4) 400 cm^3



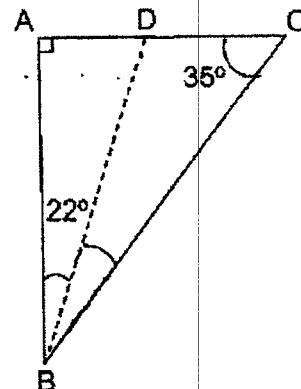
9. PQ and RS are straight lines. Which of the following is **false**?

- (1) $\angle c = \angle e + \angle f$
 (2) $\angle a + \angle b = \angle d + \angle e$
 (3) $\angle a + \angle b + \angle c = 180^\circ$
 (4) $\angle c + \angle d = 180^\circ$



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) $12 + 24 \div 12 \times 2$
- (2) $(12 + 24) \div 2 \times 12$
- (3) $12 + 24 \div 2 \times 12$
- (4) $(12 + 24) \times 2 \div 12$

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
1 st	2 nd	3 rd														

- (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 not 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

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 BDo not write in
this column

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: _____

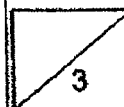
17. Use all the digits to form a number closest to 90 000.

7	8	9	2	1
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Ans _____

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

Ans: _____

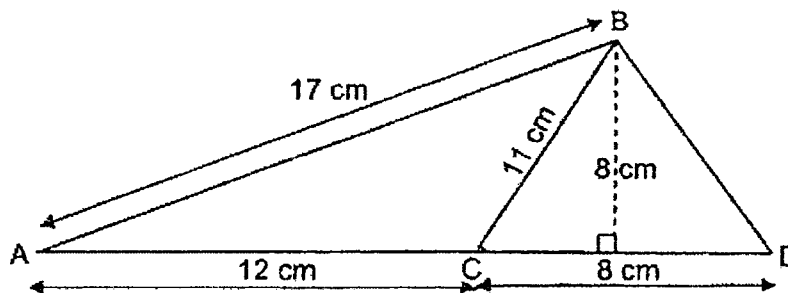


19. Mr Tan was given 124 sweets. He packed all of them into bags of 8 with some left over. How many sweets were not packed into the bags?

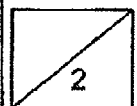
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Ans: _____

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



Ans: _____ cm²



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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this column

21a. Convert to grams.

$$3.085 \text{ kg} = \underline{\hspace{2cm}} \text{ g}$$

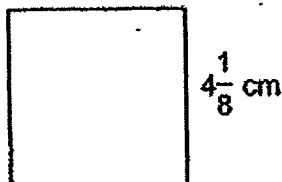
Ans: g

21b. Convert to kilometres.

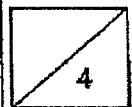
$$5020 \text{ m} = \underline{\hspace{2cm}} \text{ km}$$

Ans: km

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



Ans: cm



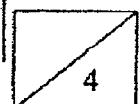
23. A tin of milk powder weighs 2.5 kg. Mrs Tan bought 10 tins of milk powder and Mrs Farhan bought 20 tins of milk powder. What is the total mass of the tins of milk bought by Mrs Tan and Mrs Fahan?

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this column

Ans: _____ kg

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: _____



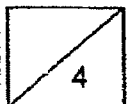
25. The three sides of a triangle are in the ratio 2 : 3 : 4. The perimeter of the triangle is 135 cm. What is the length of the shortest side of the triangle?

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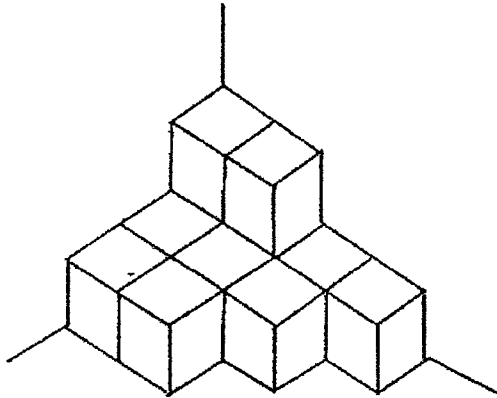
Ans: _____ cm

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: _____ %

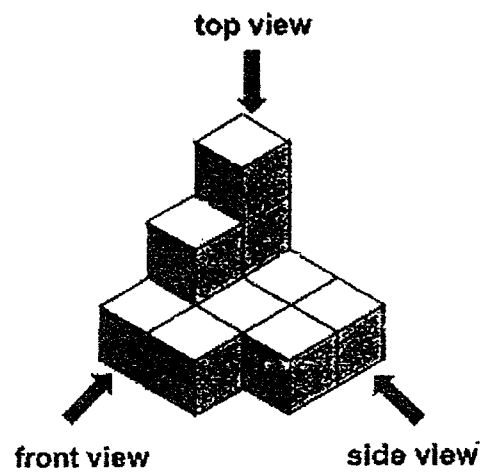


27. What is the least number of unit cubes that must be added to the figure below to form a cube?

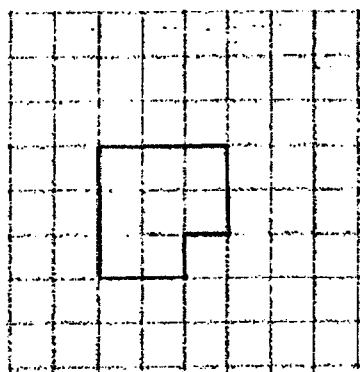


Ans: _____

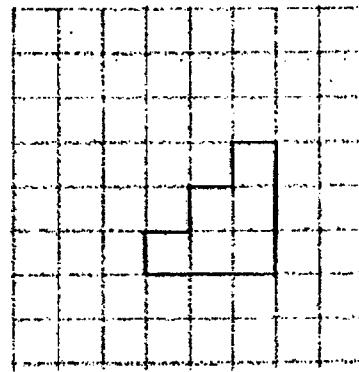
28. Oliver stacked 11 unit cubes to form the solid figure below.



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

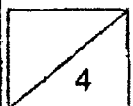


Top View



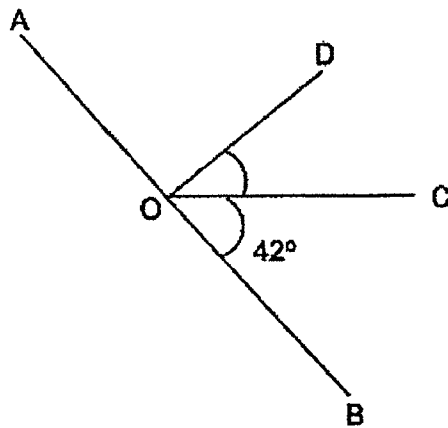
Side View

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29. In the figure, not drawn to scale, AOB is a straight line.

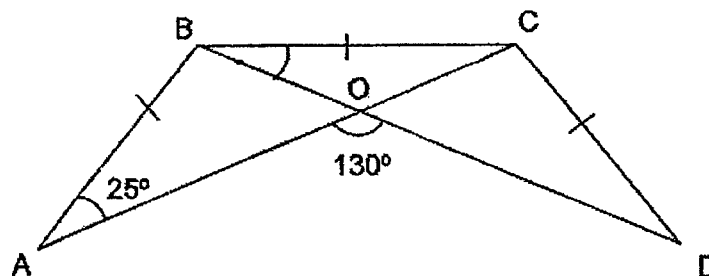
$\angle AOD$ is 2 times of $\angle DOC$. Find $\angle DOC$.



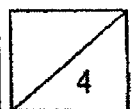
Ans: _____°

30. In the figure below, ABC and BCD are two identical triangles.

Given that $AB = BC = CD$, find $\angle OBC$.



Ans: _____°



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

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)

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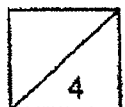
1. What is the missing number in the equation below?

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

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

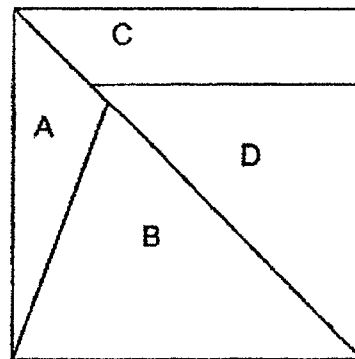


3. Mrs Jacobs is now 38 years old. In 4 years' time, she will be 6 times as old as her son. How old is her son now?

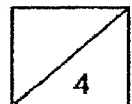
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Ans: _____

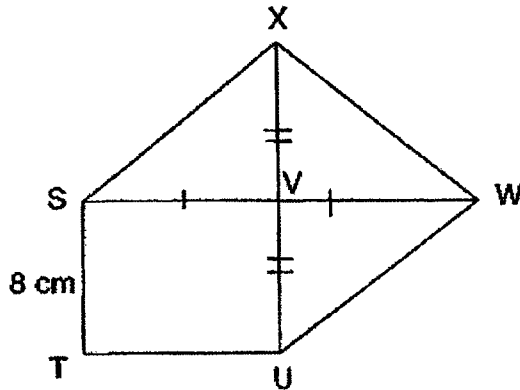
4. The diagram below shows a square. The ratio of area A to area B is 2 : 5.
The ratio of area C to area B is 3 : 5.
Find the ratio of area A to area D. (Give your answer in the simplest form.)



Ans: _____

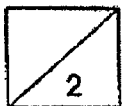


5. The perimeter of rectangle STUV is 36 cm. XVU and SVW are straight lines. Line ST is 8 cm. Find the area of triangle SWX.



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Ans: _____ cm²



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)

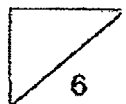
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6. Mr Ishak paid a total of \$447.60 for 3 tables and 9 chairs. Each chair cost \$15.20 less than a table. Find the cost of a chair.

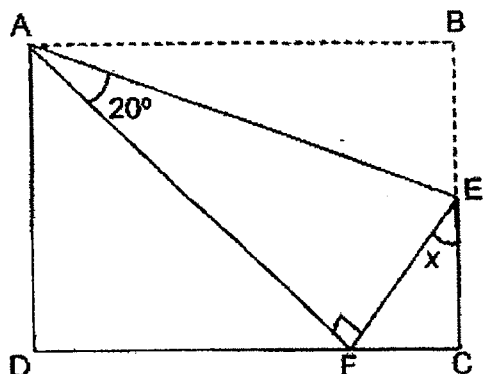
Ans: \$ _____ [3]

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]

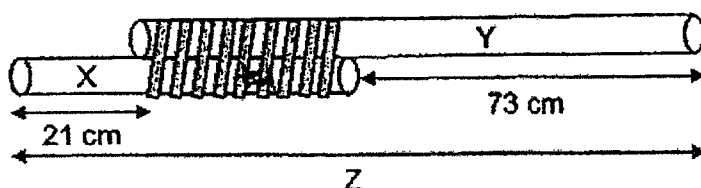


8. The figure below shows a rectangle ABCD. It is folded along line AE as shown below. Given that $\angle EAF$ is 20° , find $\angle x$.

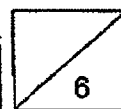


Ans: _____ [3]

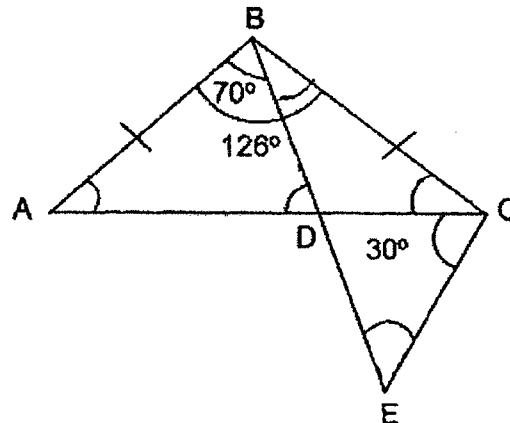
9. Two rods, X and Y were tied to form a longer rod, Z as shown below. The ratio of the length of Rod X to the length of Rod Y is 3 : 5. Find the length of Rod Z.



Ans: _____ [3]



10. In the figure, not drawn to scale, ABC is an isosceles triangle.
 BDE is a straight line. $\angle ABC$ is 126° , $\angle ABD$ is 70° and $\angle DCE$ is 30°
 (a) Find $\angle BCD$.

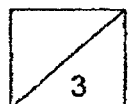


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Ans: (a) _____ [1]

- (b) Find $\angle CED$.

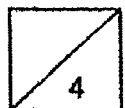
Ans: (b) _____ [2]



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?

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Ans: _____ [4]



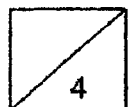
12. The usual price of a dress is \$118.75. Mrs Tan was given a 20% discount.
(a) How much is the discount?

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Ans: (a) _____ [1]

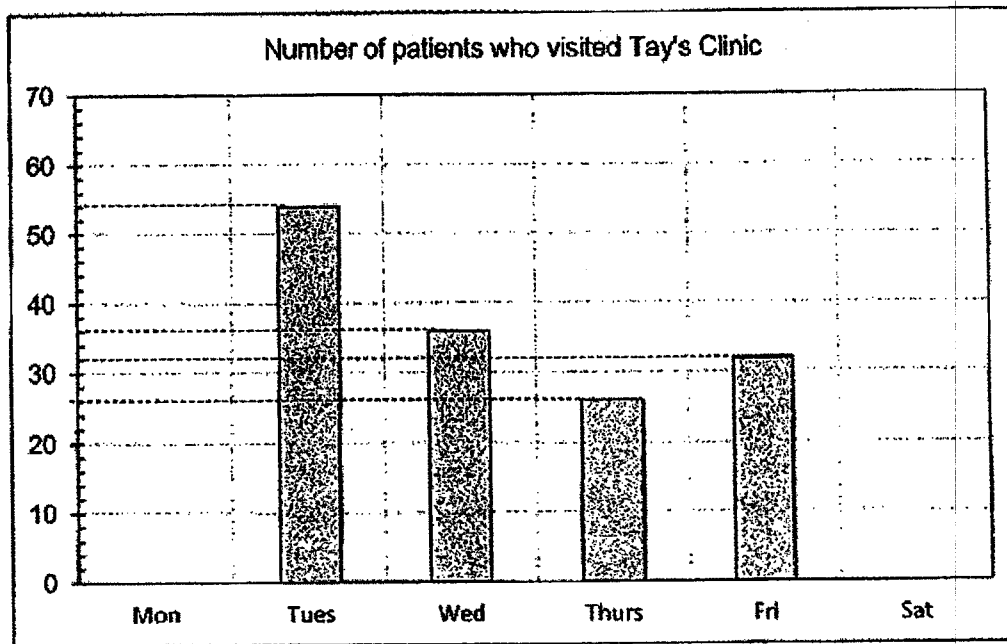
- (b) Mrs Tan paid an additional 7% of GST on the discounted price of the dress. How much did she pay for the dress including the GST?

(b) _____ [3]



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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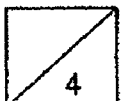


- (a) What was the total number of patients from Tuesday to Friday?

Ans: _____ [2]

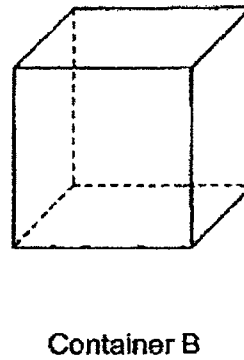
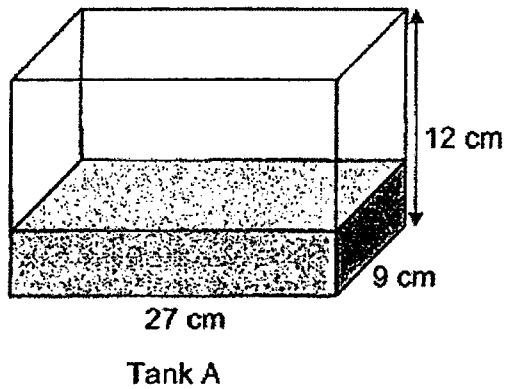
- (b) Given that the average number of patients from Monday to Saturday is 34, how many patients were there on Saturday?

Ans: _____ [2]

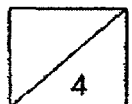


14. Tank A is 27 cm by 9 cm by 12 cm and it is $\frac{1}{4}$ - filled with water. All the water from Tank A is poured into container B and it filled container B to the brim. Given that all sides of container B are equal, what is the base area of container B?

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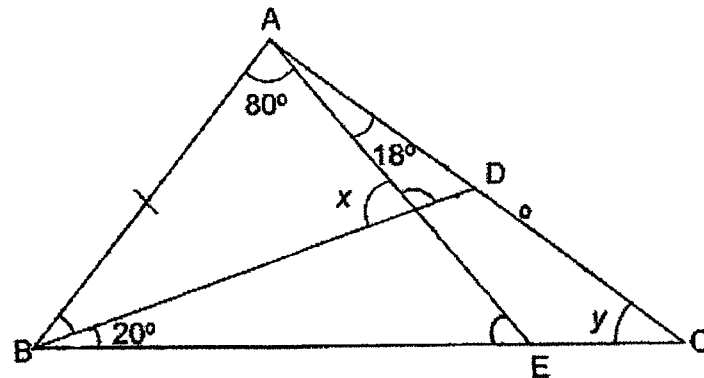


Ans: _____ [4]



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

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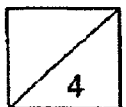


(a) Find $\angle x$.

Ans: _____ [2]

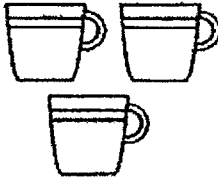
(b) Find $\angle y$.

Ans: _____ [2]



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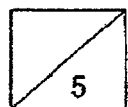
Large cups	Small cups
	
2 for \$12	3 for \$15

- (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]



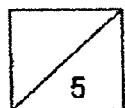
17. Tory spent $\frac{1}{4}$ of her money on 5 books and 15 sheets of stickers. The cost of each book is 9 times the cost of each sheet of sticker. She bought more books with the remaining amount of money.
- (a) How many books did she buy with the remaining amount of money?

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this column

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]



End of Paper 2
~ Please check your work thoroughly. ~

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

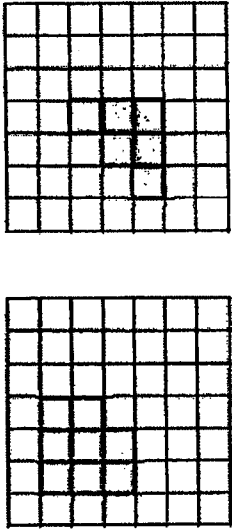
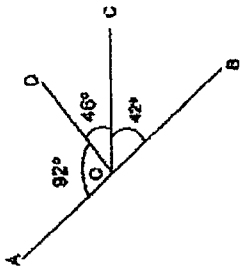
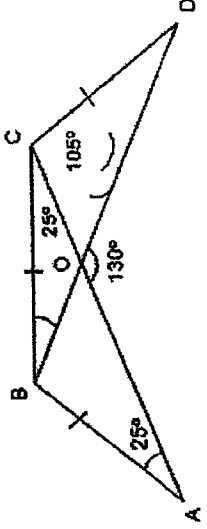
Paper 1

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

26	Percentage $\frac{24}{60} \times 100\% = 40\%$	
27	Total no of needed = $4 \times 4 \times 4 = 64$ 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	$\angle DOC = \frac{180^\circ - 42^\circ}{3} = 48^\circ$ 	
30	$\angle OBC = 180^\circ - 130^\circ - 25^\circ = 25^\circ$ OR Indicate that $\angle OBC = \angle BAO = \angle COB$ 	

Paper 2: 60 marks

Mark Scheme

Q1)

$$+ 18 \times 5 + 3 - 2 = 32$$

$$= + 90 + 3 - 2 = 32$$

$$= + 30 - 2 = 32$$

$$= + 28 = 32$$

$$\text{Missing number} = 32 - 28 = 4$$

Q2)

Method 1

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

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

$$\text{Ribbon left} = \frac{7}{12} - \frac{5}{12} = \frac{2}{12} = \frac{1}{6} \text{ m}$$

Method 2

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

$$\text{Total used} = \frac{1}{4} + \frac{5}{12} = \frac{4}{12} + \frac{5}{12} = \frac{9}{12} = \frac{3}{4}$$

$$\text{Ribbon left} = \frac{5}{6} - \frac{3}{4} = \frac{10}{12} - \frac{9}{12} = \frac{1}{12} \text{ m}$$

Q3)

$$\text{Mrs Jacobs (4 yrs time)} = 38 + 4 = 42$$

$$\text{Son then} = 42 + 6 = 7$$

$$\text{Son now} = 7 - 4 = 3$$

Q4)

$$\text{A : B} \quad \text{C : B}$$

$$2 : 5 \quad 3 : 5$$

$$\text{Area D} = 7u - 3u = 4u$$

A : D

$$2 : 4$$

$$1 : 2$$

Q5)

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

$$\text{Area of Triangle SVX} = \frac{1}{2} \times 20 \times 8 = 80 \text{ cm}^2$$

Q6)

$$12 \text{ U} = \$447.60 - (\$15.20 \times 3) = \$402$$

$$1 \text{ chair} = \$402 \div 12 = \$33.50$$

$$\text{OR}$$

$$12\text{u} = \$447.60 + (\$15.20 \times 9) = \$584.40$$

$$1\text{u} = \$584.40 \div 12 = \$48.70$$

$$\text{Chair} = \$48.70 - \$15.20 = \$33.50$$

OR

$$3\text{T} + 9\text{C} = \$447.60$$

$$1\text{T} + 3\text{C} = \$447.60 \div 3 = \$149.20$$

$$4\text{C} = \$149.20 - \$15.20 = \$134$$

$$1\text{C} = \$134 \div 4 = \$33.50$$

$$1\text{u} = \$584.40 \div 12 = \$48.70$$

$$\text{Chair} = \$48.70 - \$15.20 = \$33.50$$

Q7)

Method 1:

$$\text{watch} \quad \frac{1}{5} \quad \frac{2}{10}$$

$$\text{books} \quad \frac{3}{5} \quad \frac{3}{5} \times \frac{4}{5} = \frac{12}{25}$$

$$\text{remainder} \quad \frac{4}{5} \quad \frac{4}{5} \times \frac{5}{5} = \frac{4}{5}$$

$$\text{left} \quad \frac{5}{5} \quad \frac{5}{5} \times \frac{4}{5} = \frac{4}{5}$$

$$5\text{u} = \$105$$

$$1\text{u} = \$105 \div 5 = \$21$$

$$\text{At first, } 10\text{u} = 21 \times 10 = \$210.00$$

OR

$$\text{Method 2:}$$

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

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

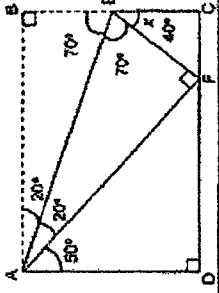
$$\text{Remainder} = \$21 \times 8 = \$168$$

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

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

$$\text{Total} = \$42 \times 5 = \$210$$

Q8)
 $\angle EAF = \angle BAE = 20^\circ$
 $\angle BEA = 180^\circ - 90^\circ - 20^\circ = 70^\circ$
 $\angle BEA = \angle AEF = 70^\circ$
 $\angle x = 180^\circ - 70^\circ - 70^\circ = 40^\circ$



Q9)
 Difference in length, $2u = 73 - 21 = 52$
 $1u = 52 \div 2 = 26 \text{ cm}$
 Rod Y, $5u = 26 \times 5 = 130$
 Rod X, $3u = 26 \times 3 = 78$
 Rod Z = $130 \text{ cm} + 21 \text{ cm} = 151 \text{ cm}$
 OR
 Rod Z = $78 \text{ cm} + 73 \text{ cm} = 151 \text{ cm}$
 OR
 Rod Z = $57 \text{ cm} + 73 \text{ cm} + 21 \text{ cm} = 151 \text{ cm}$

Q10)
 (a) $\angle BCD = \frac{180^\circ - 126^\circ}{2} = 27^\circ$
 (b) $\angle DBC = 126^\circ - 70^\circ = 56^\circ$
 $\angle CED = 180^\circ - 56^\circ - 30^\circ - 27^\circ = 67^\circ$
 OR
 $\angle DBC = 126^\circ - 70^\circ = 56^\circ$
 $\angle BDC = 180^\circ - 56^\circ - 27^\circ = 97^\circ$
 $\angle CDE = 180^\circ - 97^\circ = 83^\circ$
 $\angle CED = 180^\circ - 83^\circ - 30^\circ = 67^\circ$

Q11)

A	1u	25	1u	25	1u	25	1u	25
B	1u		1u		1u		1u	

$A = 4u + 100$
 $B = 5u$

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

A	4u		100
B	4u	1u	70

$1u = 100 - 70 = 30$
 Total number of cars = $9u + 100 = 30 \times 9 + 100 = 370$

Q12)

(a) Price after discount = $\frac{20}{100} \times \$118.75 = \23.75
 (b) Price after discount = $\$118.75 - \$23.75 = \$95.00$
 $GST = \frac{7}{100} \times \$95 = \$6.65$
 Amount payable = $\$95 + \$6.65 = \$101.65$
 OR
 Amount payable = $\frac{107}{100} \times \$95 = \101.65

Q13a) Total (Tues to Friday) = $54 + 36 + 32 + 26 = 148$
Q13b) Total for 6 days = $34 \times 6 = 204$
 No of patients on Sat = $204 - 148 = 56$

Q14)
 Amount of water in A = $\frac{1}{4} \times 27 \times 9 \times 12 = 729 \text{ cm}^3$
 OR
 Amount of water in A = $3 \times 27 \times 9 = 729 \text{ cm}^3$
 Volume of Cubical container B = 729 cm^3
 Dimension of cubical container B = $\sqrt[3]{729} = 9 \text{ cm}$
 Base Area = $9 \times 9 = 81 \text{ cm}^2$

Q16)

(a)

1 set (difference) = 1 large cup - 1 small cup = \$6 - \$5 = \$1

No of sets = $\frac{\$24}{\$1} = 24$

Total number of cups = $24 \times 2 = 48$

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 = $\frac{\$24}{\$6} = 4$

Total number of cups = $4 \times 12 = 48$

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

$24 \times 2 = 48$

OR Using Guess and Check

(b)

No of small cups = \$50 + \$15 = 3 R \$5

Total number of cups = $3 \times 3 + 6 = 15$

Fraction of cups that are small = $\frac{9}{15}$

Q17)

(a) 1 sheet of sticker = 1u

1 book = 9u

$\frac{1}{4}$ of money = $5 \times 9u + 15 \times 1u = 45u + 15u = 60u$

$\frac{3}{4}$ of money spent on books = $60u \times 3 = 180u$

Since 1 book is 9u,

No of books (from remaining money) = $180u \div 9u = 20$ books

OR

$\frac{1}{4}$ of money = $5 \times 9u + 15 \times 1u = 45u + 15u = 60u$

With 60u, one can buy --- 6 books + 6 stickers

Since $\frac{3}{4}$ of money spent on books,

Can buy --- 6 books $\times 3 = 18$ books

8 stickers $\times 3 = 18$ 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