Temasek Primary School

PSLE Preliminary Examination

Primary Six Standard

2020

MATHEMATICS

(PAPER 1 BOOKLET A)

Name: _____ ( ) Class: 6 ( )

Date: 21 August 2020

Total Time for Booklets A and B: 1 hour

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.
4. Shade your answers in the Optical Answer Sheet (OAS) provided.
5. The use of calculator is NOT allowed.
6. This booklet consists of 8 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) and shade your answer on the Optical Answer Sheet.

(20 marks)

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1 In 8 090 320, the digit 9 is in the _____ place.

(1) thousands

(2) ten thousands

(3) hundred thousands

(4) millions

2 What is the capacity of a can of Coca-Cola?

(1) 3.5 ℓ

(2) 35 ℓ

(3) 35 $m\ell$

(4) 350 $m\ell$

3 Simplify $15w - 2 - w + 10$.

(1) $14w + 8$

(2) $14w - 12$

(3) $16w + 8$

(4) $16w - 12$

4 Find the total mass of the two packets of flour as shown below.

$\frac{2}{5}$ kg

$\frac{3}{8}$ kg

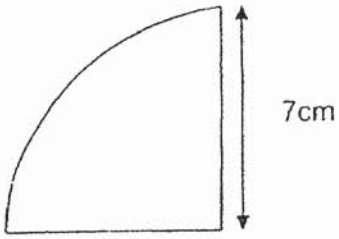
(1) $\frac{1}{40}$ kg

(2) $\frac{5}{13}$ kg

(3) $\frac{6}{40}$ kg

(4) $\frac{31}{40}$ kg

5 Find the perimeter of the quarter circle. (Take $\pi = \frac{22}{7}$)



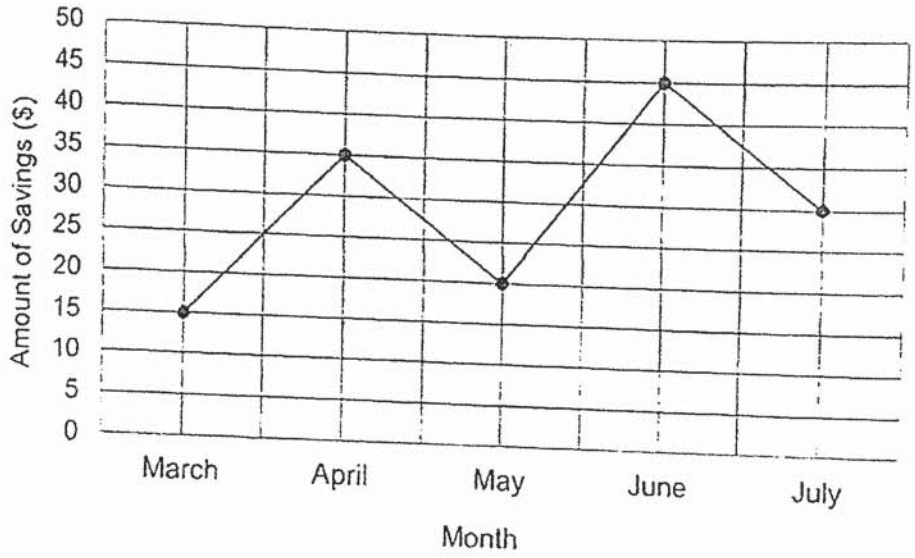
(1) 11 cm

(2) 25 cm

(3) 44 cm

(4) 58 cm

6 The line graph shows David's monthly savings from March to July.



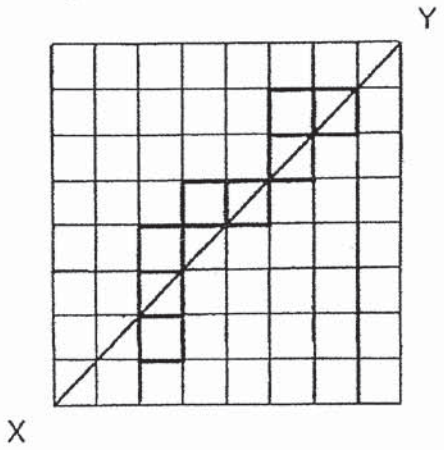
How many month(s) did David save at least $30?

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

7 In a group of 40 students, 28 are boys. What percentage of the students are girls?

(1) 12%
(2) 28%
(3) 30%
(4) 70%

8 What is the minimum number of squares that must be added so that the line XY becomes a line of symmetry?



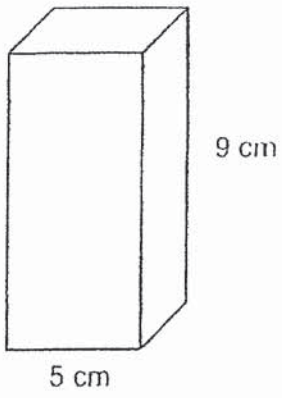
(1) 1

(2) 2

(3) 3

(4) 4

9 A rectangular container has a square base of side 5 cm and a height of 9 cm. What is the capacity of the container?



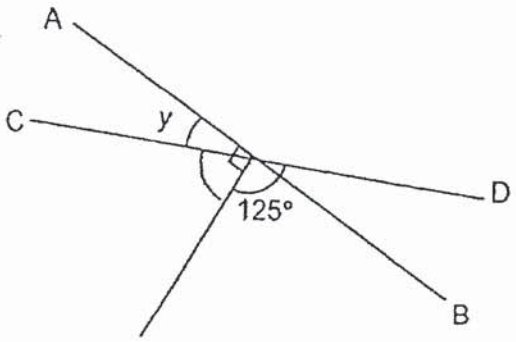
(1) 19 cm^3

(2) 45 cm^3

(3) 225 cm^3

(4) 405 cm^3

10 In the figure below, AB and CD are straight lines. Find $\angle y$.



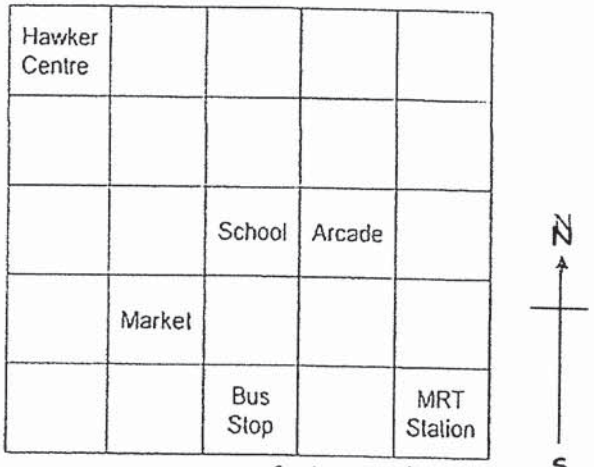
(1) 25°

(2) 35°

(3) 45°

(4) 55°

11 Look at the square grid below carefully.



Ali is standing at facing the school. He turns 90° in the clockwise direction. Then he turns 225° in the anticlockwise direction. Where is he facing now?

facing north

(1) Arcade

(2) Market

(3) MRT Station

(4) Hawker Centre

12 The table shows Adam's result slip with the scores for four subjects. He accidentally spilled some ink on it and his Mathematics and Science scores cannot be seen completely.

Subject	Score
English	99
Malay	70
Mathematics	9
Science	8

The difference between his Mathematics and Science scores is the smallest possible value. Find his average score for Malay and Mathematics.

(1) 80
(2) 85
(3) 89
(4) 90

13 Amanda folded a rectangular piece of paper into halves as shown in Figure 1. A crease was formed at the folded part. Next, she folded the same piece of paper into halves again as shown in Figure 2. Three creases were formed at the folded parts.

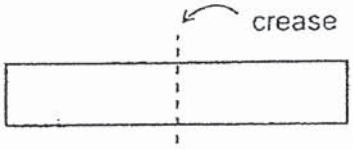


Figure 1

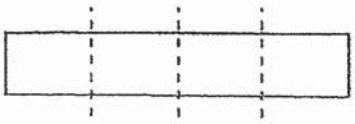
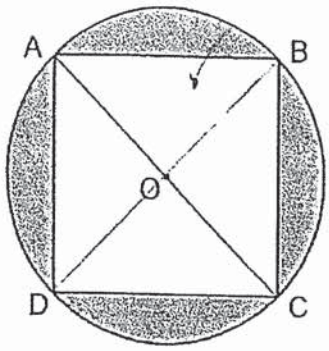


Figure 2

How many creases were there on the same piece of paper after she folded it for 5 times?

(1) 9
(2) 15
(3) 31
(4) 32

14 The figure shows a square ABCD in a circle. O is the centre of the circle with a diameter of 20 cm. Find the shaded area. Leave your answer in terms of π.



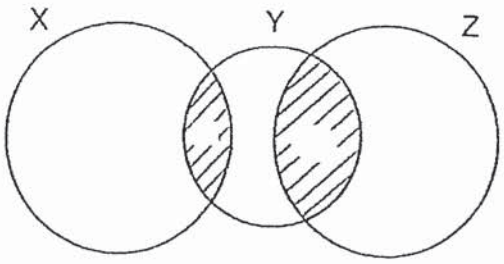
(1) $(100\pi - 100)\ cm^2$

(2) $(100\pi - 200)\ cm^2$

(3) $(400\pi - 200)\ cm^2$

(4) $(400\pi - 400)\ cm^2$

15 The figure shows 2 identical circles, X and Z, and a smaller circle Y. $\frac{1}{6}$ of Circle X and $\frac{3}{5}$ of Circle Y are shaded. Find the ratio of the area of the shaded parts to the total area of the figure.



(1) 3 : 14

(2) 4 : 14

(3) 3 : 17

(4) 4 : 17

End of Booklet A

Go to Booklet B

2020

MATHEMATICS

(PAPER 1 BOOKLET B)

Name: _____ ( ) Class: 6 ( )

Date: 21 August 2020

Total Time for Booklets A and B: 1 hour

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.
4. Write your answers in this booklet.
5. The use of calculator is **NOT** allowed.
6. This booklet consists of 9 printed pages.

/25

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

16 What is the value of $40 - (28 - 10) \div 2 \times 3$?

Ans: _____

17 Find the value of $30.2 \div 5$.

Ans: _____

18 Arrange the following fractions from the smallest to the largest:

$\frac{4}{3}$, $1\frac{1}{6}$, $\frac{5}{4}$

Ans: _____

19 Express 100 g as a ratio of 0.6 kg. Leave your answer in the simplest form.

Ans: _____

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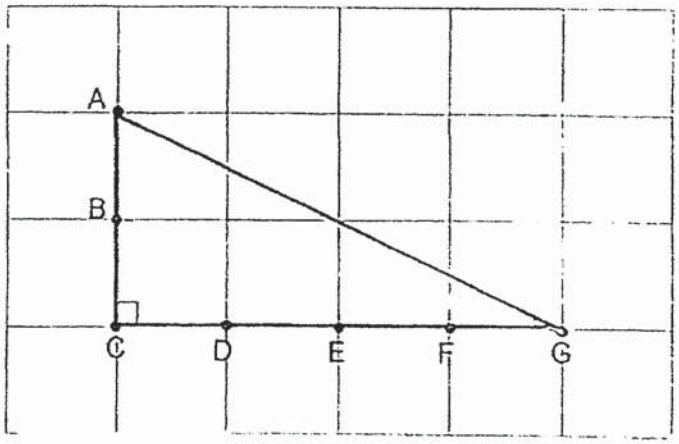
20 In the square grid shown below, there is a right-angled triangle.
Divide the triangle into two parts, each with the same area, by joining two points (A, B, C, D, E, F or G) together.



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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21 A photocopier can print 300 pages in 4 minutes.

How many pages can it print in 10 minutes?

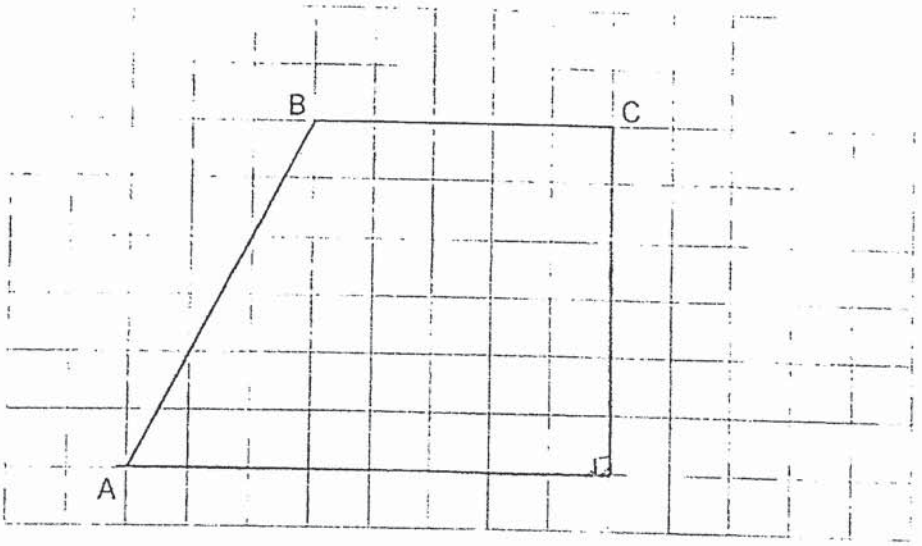
Ans: _____

---

22 In the square grid below, AB and BC are two sides of a trapezium ABCD.

(a) Measure ∠ABC.

(b) Given that ∠CDA = 90°, complete the drawing of trapezium ABCD.



Ans: (a) _____ °

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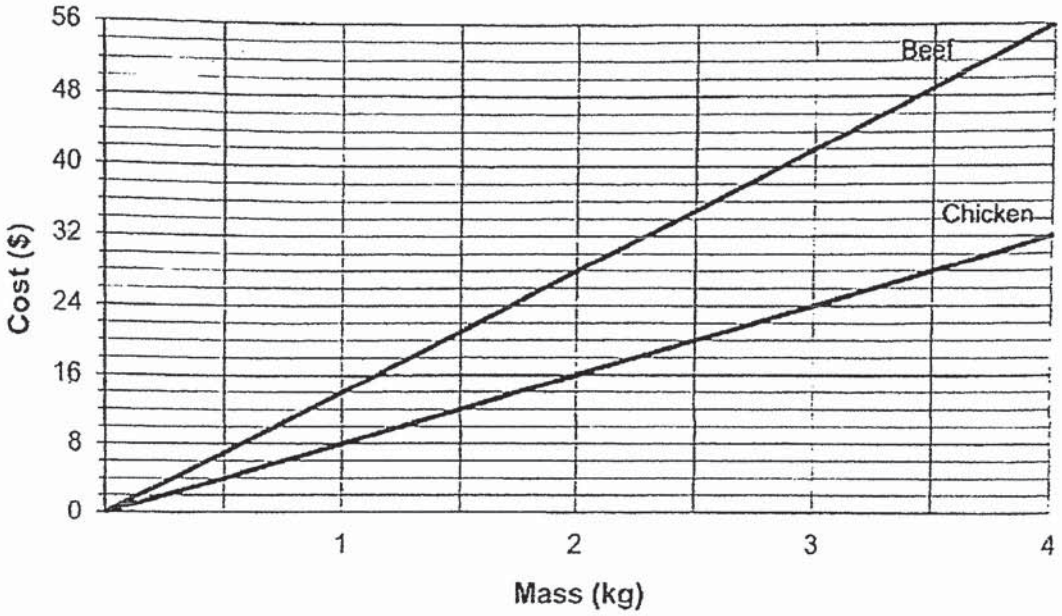
23 The line graph shows the cost of chicken and beef sold at a supermarket.



Lena had just enough money to buy 2 kg of beef. If she decides to buy chicken instead of beef, how much chicken can she buy?

Ans: _____ kg

---

24 40% of the people who watched a musical were children. The rest were men and women in the ratio 1 : 3. There were 100 fewer men than children. How many people watched the musical?

Ans: _____

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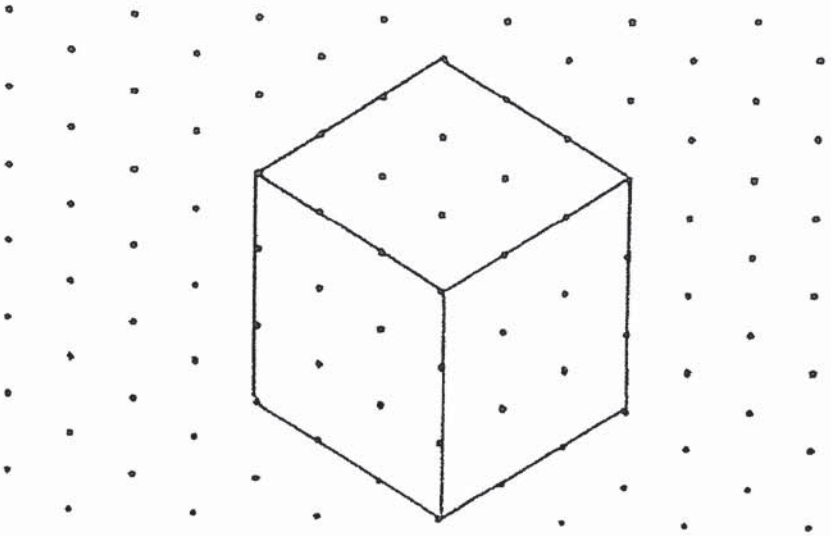
25 On the isometric grid, draw a cuboid that has the same volume as the cube shown below.



26 Durians are sold at \$30 per kg. Charlotte bought some durians. She gave the durian seller two \$50 notes and received \$4 change. How many kilograms of durian did Charlotte buy?

Ans: _____ kg

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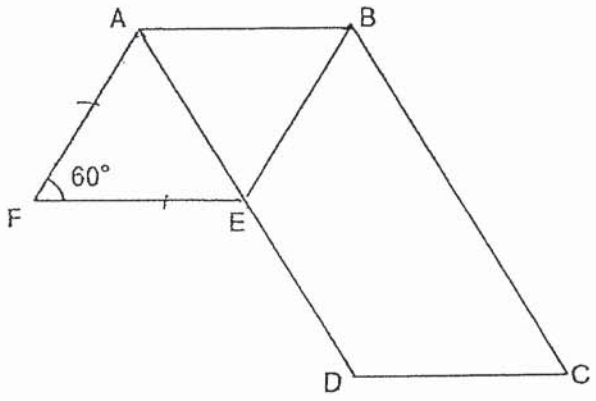
27 In the figure below, ABCD is a parallelogram and ABEF is a rhombus.



Each of the statements below is either true, false or not possible to tell from the information given. For each statement, put a tick (√) to indicate your answer.

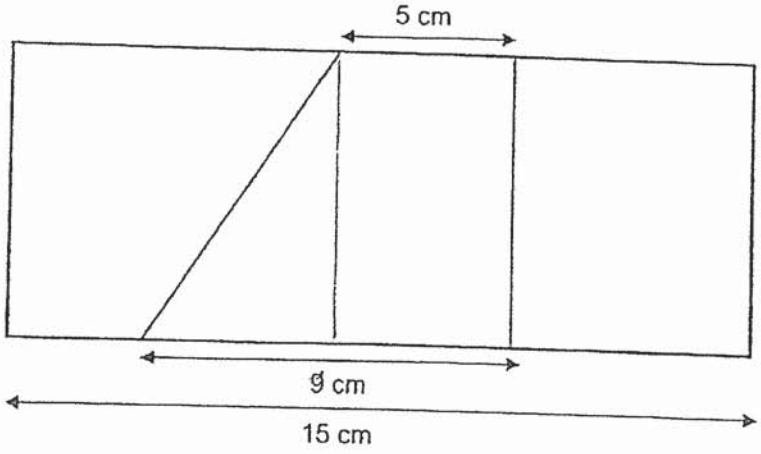
Statement	True	False	Not possible to tell
∠EBC = ∠BCD			
∠BED = 102°			
ABE is an equilateral triangle.			

---

28 Henry had a total of 49 $2 notes and $10 notes. When he exchanged all his $2 notes for $10 notes, he had 25 notes. How many $10 notes did he have at first?

Ans: _____

29 What fraction of the rectangle is shaded? Give your answer in the simplest form.



Ans: _____

30 The ratio of the number of motorcycles to the number of cars at a car park was 4 : 7. The ratio of the number of lorries to the number of vans at the same car park was 4 : 5. There were twice as many cars as vans. Find the ratio of the number of cars to the number of lorries to the number of vans. Give your answer in the simplest form.

Ans: _____

End of Paper

Temasek Primary School

PSLE Preliminary Examination

Primary Six Standard

2020

MATHEMATICS

(PAPER 2)

Name: _____( ) Class: 6 ( )

Date: 21 August 2020

Total Time: 1 hour 30 minutes

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.
4. Write your answers in this booklet.
5. The use of a calculator is allowed.
6. This booklet consists of 15 printed pages.

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

Parent's Signature/Date: _____

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)

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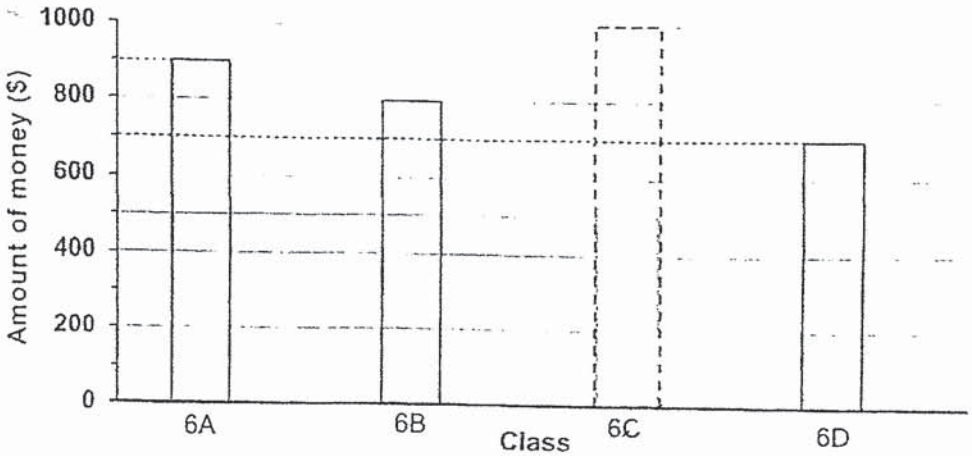
1 The bar graph shows the amount of money collected by 4 classes for charity.



The average amount of money collected by the 4 classes was $725.
Complete the bar graph above to show the amount collected by Class 6C.

---

2 Joseph has a piece of rectangular paper as shown in Figure 1. He cuts it into 3 identical small rectangles to form a new rectangle as shown in Figure 2. What is the perimeter of the new rectangle? Give your answer in terms of g.

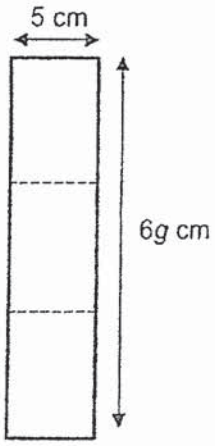


Figure 1

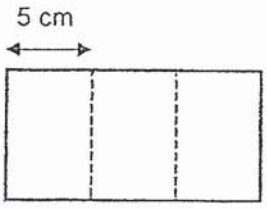


Figure 2

Ans: _____ cm

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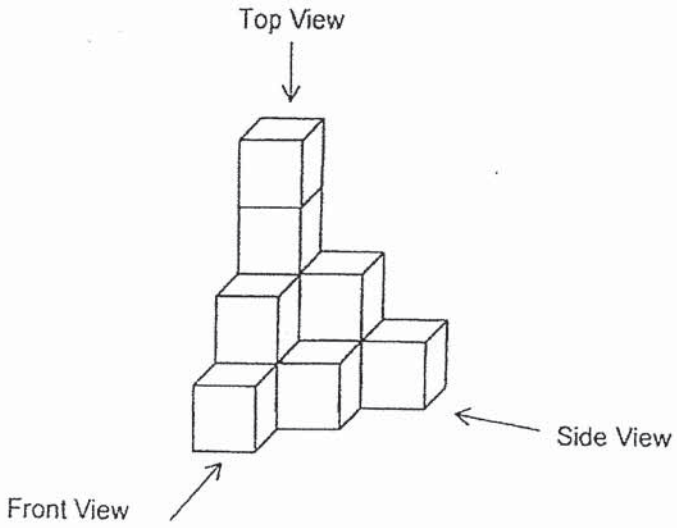
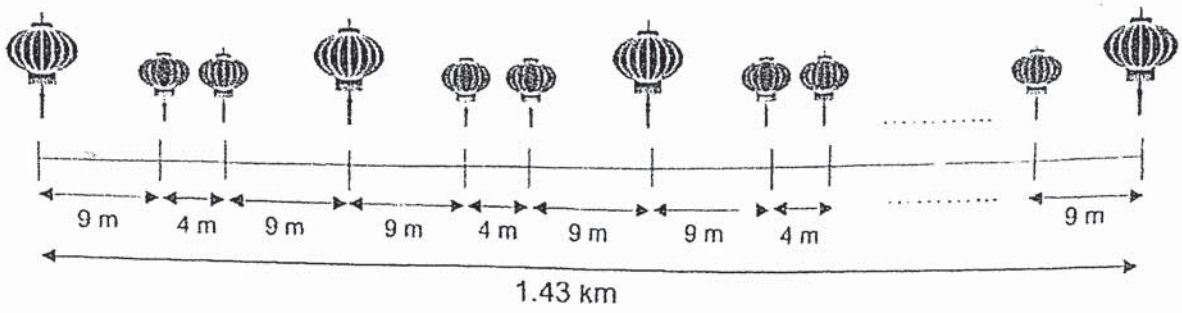
3 Draw the top view and front view of the solid on the grid below.



Top View

Front View

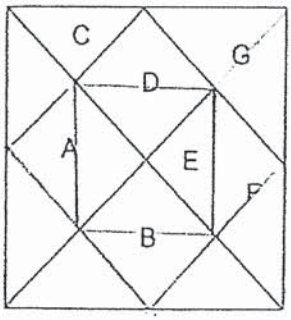
4 During Chinese New Year, big and small lanterns were hung along Chinatown Road following a pattern as shown below.



How many big lanterns were hung altogether?

Ans: _____

5 The figure shows a square made up of 7 tiles, A, B, C, D, E, F and G.



(a) Tile F and another tile when added together give an area that is a quarter of the area of the square. Which is the other tile?

(b) If the area of tile E is 4 cm^2, find the area of the square.

Ans: (a) _____ [1]

(b) _____ [1]

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)

6 There were $\frac{2}{9}$ as many cakes as buns at a bakery. After selling $\frac{1}{3}$ of the buns, there were 68 more buns than cakes left.

(a) How many cakes were there at the bakery at first?

(b) At the end of the day, the baker sold all the cakes at $26 each. How much did he collect from selling all the cakes?

Ans: (a) _____ [2]

(b) _____ [1]

7 Valerie wants to buy some cupcakes for a party.

Price of Cupcakes

1 cupcake for $2

1 box of 6 cupcakes for $10

Buy 5 boxes of cupcakes, get one box for FREE!

(a) What is the least amount of money she has to pay for 28 cupcakes?

(b) Valerie decides to buy 36 cupcakes instead of 28 cupcakes. What is the least additional amount of money that she must pay?

Ans: (a) _____ [2]

(b) _____ [1]

8 The table shows the hourly rates for booking badminton court at Raffles Sports Club.

	Member	Non-Member
Non-Peak Hours Weekdays: 7 a.m. to 6 p.m.	$5 per hour	$8 per hour
Peak Hours Weekdays: 6 p.m. to 10 p.m. Weekends & Public Holidays: 7 a.m. to 10 p.m.	$8 per hour	$12 per hour

(a) Hong Hong booked a badminton court for 3 hours on National Day. She and her 3 friends are members of the Club and they shared the cost equally among themselves. How much did each of them pay?

(b) How much more must each of them pay for the same booking if they were non-members of the Club?

Ans: (a) _____ [1]

(b) _____ [2]

---

9 A pencil costs y cents and a file costs 40 cents more than a pencil.

(a) What is the cost of 2 identical files and 3 identical pencils in cents? Express your answer in terms of y in the simplest form.

(b) Shernice wants to buy 2 such files and 3 such pencils but is short of 30 cents. If the pencil costs 90 cents, how much money does Shernice have?

Ans: (a) _____ [1]

(b) _____ [2]

10 The table shows the monthly usage charges for Mobile Phone Plan A and Plan B.

	Plan A	Plan B
Basic Charges	Nil	$19.90
Incoming Calls	Unlimited	Unlimited
Outgoing Calls	Free 200 min 15 cents for every additional minute	Free 250 min 10 cents for every additional minute
Data	Free 20 GB $10 for every additional 10 GB or part thereof	Free 30 GB $8 for every additional 10 GB or part thereof

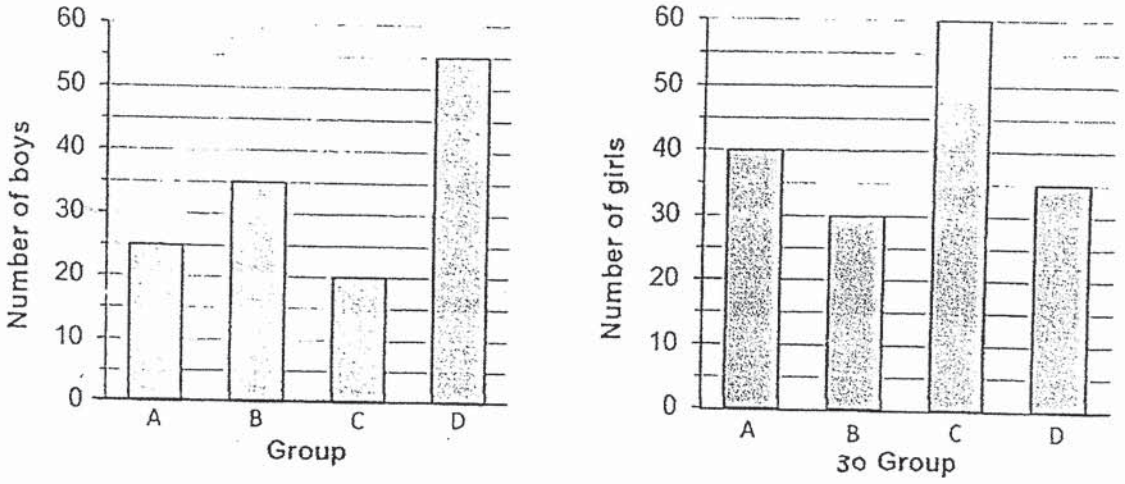
(a) Claire subscribed to Mobile Phone Plan A.
In July, she received 280 minutes of incoming calls and made 240 minutes of outgoing calls. She used 28 GB of data. How much did she pay for her mobile phone bill for July?

(b) If Claire had subscribed to Plan B, how much more would she have to pay for her mobile phone bill for July?

Ans. (a) _____

(b) _____

11 The bar graphs show the number of boys and girls in Groups A, B, C and D.



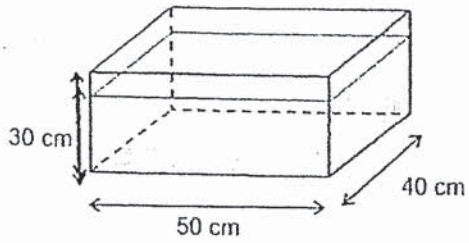
(a) Which 2 groups have the same number of students?

(b) What fraction of the total number of students were girls from Group B? Give your answer in the simplest form.

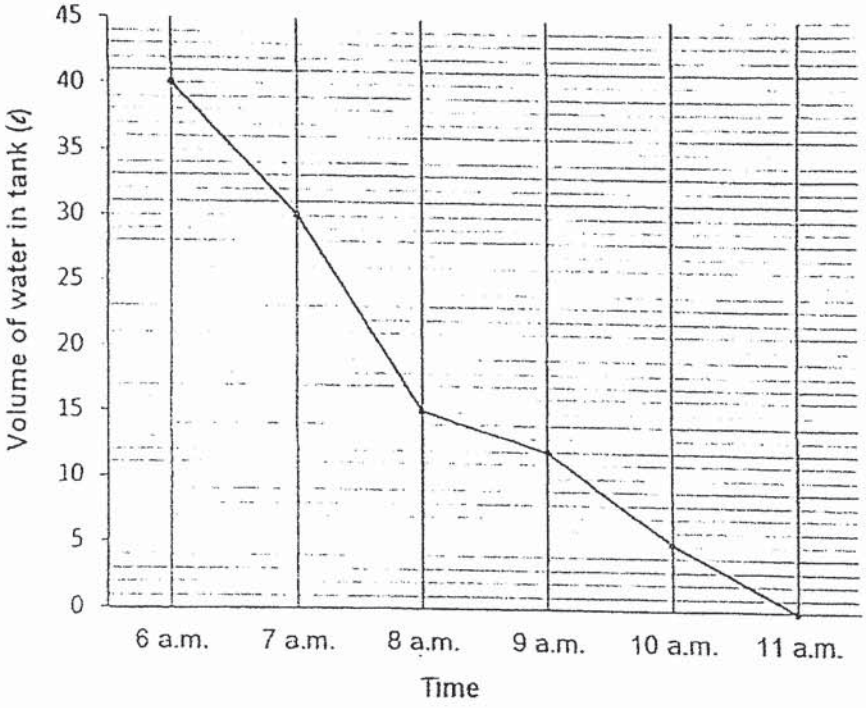
Ans: (a) _____ [1]

(b) _____ [2]

12 A rectangular tank measuring 50 cm by 40 cm by 30 cm was $\frac{4}{5}$ filled with water at first.



Water was then poured out from the tank from 6 a.m. to 11 a.m. and the volume of water left in the tank is shown in the line graph.



(a) What was the volume of water in the tank at first? Give your answer in litres.

(b) At what time was $\frac{1}{4}$ of the tank filled with water?

Ans: (a) _____ [2]

(b) _____ [2]

13 Mr Lee bought some stickers. $\frac{3}{4}$ of them were star-shaped and the rest were heart-shaped. He pasted $\frac{2}{5}$ of the star-shaped and $\frac{1}{3}$ of the heart-shaped stickers onto his students' workbooks and was left with 111 stickers. How many stickers did he buy?

Ans: _____ [5]

14 John has a rectangular piece of paper ABCDEF as shown in Figure 1.
He folds corner C such that it touches E as shown in Figure 2.
Next, he folds BD such that B touches F as shown in Figure 3.

(a) Find $\angle d$.

(b) Find $\angle z$.

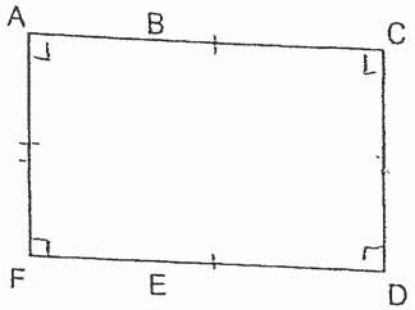


Figure 1

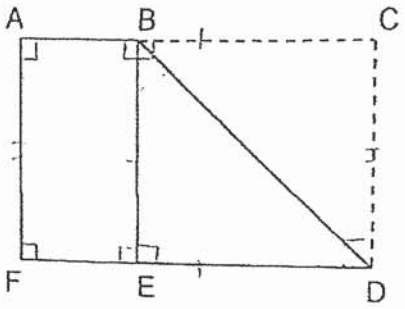


Figure 2

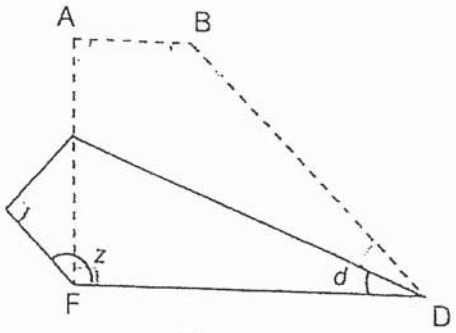


Figure 3

Ans: (a) _____ [2]

(b) _____ [2]

15 For every laptop that Danny sells, he earns a sum of money as stated below:

10% of the first $800 of the selling price

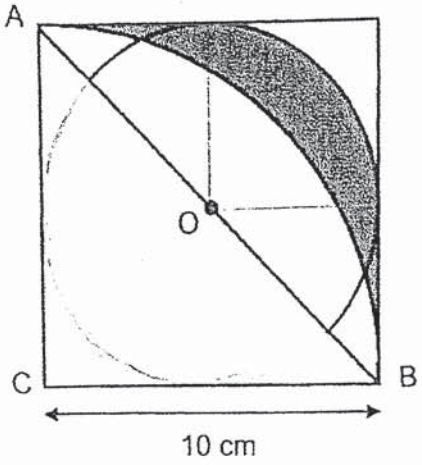
and

5% of the remaining selling price

Danny sold a laptop and earned $210. What was the selling price of the laptop?

Ans: _____ .[5]

16 The figure shows a square with a semicircle and a quarter circle ABC. O is the centre of the semicircle. The length of the square is 10 cm. (Take $\pi = 3.14$)



(a) Find the area of the quarter circle ABC.

(b) Find the area of the shaded part.

Ans: (a) _____ [1]

(b) _____ [3]

17 Zoe baked some chocolate cookies and gave half of them to Mabel. Mabel baked some butter cookies and gave half of them to Zoe. Zoe ate 5 butter cookies and the ratio of the number of chocolate cookies to the number of butter cookies she had left became 4 : 1. Mabel ate 3 chocolate cookies and the ratio of the number of chocolate cookies she had left to the number of butter cookies became 3 : 1.

(a) Were there more chocolate cookies or butter cookies at first?

(b) How many chocolate cookies did Zoe bake?

Ans: (a) _____ [1]

(b) _____ [4]

End of Paper