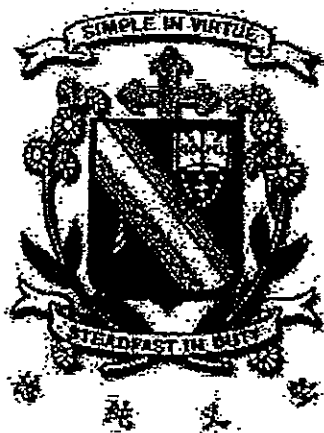


Name : \_\_\_\_\_ (    )

Class : Primary 6 \_\_\_\_\_



Primary 6 Mathematics

2013 Preliminary Examination

Paper 1

Booklet A

20 August 2013

**TOTAL TIME FOR BOOKLETS A AND B: 50 MINUTES**

**INSTRUCTIONS TO CANDIDATES**

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL QUESTIONS.

SHADE YOUR ANSWERS IN THE OPTICAL ANSWER SHEET (OAS)  
PROVIDED.

THE USE OF CALCULATORS IS NOT ALLOWED.

*This booklet consists of 8 printed pages including the cover page.*

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet (OAS). (20 marks)

---

- 1) A charitable organisation raised \$624 728 last year. Express this amount to the nearest hundred dollars.

- |               |               |
|---------------|---------------|
| (1) \$624 000 | (2) \$624 700 |
| (3) \$624 800 | (4) \$625 000 |

- 2) Evaluate  $121 - (38 - 2) + 9 - 6$ .

- |         |         |
|---------|---------|
| (1) 111 | (2) 109 |
| (3) 66  | (4) 27  |

- 3)  $250 \div 200 =$  \_\_\_\_\_.

- |           |           |
|-----------|-----------|
| (1) 125.0 | (2) 12.5  |
| (3) 1.25  | (4) 0.125 |

- 4) Jonah had 5 bags of sweets. The average mass of 2 of the bags was 126g. The total mass of the remaining bags was 328 g. Find the average mass of the 5 bags of sweets.

- |             |           |
|-------------|-----------|
| (1) 90.8 g  | (2) 116 g |
| (3) 247.2 g | (4) 580 g |

- 5) Callie left Town G at 6.42 p.m. and reached Town K, the next day, at 10a.m.. How long did Callie take to reach Town K?

- |                 |                 |
|-----------------|-----------------|
| (1) 3 h 18 min  | (2) 3 h 58 min  |
| (3) 15 h 18 min | (4) 15 h 58 min |

- 6) In a group of 60 pupils, 25% of them are girls. How many more boys than girls are there?

- |        |        |
|--------|--------|
| (1) 10 | (2) 15 |
| (3) 30 | (4) 45 |

- 7) Beniton's salary is  $\frac{1}{2}$  of Loriane's salary. Loriane's salary is  $\frac{6}{7}$  of Harifah's salary. What is the ratio of Harifah's salary to the total salary of the three people?

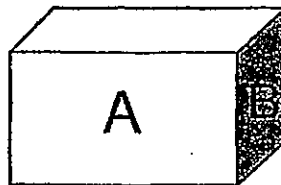
(1) 1 : 2

(2) 7 : 9

(3) 7 : 16

(4) 7 : 25

- 8) The figure shows a cuboid with a volume of  $640 \text{ m}^3$ . The shaded face, labelled B, is a square of area  $64 \text{ m}^2$ . What is the area of A?



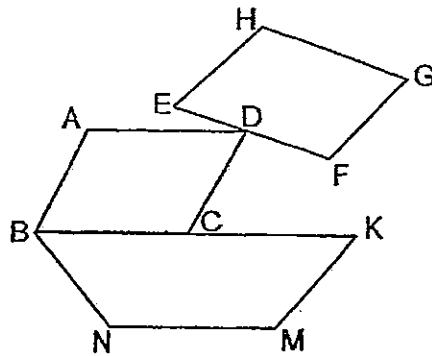
(1)  $10 \text{ m}^2$

(2)  $40 \text{ m}^2$

(3)  $80 \text{ m}^2$

(4)  $100 \text{ m}^2$

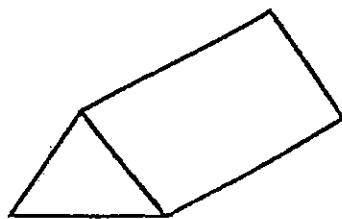
- 9) In the figure, ABCD and EFGH are identical rhombuses and BKMN is a trapezium. Which one of the following statements is true?



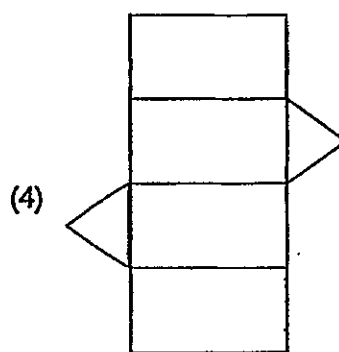
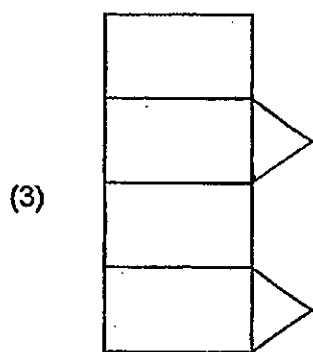
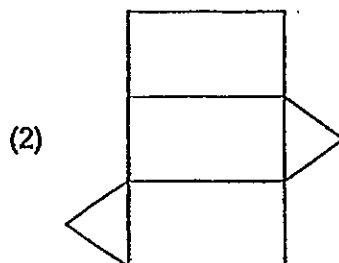
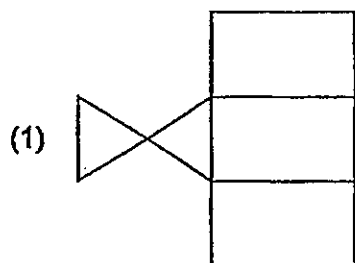
- (1)  $HE \parallel GF \parallel KM$                       (2)  $AB \parallel DC \parallel KM$
- (3)  $HG \parallel EF \parallel NM$                       (4)  $AD \parallel BC \parallel NM$
- 10) The ratio of Hailey's stamps to Irene's stamps was 4 : 9. After Hailey gave half of her stamps to Irene, Hailey had 48 stamps left. How many stamps did Irene have at first?

- (1) 216    (2) 264
- (3) 414    (4) 528

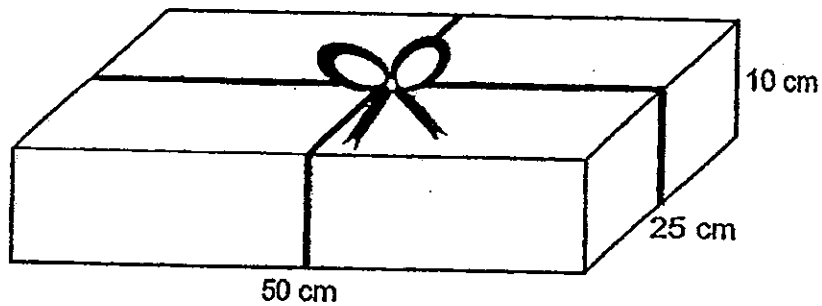
- 11) The figure below shows a prism.



Which one of the following is a net of the prism?



- 12) What is the length of ribbon needed to tie a box as shown if the ribbon goes around the box once, leaving 90 cm to tie a bow ?



- (1) 1.9 m                                      (2) 2.6 m
- (3) 2.8 m                                      (4) 3.1 m
- 13) Mrs Louis baked some muffins.  $\frac{1}{6}$  of the them were chocolate muffins,  $\frac{1}{2}$  of them were blueberry muffins and the rest were strawberry muffins. She gave away  $\frac{2}{3}$  of the blueberry muffins and  $\frac{1}{3}$  of the strawberry muffins. What fraction of the muffins did she give away?

- (1)  $\frac{4}{9}$     (2)  $\frac{5}{9}$
- (3)  $\frac{11}{18}$     (4)  $\frac{6}{9}$

- 14) The table below shows the cost of yogurt sold at a store.

Mass	Cost
First 40 g	\$2.80
Next 20 g	\$1.30
Every additional 10 g or less	\$0.50

Joe bought a cup of yogurt with a mass of 94 g. How much does he need to pay for his yogurt if he is given a 10% discount?

- (1) \$5.04                      (2) \$5.49  
(3) \$5.60                      (4) \$6.10

- 15) Jennifer had some money. She bought 3 packets of chocolates that cost \$y each and had \$32 left. How much money, in terms of y, did she have at first?

- (1)  $\$(32 + 3y)$                       (2)  $\$(32 - 3y)$   
(3)  $\$(32 + \frac{y}{3})$                       (4)  $\$(32 - \frac{y}{3})$

End of Booklet A



Name : \_\_\_\_\_ (     )

Class : Primary 6 \_\_\_\_\_



Primary 6 Mathematics

2013 Preliminary Examination

Paper 1

Booklet B

20 August 2013

**TOTAL TIME FOR BOOKLETS A AND B: 50 MINUTES**

**INSTRUCTIONS TO CANDIDATES**

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL QUESTIONS.

WRITE YOUR ANSWERS IN THIS BOOKLET.

THE USE OF CALCULATORS IS **NOT** ALLOWED.

*This booklet consists of 8 printed pages including the cover page.*

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

---

Do not  
write in  
this space.

- 16) Find the value of  $1069 \times 600$ .

Ans : \_\_\_\_\_

- 17) Collie bought a pizza and gave  $\frac{1}{4}$  of it to his friend. He cut the remainder equally into 9 slices. What fraction of the pizza was each slice?

Ans : \_\_\_\_\_

- 18) A bag of 12.67 kg of nuts are re-packed into packets of 70 g each. How many packets were there altogether?

Ans: \_\_\_\_\_



- 19) Tessa had \$4. She spent 60% of it on a book and 10% of it on some snacks. How much money had she left?

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Ans: \$ \_\_\_\_\_

- 20) Study the number pattern below.

$$3 \times 37 = 111$$

$$6 \times 37 = 222$$

$$9 \times 37 = 333$$

:        :

:        :

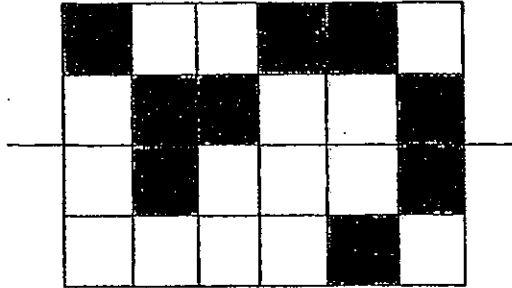
$$G \times 37 = 888$$

Find the value that G represents.

Ans: \_\_\_\_\_

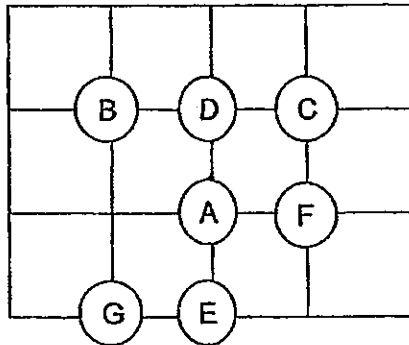


- 21) The figure below is made up of identical squares. Shade three more squares to make a symmetric pattern which has a line of symmetry.



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- 22) Refer to the square grid below and fill in the blanks with the right answers.



Point A is northeast of point (a) \_\_\_\_\_ and (b) \_\_\_\_\_ of point D.

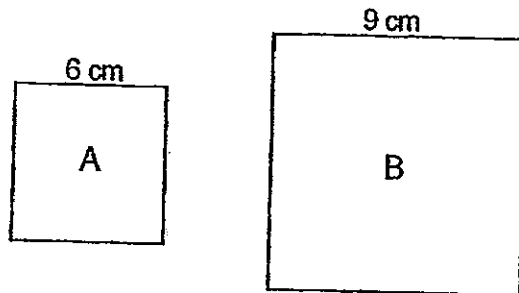
Ans: (a) \_\_\_\_\_

(b) \_\_\_\_\_



- 23) The figure below shows two squares.

What fraction of the area of square B is the area of square A?



Ans: \_\_\_\_\_

- 24) The area of one face of a cube is  $49 \text{ cm}^2$ . What is the volume of the cube?

Ans: \_\_\_\_\_  $\text{cm}^3$

- 25) Alfie travelled 460 km at an average speed of 80 km/h. Find the time Alfie took to cover this distance.

Ans : \_\_\_\_\_ h

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

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- 26) Polly has  $r$  bookmarks. Kellie has three times as many bookmarks as Polly and 9 more bookmarks than Frilly. How many more bookmarks does Frilly have than Polly? Give your answer in terms of  $r$ .

Ans: \_\_\_\_\_

- 27) At a stationery store, the price of a notepad is  $\frac{1}{5}$  the price of a pen. The price of a pack of coloured paper is  $\frac{1}{12}$  the total price of the pen and the notepad. What is the ratio of the price of the notepad to the price of the pack of coloured paper?

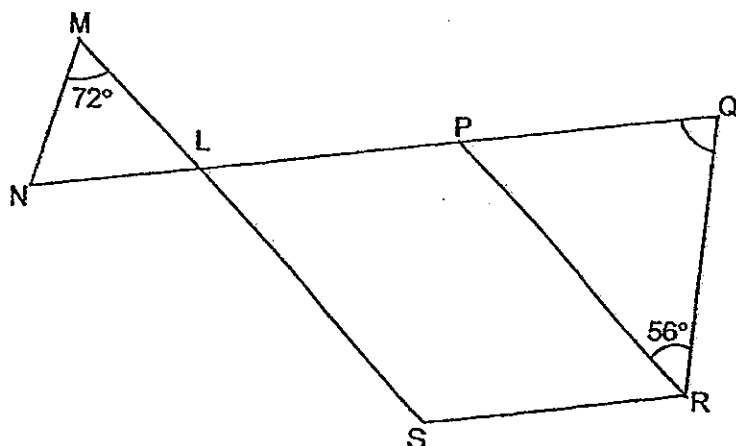
Ans : \_\_\_\_\_



- 28) In the figure below, not drawn to scale, LPRS is a parallelogram.

$ML = NL$  and  $NQ$  and  $MS$  are straight lines.

Find  $\angle PQR$ .



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Ans : \_\_\_\_\_°

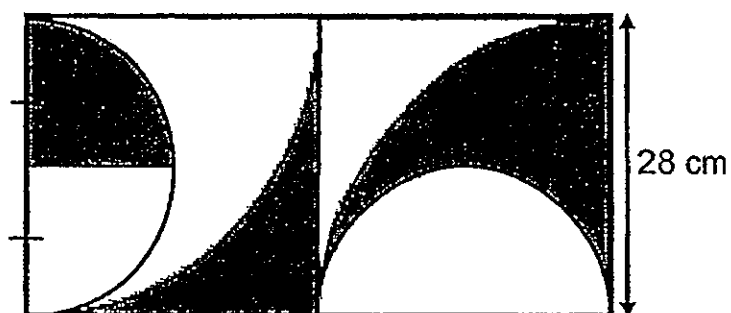
- 29) The mass of 4 pigs is 91.2 kg. One of the pigs has a mass of 36 kg. What is the average mass of the remaining pigs? Give your answer in kilograms and grams.

Ans: \_\_\_\_\_ kg \_\_\_\_\_ g



- 30) The figure below is made up of 2 identical quadrants and 2 identical semicircles. Find the area of the shaded part of the figure.

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



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this space.

Ans: \_\_\_\_\_ cm<sup>2</sup>

End of Booklet B





Name : \_\_\_\_\_ (     )

Class : Primary 6 \_\_\_\_\_



Primary 6 Mathematics

2013 Preliminary Examination

Paper 2

20 August 2013

\_\_\_\_\_  
Parent's/Guardian's Signature

Paper 1	40
Paper 2	60
Total Marks	100

**TOTAL TIME FOR PAPER 2: 1 HOUR 40 MINUTES**

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL QUESTIONS.

WRITE YOUR ANSWERS IN THIS BOOKLET.

THE USE OF AN APPROVED CALCULATOR IS EXPECTED, WHERE APPROPRIATE.

*This booklet consists of 16 printed pages including the cover page.*

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

Do not write in this space.

- 1) Walter had 342 pieces of chocolates. He ate the same number of pieces of chocolates each day. At the end of the 8<sup>th</sup> day,  $\frac{5}{9}$  of the chocolates was left. How many pieces of chocolates did he eat each day?

Ans : \_\_\_\_\_

- 2) For every watch James sells, he earns a commission of \$32. He will earn an additional \$26 for every 5 watches sold. How much commission will he earn if he sells 52 watches?

Ans : \$ \_\_\_\_\_



- 3) Mrs Poon had some roses and daisies.  $\frac{1}{4}$  of the flowers were roses.

After selling 88 roses,  $\frac{3}{5}$  of the roses were left. How many daisies did Mrs Poon have?

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Ans : \_\_\_\_\_

- 4) Mrs Conchie bought 6 m 20 cm of ribbon and used up  $\frac{3}{4}$  of it. She cut the remaining ribbon into 5 equal strips. How long is each strip of ribbon?

Ans : \_\_\_\_\_ m

- 5) Hui Yee paid \$1224 and \$480 for a television set and DVD player respectively after a discount of 20%. What was the total discount given?

Ans : \$ \_\_\_\_\_



For questions 6 to 18, show your working clearly and write your answer in the spaces provided. The number of marks available is shown in the brackets ( ) at the end of each question or part-question. (50 marks)

---

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- 6) There were 1600 animals in Mr Loh's farm. 30% of the animals were ducks and the rest were chickens and geese. The ratio of the number of chickens to the number of geese is 11 : 3. He bought some more ducks and the percentage of ducks increased to 50%.

- a) How many chickens were there?  
b) How many ducks did he buy?

Ans : (a) \_\_\_\_\_ (3 m)

(b) \_\_\_\_\_ (2 m)



- 7) Ruth and Steve drove from City X to City Y. The distance between the two cities was 315 km. Ruth left City X 10 minutes after Steve, but arrived at City Y 20 minutes before Steve. Steve's average speed was 90 km/h. Find Ruth's average speed for the whole journey.

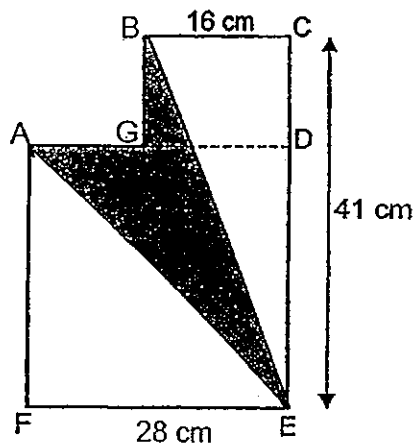
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this space.

Ans : \_\_\_\_\_ (3 m)



- 8) The figure below is not drawn to scale. ADEF is a square and BCDG is a rectangle. Given that  $BC = 16\text{ cm}$ ,  $FE = 28\text{ cm}$  and  $CE = 41\text{ cm}$ , find the area of the shaded parts AEBG.

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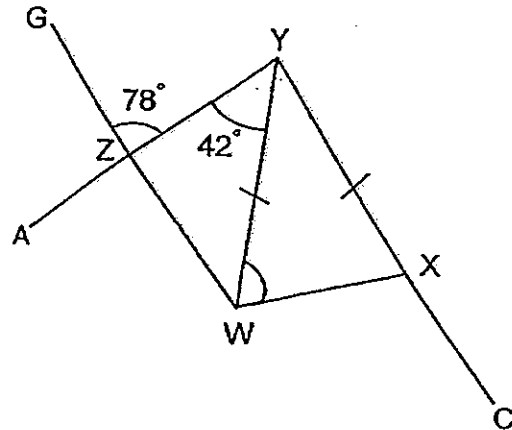


Ans: \_\_\_\_\_ (4 m)



- 9) In the figure below, not drawn to scale, WXYZ is a trapezium. AY, GW and YC are straight lines. Find  $\angle YWX$ .

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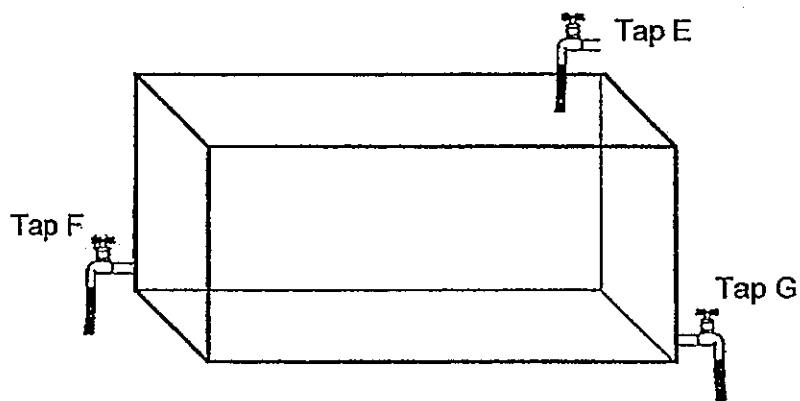


Ans: \_\_\_\_\_ (3 m)



- 10) An empty rectangular container measures 116.8cm by 25cm by 40cm. Water from Tap E flows into the container at a rate of 5.2 l per minute while Tap F and Tap G drain water from the container at 2.8 l per minute and 1.6 l per minute respectively. Tap E is turned on for 10 minutes before Tap F and Tap G are turned on at the same time. How long does it take for the container to be half-filled with water?

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this space.



Ans: \_\_\_\_\_ (4 m)





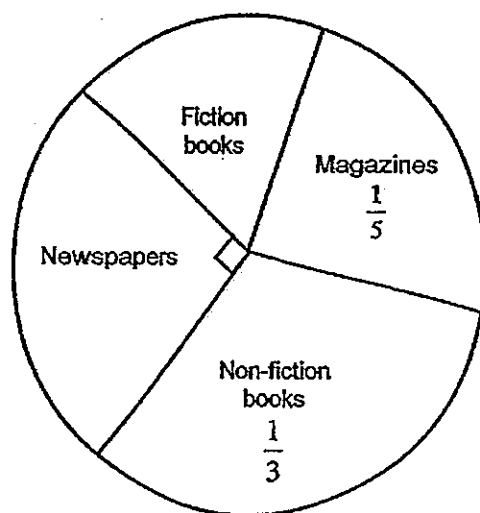
- 11) Four boxes, A, B, C and D, contain some marbles. Box D contains 108 marbles. Box A contains  $\frac{3}{4}$  of the total number of marbles in boxes B, C and D. The ratio of the number of marbles in box B to the total number of marbles in boxes C and D is 1 : 3. Box C contains 4 times the number of marbles in box D. How many marbles are there altogether in the four boxes?

Do not  
write in  
this space.

Ans: \_\_\_\_\_ (4 m)



- 12) The pie chart below shows the number of items sold in a bookstore in a month. How many newspapers were sold if 845 fiction books were sold?



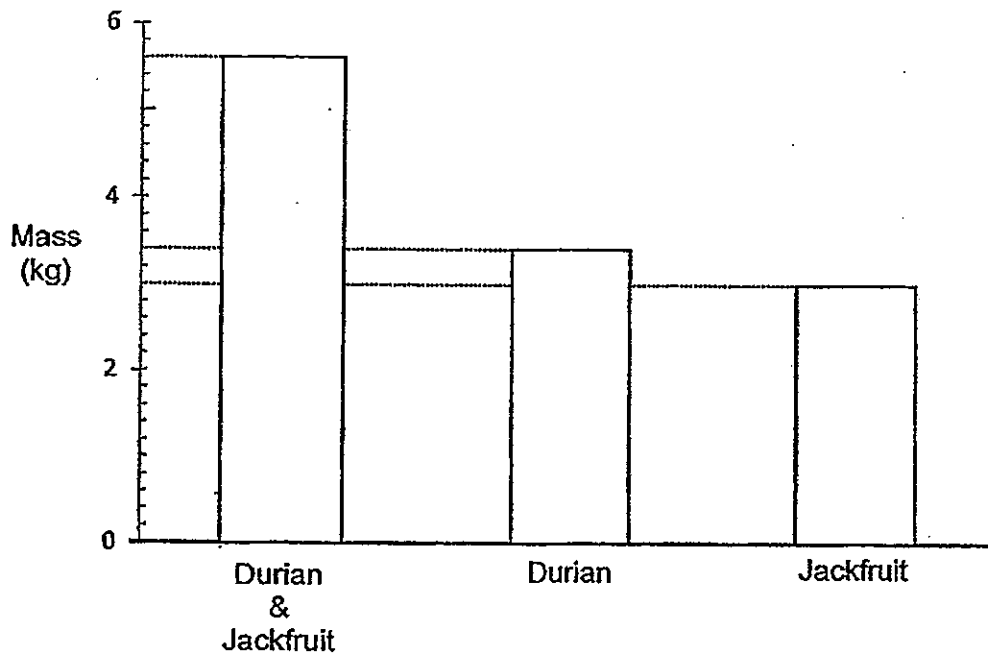
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Ans: \_\_\_\_\_ (3 m)



- 13) The graph below shows the mass of three identical baskets with different combinations of durian and jackfruit placed in it.

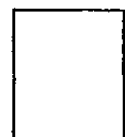
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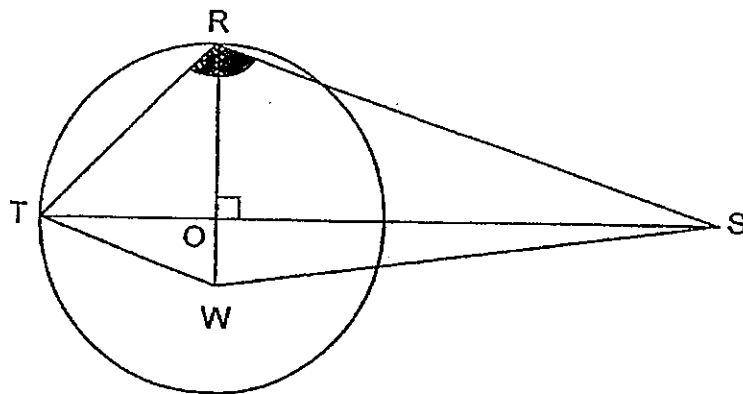
- a) What is the mass of the basket?  
b) What is the average mass of a durian and a jackfruit?

Ans: (a) \_\_\_\_\_ (2 m)

(b) \_\_\_\_\_ (2 m)



- 14) The figure below, not drawn to scale, is a circle with  $O$  as the centre.  $TS$  and  $RW$  are straight lines. The ratio of  $\angle RSO$  to  $\angle OSW$  is  $2 : 1$ .  $\angle SWO = 73^\circ$ . Find  $\angle TRS$ .

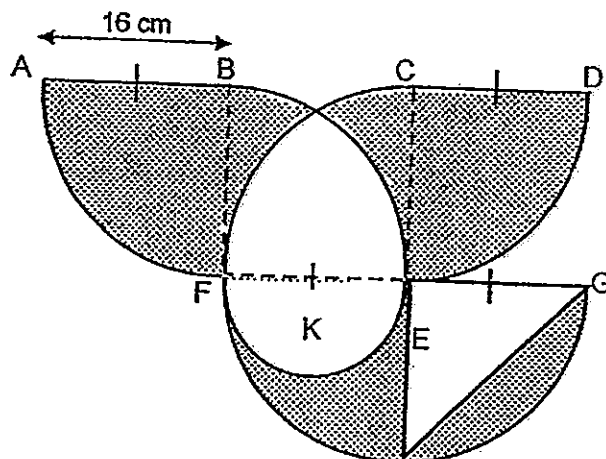


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Ans : \_\_\_\_\_ (3 m)



- 15) The figure is made up of 6 identical quadrants, a semicircle K and a triangle. The total area of the unshaded parts in the figure is  $370 \text{ cm}^2$ . Find the total area of the shaded parts. (Take  $\pi = 3.14$ )



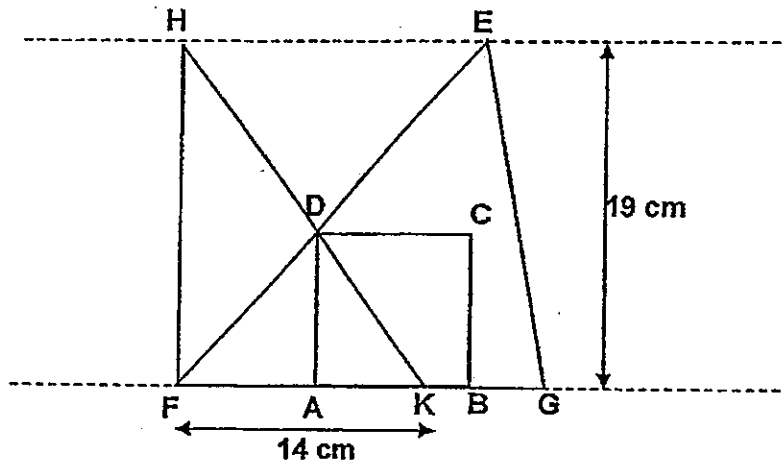
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Ans: \_\_\_\_\_ (5 m)



- 16) The figure below, not drawn to scale, is made up of a square ABCD and two triangles EFG and FKH, overlapping one another. The square has an area of  $81 \text{ cm}^2$ . FK is  $14 \text{ cm}$  and it is  $\frac{2}{3}$  of the length of FG. Find the area of the figure.

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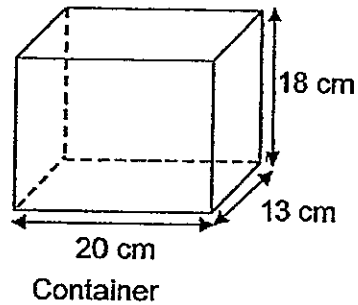
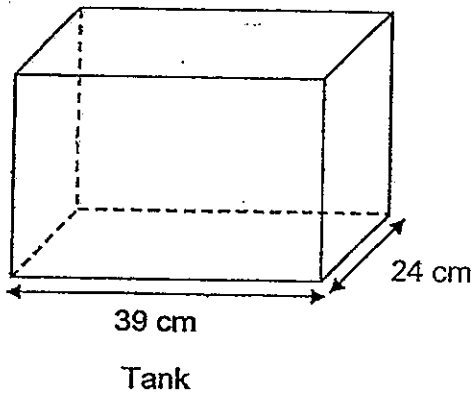


Ans: \_\_\_\_\_ (3 m)



- 17) The figure below shows a tank 39 cm long and 24 cm wide. It was half-filled with water to a depth of 18 cm. Water was poured from the tank into an empty container 20 cm by 13 cm by 18 cm until the container was 80 % filled with water.

- a) What was the final water level in the tank?  
b) How much water was needed to fill up the entire tank?



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this space.

Ans: (a) \_\_\_\_\_ (3 m)

(b) \_\_\_\_\_ (2 m)



- 18) There were 1 570 pupils in a school at the beginning of the year. The ratio of the number of Chinese pupils to Malay pupils to Indian pupils was 5 : 3 : 2. In the middle of the year, 463 Chinese pupils joined the school while some Malay pupils and Indian pupils left the school. The percentage of Chinese pupils increased to 78% while the number of Malay pupils is equal to the number of Indian pupils.

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space.

- (a) How many Indian pupils left the school in the middle of the year?
- (b) What is the percentage decrease in the number of Indian pupils?  
Leave your answer correct to 1 decimal place.

Ans: a) \_\_\_\_\_ (3 m)

b) \_\_\_\_\_ (1 m)

End of Paper





# Answer Key

**EXAM PAPER 2013**

**SCHOOL : CHIJ**

**SUBJECT : PRIMARY 6 MATHEMATICS**

**TERM : SA2**

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

16)641400

17)1/12

18)181

19)\$1.20

20)24

21)

22)a)G

b)South

23)4/9

24)343cm<sup>3</sup>

25)5<sup>3</sup>/<sub>4</sub>h

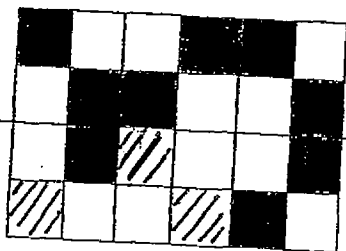
26)2r - 9

27)2 : 1

28)88°

29)18kg 400g

30)630cm<sup>2</sup>



## Paper 2

1)  $1 - \frac{5}{9} = \frac{4}{9}$

$342 \times \frac{4}{9} \div 8 = 19$

2)  $(32 \times 5) + 26 = 186$

$52 \div 5 = 10R2$

$186 \times 10 = 1860$

$2 \times 32 = 64$

$64 + 1860 = \$1924$

$$3) 88/2 \times 5 \times 3 = 660$$

$$4) 6.2 \times \frac{1}{4} \div 5 = 0.31m$$

$$5) (1224 + 48) \div 4 = \$426$$

$$6) 1600 \div 20 = 80$$

$$80 \times 11 = 880$$

$$14 - 6 = 8$$

$$80 \times 8 = 640$$

$$a) 880$$

$$b) 640$$

$$7) 315 \div 90 = 3.5$$

$$3\frac{1}{2} - \frac{1}{3} - \frac{1}{6} = 3$$

$$315 \div 3 = 105km/h$$

$$8) \frac{1}{2} \times 16 \times 13 = 104$$

$$\frac{1}{2} \times 12 \times 28 = 168$$

$$168 + 104 = 272cm^2$$

$$9) 180^\circ - 78^\circ = 102^\circ$$

$$180^\circ - 102^\circ - 42^\circ = 36^\circ$$

$$(180^\circ - 36^\circ) \div 2 = 72^\circ$$

$$10) 5.2 \times 10 = 52$$

$$40 \times 25 \times 116.8 \times \frac{1}{2} = 58400$$

$$5.2 - 2.8 - 1.6 = 0.8$$

$$58.4 - 52 = 6.4$$

$$6.4 \div 0.8 = 8$$

$$8 + 10 = 18min$$

$$11) (432 + 108) \div 3 = 180$$

$$(180 + 108 + 432) \div 4 \times 3 = 540$$

$$540 + 180 + 432 + 108 = 1260$$

$$12) 1 - \frac{1}{4} - \frac{1}{5} - \frac{1}{3} = \frac{13}{60}$$

$$845 \div 13 \times 60 \times \frac{1}{4} = 975$$

$$13) a) (3 + 3.4) - 5.6 = 0.8kg$$

$$b) (5.6 - 0.8) \div 2 = 24kg$$

$$14)(180^\circ - 90^\circ - 73^\circ) \times 2 = 34^\circ$$

$$45^\circ + (180^\circ - 34^\circ - 90^\circ) = 101^\circ$$

$$15) 3.14 \times 16 \times 6/4 = 1205.76$$

$$3.14 \times 16 \div 2 = 401.92$$

$$3.14 \times 8 \div 2 = 100.48$$

$$16 \times 16 \times 0.5 = 128$$

$$370 - 128 - 100.48 = 141.52$$

$$1205.76 - 128 - 100.48 - (141.52 \times 2) = 694.24 \text{cm}^2$$

$$16) \sqrt{81} = 9$$

$$14 \div 2 = 7$$

$$14 + 7 = 21$$

$$\frac{1}{2} \times 19 \times 21 = 199.5 \text{ (EFG)}$$

$$\frac{1}{2} \times 14 \times 9 = 63$$

$$\frac{1}{2} \times 14 \times 19 = 133$$

$$133 - 63 = 70 \text{ (HDF)}$$

$$70 + 199.5 = 269.5 \text{cm}^2$$

$$17) a) 18 \times 39 \times 24 = 16848$$

$$20 \times 13 \times 18 \times 80\% = 3744$$

$$16848 - 3744 = 13104$$

$$13104 \div 39 \div 24 = 14 \text{cm}$$

$$b) 36 - 14 = 22$$

$$22 \times 24 \times 39 = 20592 \text{cm}^3$$

$$18) 5u + 463 = 78p$$

$$1570 \div 10 = 157 \text{ (1u)}$$

$$785 + 463 = 78p$$

$$1248 = 78p$$

$$16 = 1p$$

$$176 = 11p$$

$$314 = 2u$$

$$314 - 176 = 138$$

$$138/314 \approx 43.9\%$$

$$a) 138$$

$$b) 43.9\%$$

