



新加坡福建会馆属下五校小六统一考试  
道南 • 爱同 • 崇福 • 南侨 • 光华

SINGAPORE HOKKIEN HUAY KUAN  
5-SCHOOL COMBINED PRIMARY 6 PRELIMINARY EXAMINATIONS  
TAO NAN • AI TONG • CHONGFU • NAN CHIAU • KONG HWA

2012  
数学 MATHEMATICS  
PAPER 1  
BOOKLET A

Date : 23 August 2012

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANDIDATES

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

This booklet consists of 7 printed pages.

School : \_\_\_\_\_

Name : \_\_\_\_\_ ( )

Class : \_\_\_\_\_

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 on the Optical Answer  
Sheet (OAS).  
(20 marks)

---

1. Find the value of  $60 - (10 + 14) \div 4 \times 3$ .

(1) 58

(2) 42

(3) 3

(4) 27

2. Onions are sold at 20 cents per 100 g. Chef Poh bought 1.2 kg of the onions. How much did he pay?

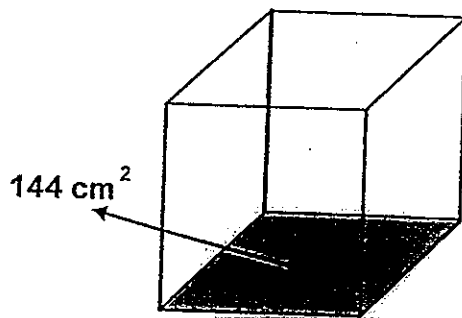
(1) \$1.20

(2) \$2.00

(3) \$2.20

(4) \$2.40

3. The figure below, not drawn to scale, shows a cubical box with a base area of  $144 \text{ cm}^2$ . What is the volume of the box?



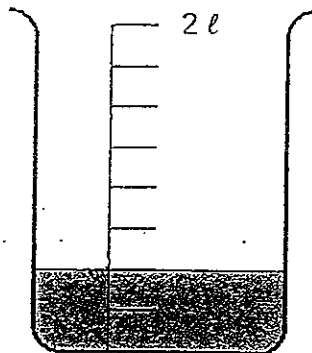
(1)  $156 \text{ cm}^3$

(2)  $432 \text{ cm}^3$

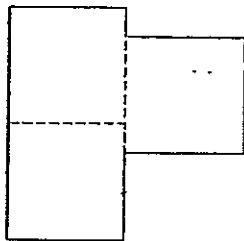
(3)  $1728 \text{ cm}^3$

(4)  $5184 \text{ cm}^3$

4. 10% of the water from a completely filled pail was poured into the container as shown below. What is the capacity of the pail?

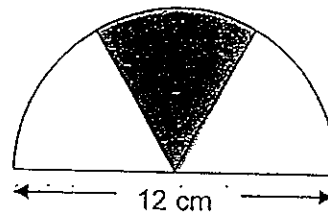


- (1) 5000 ml  
(2) 4500 ml  
(3) 2500 ml  
(4) 1000 ml
5. The figure below is made up of 3 identical squares.  
The area of the figure is  $147 \text{ cm}^2$ . What is the perimeter of the figure?



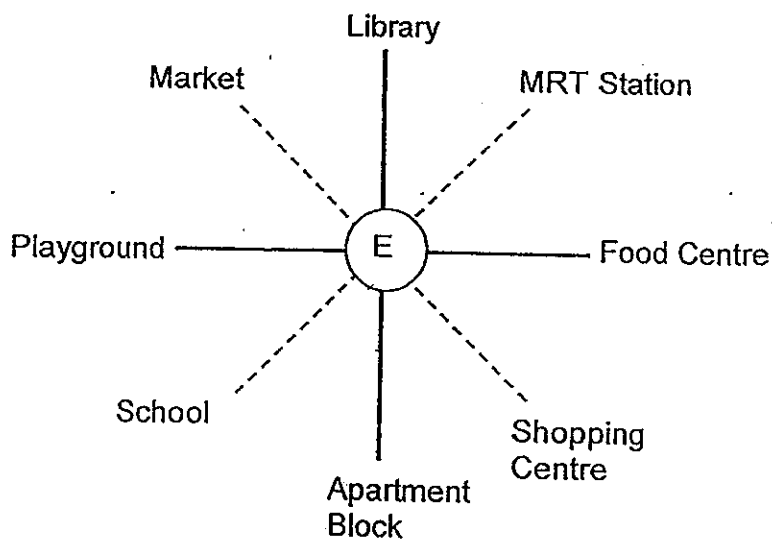
- (1) 28 cm  
(2) 49 cm  
(3) 56 cm  
(4) 84 cm

6. The figure below, not drawn to scale, shows a semicircle of diameter 12 cm. It is divided into three equal parts. What is the area of the shaded part?



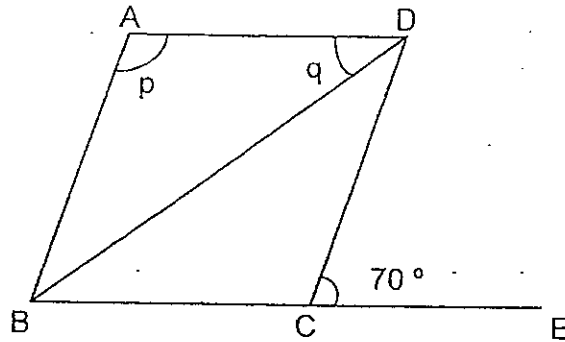
- (1)  $6\pi \text{ cm}^2$
- (2)  $12\pi \text{ cm}^2$
- (3)  $18\pi \text{ cm}^2$
- (4)  $36\pi \text{ cm}^2$

7. Joline is standing at the point marked 'E' in the figure below. She has made a  $135^\circ$  clockwise turn and is now facing the Market. Where was she facing before she made the turn?



- (1) Apartment Block
- (2) Food Centre
- (3) MRT Station
- (4) School

8. In the figure below, not drawn to scale, ABCD is a rhombus. Given that BCE is a straight line, find  $\angle p + \angle q$ .



- (1)  $35^\circ$   
 (2)  $55^\circ$   
 (3)  $140^\circ$   
 (4)  $145^\circ$
9. The table below shows the number of candidates taking the piano examinations.  $\frac{3}{4}$  of the candidates passed the examinations. How many candidates passed the Grade 4 examination?

Grade	1	2	3	4
Number of Candidates taking the examinations	10	14	9	7
Number of Candidates who passed the examinations	8	12	7	?

- (1) 30  
 (2) 27  
 (3) 3  
 (4) 5

10. 4 boys shared 5 regular-sized pizzas equally.  
5 girls shared 3 regular-sized pizzas equally.  
What is the difference between each girl's and each boy's share?

(1)  $\frac{1}{5}$

(2)  $\frac{5}{12}$

(3)  $\frac{13}{20}$

(4)  $\frac{13}{15}$

11. Alice, Betty and Cindy share a packet of sweets equally. There are  $n$  sweets in the packet. Cindy eats 2 sweets and gives 10 of her sweets to her brother. Express the number of sweets Cindy has left in terms of  $n$ .

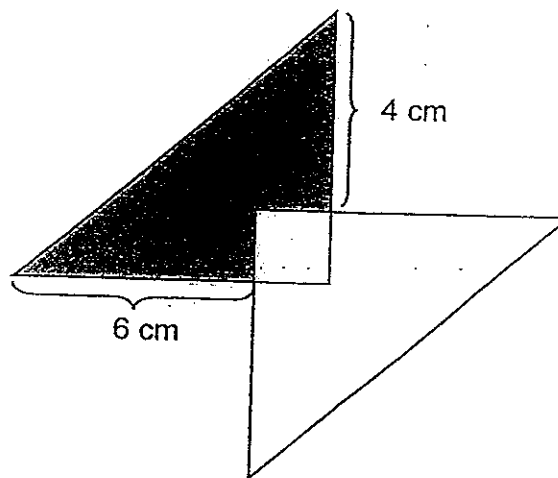
(1)  $\frac{n}{3} - 8$

(2)  $\frac{n}{3} - 12$

(3)  $\frac{n-12}{3}$

(4)  $\frac{n-8}{3}$

12. The figure below is not drawn to scale. Two identical right-angled triangles overlapped and formed a square with a perimeter of 8 cm. Find the area of the shaded part.



- (1)  $12 \text{ cm}^2$   
 (2)  $20 \text{ cm}^2$   
 (3)  $24 \text{ cm}^2$   
 (4)  $32 \text{ cm}^2$
13. The total length of 12 similar ropes and 3 similar ribbons is 0.27 m shorter than the total length of 3 such ropes and 12 such ribbons. A piece of rope is 40 cm long. Find the total length of one piece of ribbon and one piece of rope.
- (1) 0.43 m  
 (2) 0.70 m  
 (3) 0.77 m  
 (4) 0.83 m

14. Dick, Edward and Felix have some money. If Dick gives \$26 to Felix, both boys will have the same amount of money each. If Edward gives \$15 to Felix, he will have the same amount of money as Felix. How much more money does Dick have than Edward?

- (1) \$11
- (2) \$22
- (3) \$37
- (4) \$41

15. There was some water in a container. Felicia first poured out  $\frac{1}{2}$  of the water. Then she poured out  $\frac{1}{3}$  of the remaining water.

In the third pouring, she poured out  $\frac{1}{4}$  of the remaining water.

In the fourth pouring, she poured out  $\frac{1}{5}$  of the remaining water, and so on.

How many times of pouring will there be for the remaining water to be exactly  $\frac{1}{10}$  of the original amount of water in the container?

- (1) 8
- (2) 9
- (3) 10
- (4) 11





新加坡福建会馆属下五校小六统一考试  
道南 • 爱同 • 崇福 • 南侨 • 光华

SINGAPORE HOKKIEN HUAY KUAN  
5-SCHOOL COMBINED PRIMARY 6 PRELIMINARY EXAMINATIONS  
TAO NAN • AI TONG • CHONGFU • NAN CHIAU • KONG HWA

2012  
数学 MATHEMATICS  
PAPER 1  
BOOKLET B

Date : 23 August 2012

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANDIDATES

- √ Do not open this booklet until you are told to do so.
- √ Follow all instructions carefully.
- √ Answer all questions.
- √ You are **not** allowed to use a calculator.

This booklet consists of 8 printed pages.

School : \_\_\_\_\_  
Name : \_\_\_\_\_ ( )  
Class : \_\_\_\_\_

TOTAL	20
-------	----



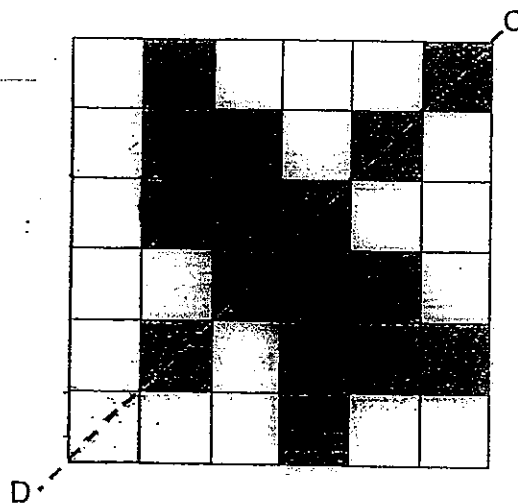
Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

16. A 2-digit number when divided by 13 gives a remainder of 3. What is the **largest** possible value of this 2-digit number?

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

17. Shade **2 more** squares such that the line CD is the line of symmetry for the figure below.

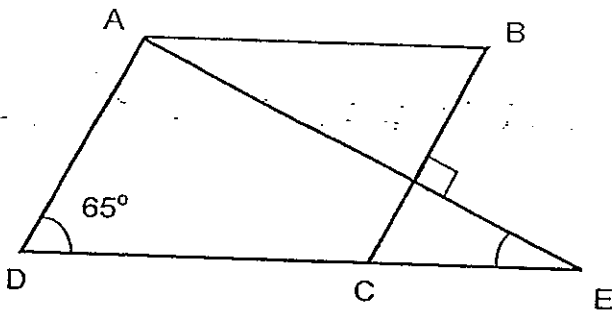


18. Express 1.2 as a percentage.

Do not write  
in this space

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

19. In the figure below, not drawn to scale, ABCD is a parallelogram, DE and AE are straight lines. Find  $\angle AED$ .



Ans: \_\_\_\_\_ °

20. A group of  $p$  workers was engaged to lay the cement tiles for an office in 2 weeks. If  $3p$  more workers were to join the work team, how many week(s) would the job take?

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



21. For every \$5 that Valerie saves, her father will give her \$e. After some time, Valerie saved \$140. How much did her father give her?

Do not write  
in this space

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

22. A group of children was in the hall. The ratio of the number of girls to the number of boys was 3 : 5. After a group of boys entered the hall, the number of girls became  $\frac{3}{10}$  the new total number of children. What was the percentage increase in the number of boys?

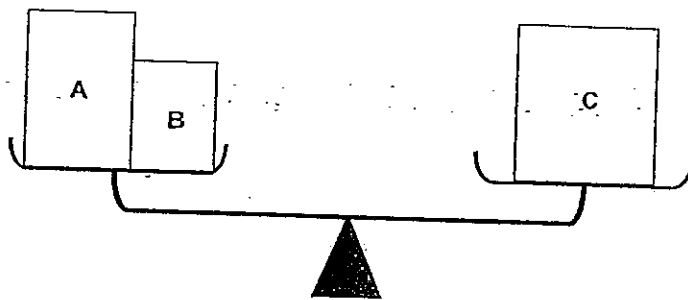
Ans: \_\_\_\_\_ %

23. Marcus completed a race in 2 min 20 s. He was 30 s faster than Tom. How long did Tom take to complete the race?

Do not write  
in this space

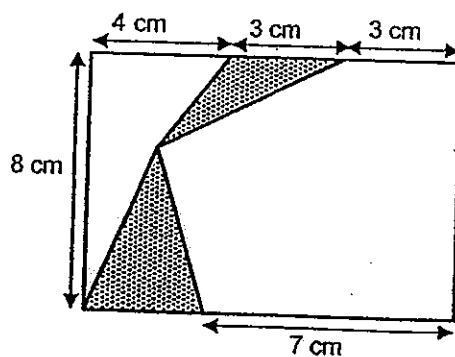
Ans: \_\_\_\_\_ s

24. The figure below shows three boxes on a balance scale. Given that the average mass of Boxes A and B is  $1\frac{2}{5}$  kg, find the mass of Box C.



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

25. The figure below, not drawn to scale, shows 2 shaded triangles inside a rectangle. Find the area of the shaded parts.



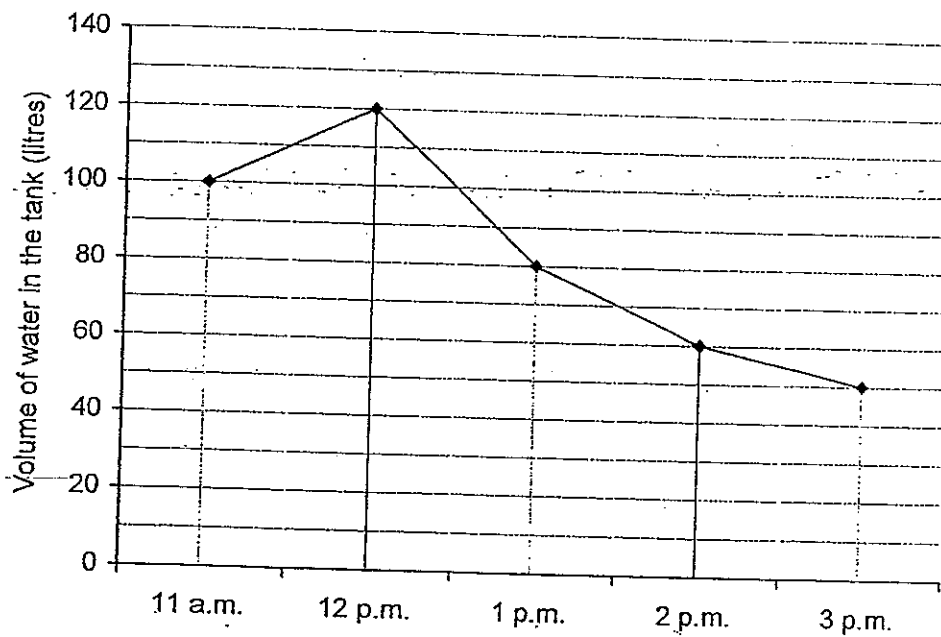
Ans: \_\_\_\_\_ cm<sup>2</sup>

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 answer in the units stated.

(10 marks)

Do not write  
in this space

26. The line graph shows the volume of water in a tank from 11 a.m. to 3 p.m. The tank was completely filled with water at 12 p.m. Water was then allowed to flow out of the tank.

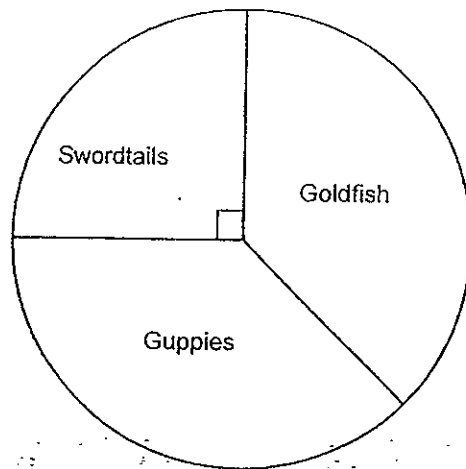


At what time was there only 50% of water left in the tank?

Ans: \_\_\_\_\_ p.m.

27. There are three types of fish in a tank. The pie chart below represents the number of each type of fish in it. There are 18 guppies and goldfish altogether. Find the total number of fish in the tank.

Do not write  
in this space



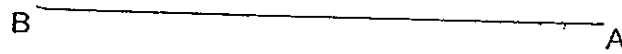
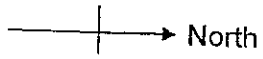
Ans: \_\_\_\_\_





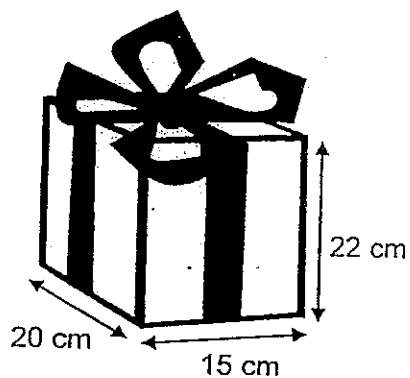
28. In the figure below, Point A is north of Point B and Point C is east of Point B.  $\angle BAC = 45^\circ$ . Draw triangle ABC by completing the figure.

Do not write  
in this space



29. Charlotte wrapped a birthday present. She used 2 m of ribbon for the present. What was the length of ribbon used to tie the bow?

Do not write  
in this space



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

30. 4 girls shared a bag of beads. Elaine took 470 beads. Fiona took 100 fewer beads than Gladys. Gladys took 30% of the beads while Hilda took  $\frac{1}{5}$  of the beads. How many beads were there in the bag?

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

End of Paper 1



新加坡福建会馆属下五校小六统一考试  
道南 • 爱同 • 崇福 • 南侨 • 光华

SINGAPORE HOKKIEN HUAY KUAN  
5-SCHOOL COMBINED PRIMARY 6 PRELIMINARY EXAMINATIONS  
TAO NAN • AI TONG • CHONGFU • NAN CHIAU • KONG HWA

2012  
数学 MATHEMATICS  
PAPER 2

Date : 23 August 2012  
Total Time for Paper 2: 1 h 40 min

INSTRUCTIONS TO CANDIDATES

- Do not open this booklet until you are told to do so.
- √ Follow all instructions carefully.
  - √ Answer all questions.
  - √ Show your working clearly as marks are awarded for correct answers
  - √ You are allowed to use a calculator.

This booklet consists of 16 printed pages.

School : \_\_\_\_\_  
Name : \_\_\_\_\_  
Class : \_\_\_\_\_

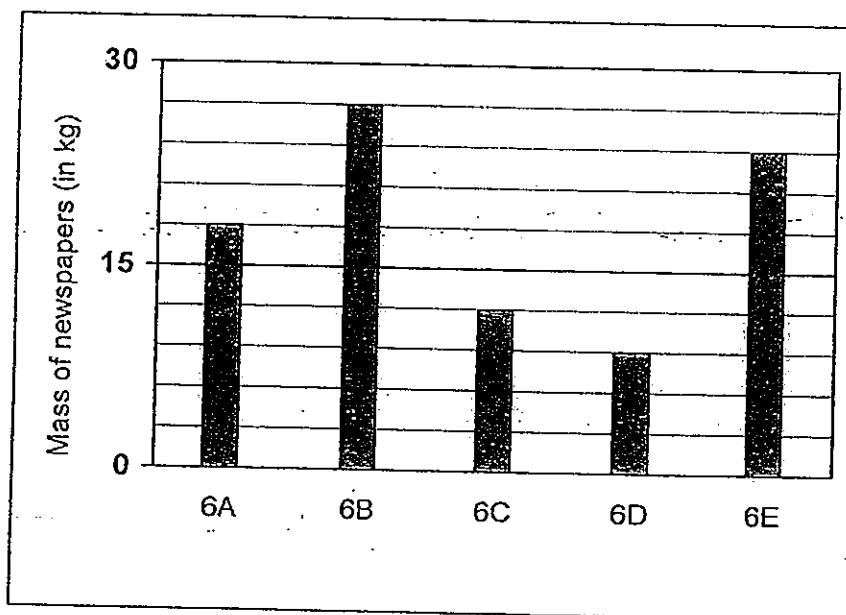
Booklet A	
Booklet B	
Paper 2	
Total Marks	

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

Do not write in this space

(10 marks)

1. The graph below shows the mass of newspapers collected by five classes in a recycling project.



Another two classes, 6F and 6G collected a total of 36 kg of newspapers. What was the average mass of newspapers collected by all the 7 classes?

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

2. There are some cards in a box.  $\frac{1}{4}$  of the cards are blue and  $\frac{1}{2}$  of the remainder are yellow. The rest of the cards are red. Express the number of blue cards as a fraction of the number of red cards.

Do not write  
in this space

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

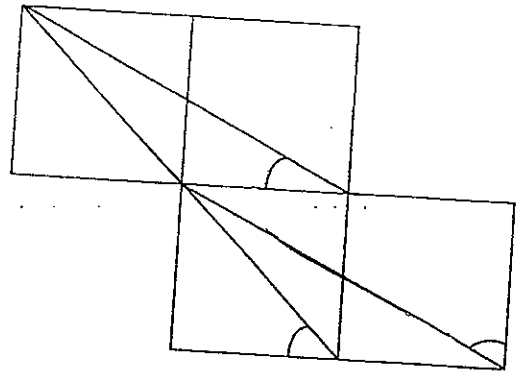
3. 150 balloons are hung at an equal distance apart in a row. The distance between the 34<sup>th</sup> and the 64<sup>th</sup> balloon is 24 m. What is the distance between the first and the last balloon?

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



4. The figure below is not drawn to scale. It is made up of 4 identical squares. Find the sum of the 3 marked angles.

Do not write in this space



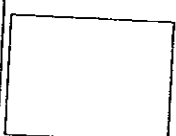
Ans: \_\_\_\_\_°

5. Ervin bought 4 different promotional items from the bookshop. He paid \$5 for them and received a change of 10¢. Out of the 4 items, only 2 were of the same value. Which of the items bought was the most expensive?

Eraser -- \$0.55	Sharpener -- \$0.55
Pencil -- \$0.65	Pen -- \$1.80
Notebook -- \$2.00	File -- \$2.50

**OFFER!**

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



For questions 6 to 18, show your working clearly in the space below each question and write your answers in the spaces provided.

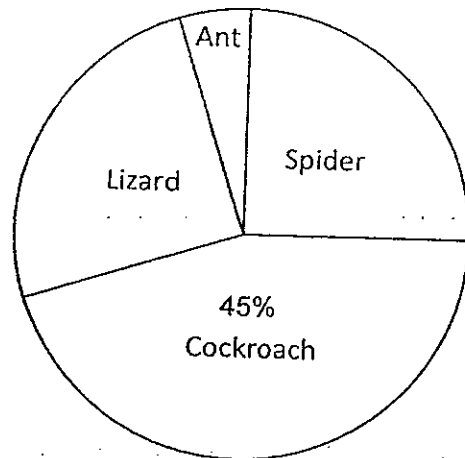
The number of marks available is shown in the brackets [ ] at the end of each question or part-question. (50 marks)

Do not write  
in this space

6. Mdm Lim bought 10 apples and 2 pears with \$16. She would have \$4 left if she bought 4 apples and 12 pears instead. Find the total cost of a pear and an apple.

Ans : \_\_\_\_\_ [3]

7. The pie chart below shows the findings of a survey conducted with 800 housewives on the types of pests most disliked.



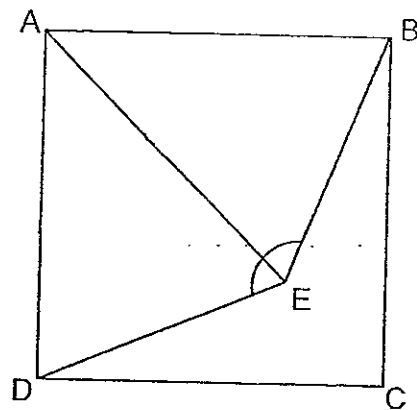
Do not write  
in this space

The number of housewives who dislike ants is  $\frac{1}{10}$  that of the total number of housewives who dislike lizards and spiders. The number of housewives who dislike lizards is the same as the number of housewives who dislike spiders. How many more housewives dislike spiders than those who dislike ants?

Ans : \_\_\_\_\_ [3]



8. The figure below is not drawn to scale. It shows two triangles inside a square ABCD.  $AE = CD$ . Find  $\angle BED$ .



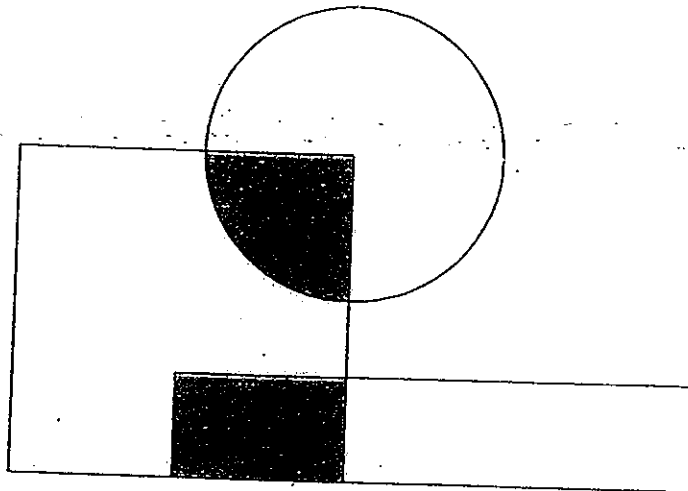
Do not write  
in this space

Ans : \_\_\_\_\_ [3]



9. In the figure below, not drawn to scale,  $\frac{1}{4}$  of the circle is shaded. The ratio of the area of the square to the total area of rectangle and circle is 5 : 7. 40% of the square is shaded and  $\frac{1}{3}$  of the rectangle is shaded. What is the ratio of the area of shaded parts to the area of the unshaded parts in the figure?

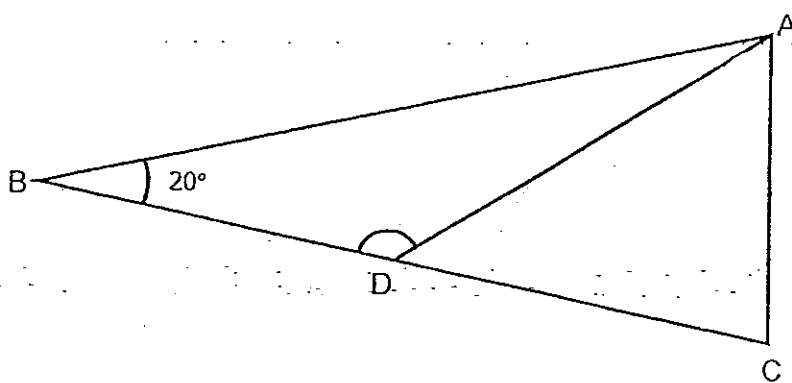
Do not write  
in this space



Ans : \_\_\_\_\_ [3]



10. The figure below is not drawn to scale.  $ABC$  is an isosceles triangle where  $BA = BC$ . Given that  $D$  is the midpoint of  $BC$  and  $AC$  is  $\frac{1}{2}$  of  $BA$ , find  $\angle ADB$ .



Do not write  
in this space

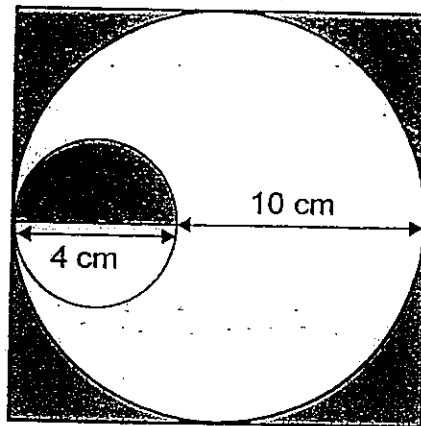
Ans : \_\_\_\_\_ [3]



11. The figure below, not drawn to scale, shows 2 circles within a square. The diameter of the small circle is 4 cm and the diameter of the big circle is 10 cm more. Find area of the shaded parts.

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

Do not write  
in this space



Ans : \_\_\_\_\_ [4]

12. Car A and Car B started travelling at 09 45 from the opposite ends of a straight road. Car A travelled at an average speed of 40 km/h. Car B travelled 10 km/h faster and took 1.5 hours less than Car A to travel the entire road. Find the time when both cars met.

Do not write  
in this space

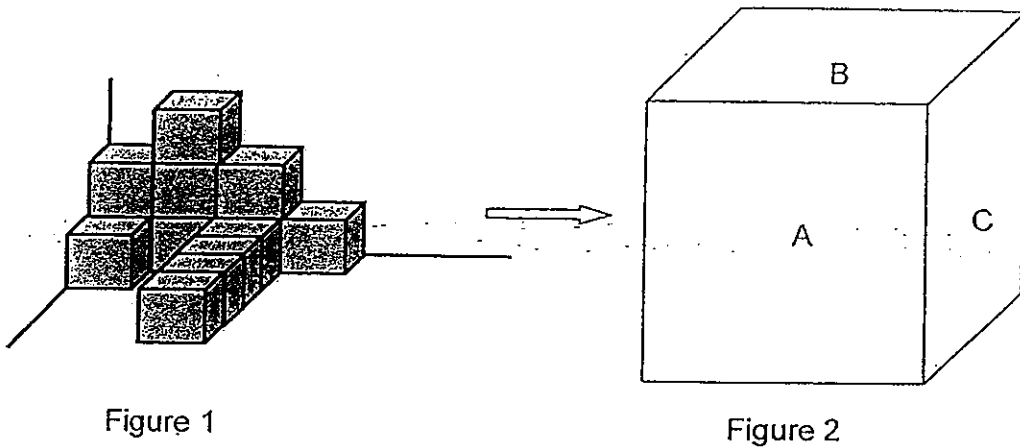
Ans : \_\_\_\_\_ [4]



13. Figure 1 is a solid figure made up of identical cubes. It has a volume of  $832 \text{ cm}^3$ . 112 more cubes are added to Figure 1 to form a big cube as shown in Figure 2.

Do not write  
in this space

- (a) Find the volume of the big cube formed.  
(b) Faces A, B and C of the big cube formed are painted red. Find the area that is painted red.

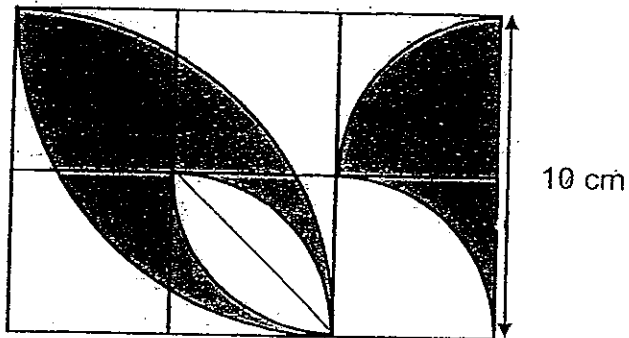


Ans: (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [2]

14. The figure below, not drawn to scale, is made up of identical squares and quadrants.  
Find the total area of the unshaded parts. (Take  $\pi = 3.14$ )

Do not write  
in this space



Ans : \_\_\_\_\_ [5]

15. Cindy, Dick and Eddy had \$410 altogether. Cindy gave  $\frac{1}{3}$  of her money to Eddy. Dick then gave  $\frac{2}{5}$  of his money to Cindy. As a result, Dick had \$20 less than Cindy and \$30 less than Eddy. How much money had Cindy at first?

Do not write  
in this space

Ans : \_\_\_\_\_ [4]



16. Roger had some fairy lights. He used  $\frac{1}{3}$  of the fairy lights to decorate 15 small Christmas trees and  $\frac{2}{5}$  of the fairy lights to decorate 6 big Christmas trees. He kept the rest. Each big Christmas tree had 14 more fairy lights than each small Christmas tree. How many fairy lights did Roger have at first?

Do not write  
in this space

Ans : \_\_\_\_\_ [4]

17. A fruit seller had some oranges, pears and mangoes. After selling some of them, there were 6 pears for every 5 oranges left and 7 oranges for every 3 mangoes left. He sold 168 oranges. The number of pears sold was the same as the number of mangoes sold. He had a total of 456 pears and mangoes left.

Do not write  
in this space

- (a) How many oranges had he at first?  
(b) Given that the number of pears was twice the number of mangoes at first, what was the total number of pears and mangoes sold?

Ans : (a) \_\_\_\_\_ [3]

(b) \_\_\_\_\_ [2]



18. Bossy Tan bought 80 handphones. He sold 10% of them at the price he had paid for. He sold  $\frac{2}{3}$  of the remaining handphones at \$650 and the rest at a 15% discount of the selling price \$650. In the end, he earned \$1620. How much did Bossy Tan pay for one handphone?

Do not write  
in this space

Ans : \_\_\_\_\_ [5]

*End of Paper 2*



# Answer Ke

KAM PAPER 2011

SCHOOL : HOKKIEN  
SUBJECT : PRIMARY 6 SCIENCE

FORM : SA 2

per 1

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

) Multiples of 13: 13, 26, 39, 52, 65, 78, 91

Largest possible value = 91

Remainder of 3 =  $91 + 3 = 94$

)  $1.2 \times 100\% = 120\%$

) Angle BCE =  $65^\circ$

Angle AED =  $180^\circ - 90^\circ - 65^\circ = 25^\circ$

Total worker =  $3p + p = 4p$

p workers = 2 weeks

4p workers =  $2 \div 4 = 0.5$  week.

$\$140 \div \$5 = 28$

$28 \times e = 28e$

Original ratio: Girls 3, Boys 5

New ratio: Girls 3, boys  $10 - 3 = 7$

Increment in boys = ratio of  $7 - 5 = 2$

Percentage Increase =  $(\text{Increment}) \div 5 (\text{original}) \times 100\% = 40\%$

2 min 20 sec =  $2 \times 60 + 20 = 140$  seconds

Tom's time =  $140 + 30 = 170$  seconds

Total mass =  $1 \frac{2}{5} \times 2 = 2 \frac{4}{5}$  kg

Total mass in grams =  $2 \frac{4}{5} \times 1000\text{g} = 2800$  g

x base x combined height

5) Area =

$$2 \times 3 \times 8$$

$$= 12\text{cm}^2$$

Base = 3cm for both triangles ( 4 + 3 + 3 - 7 = 3 cm)

i) 100% of water is at 12pm

$$50\% \text{ of water} = 50/100 \times 120\text{L} = 60\text{L}$$

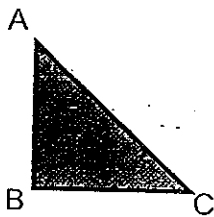
Time at which water is left 60L = 2pm.

$$) 360^\circ - 90^\circ = 270^\circ$$

$$\cdot 270^\circ = 18 \text{ Fishes}$$

$$\text{Total number of fishes} = 360^\circ / 270^\circ \times 18 = 24$$

)



$$) 2\text{m} = 200\text{cm}$$

$$200 - 4(22) - 2(15+20) = 42\text{cm}$$

$$42\text{cm} = 0.42\text{m}$$

$$\text{Gladys} = 30\%$$

$$\text{Hilda} = 1/5 \times 100\% = 20\%$$

Assuming Elaine took 100 beads lesser and Fiona took exactly same number of beads as Gladys

$$\text{Fiona} = 30\%$$

$$\text{Elaine} = 470 - 100 = 370 \text{ beads} \rightarrow 100\% - 30\% - 30\% - 20\% = 20\%$$

$$20\% = 370$$

$$100\% = 100\% / 20\% \times 370 = 1850$$

er 2

$$6A = 18$$

$$6B = 27$$

$$6C = 12$$

$$6D = 9$$

$$6E = 24$$

$$\text{Average} = (18+27+12+9+24+36) \div 7 = 18$$

$$\text{Blue} = 1/4$$

$$\text{Remaining} = 1 - 1/4 = 3/4$$

$$\text{Yellow} = 1/2 \text{ of remaining} = 1/2 \times 3/4 = 3/8$$

$$\text{Red} = 1 - 1/4 - 3/8 = 3/8$$

Express blue as a fraction of red =  $1/4 \div 3/8 = 8/12$   
 $8/12 = 2/3$

) Distance between 2 balloons:  $24 \div (64-34) = 0.8\text{m}$   
Total distance =  $0.8 \times (150-1) = 119.2\text{m}$   
(distance between 0th and 1st balloon not counted, hence -1)

$$90^\circ + 45^\circ = 135^\circ$$

4 items were 1 eraser 1 sharpener 1 pen and 1 notebook  
Most expensive = notebook.

Let apple be A and pear be P.

$$10A + 2P = 16$$

Equation 1 (1)

$$4A + 12P = 16 - 4$$

Equation (2)

$$(1) \times 6: 60A + 12P = 96$$

-(3)

$$(3) - (2): 60A + 12P - (4A + 12P) = 96 - 12$$

$$56A = 84$$

$$A = \$1.50$$

Substitute A = \$1.50 into (1):  $10(1.50) + 2P = 16$

$$15 + 2P = 16$$

$$2P = 1$$

$$P = \$0.50$$

Cost of 1 apple and 1 pear =  $\$1.50 + \$0.50 = \$2$

Alternatively:

Adam can buy 14 apples and 14 pears, total she would spend:

$$16 + (16-4) = \$28$$

14 apples and 14 pears cost \$28, hence 1 apple and 1 pear would cost:

$$\$28 / 14 = \$2$$

Cockroach = 45%

Remaining = 55%

Ants is 1/10 of lizards and spiders; Lizards and Spiders = 10 parts, Ants = 1 part  
total 11 part.

$$11p = 55\%$$

Each part = 5%

Spider = Lizard =  $10/2 = 5$  parts

Number of spider more than ant =  $5 - 1 = 4$  parts

$$4\text{parts} = 20\%$$

$$20\% \text{ of } 800 = 20/100 \times 800 = 160$$

Angle BAE = Angle DAE.

Assuming they are cut evenly, Angle AEB =  $(180^\circ - 45^\circ) \div 2 = 67.5^\circ$

Hence angle BED =  $67.5^\circ \times 2 = 135^\circ$

1/4 of square shaded:  $1/4 \times 5 = 2$  parts square shaded.

1/4 and 1/3 of circle and rectangle shaded = 2 parts out of 7 parts

Total shaded parts = 4 parts

Total parts of square rectangle and circle =  $5 + 7 = 12$

Ratio of shaded to unshaded =  $4:12 = 1:4$

Angle BCA =  $(180^\circ - 20^\circ) \div 2 = 80^\circ$

Since D is midpoint of BC, length of AD = CD ie: triangle ACD is also an isosceles triangle

Angle ADC =  $(180^\circ - 80^\circ) \div 2 = 50^\circ$

Angle ADB =  $180^\circ - 50^\circ = 130^\circ$

Area of circle =  $22/7 \times r^2$

Radius of small circle = 2cm

Area of shaded half small circle =  $1/2 \times 22/7 \times 2^2 = 44/7 \text{ cm}^2$

Total square area =  $14 \times 14 = 196 \text{ cm}^2$

Radius of large circle = 7cm

Area of large circle =  $22/7 \times 7^2 = 154 \text{ cm}^2$

Area of shaded parts =  $44/7 + (196 - 154) = 482/7 \text{ cm}^2$

Car A = 40km/h

Car B = 50km/h

Let x be the distance.

Time taken by Car A =  $x/40$

Time taken by Car B =  $x/50$

Difference between Car A and B = 1.5hr

$x/40 - x/50 = 1.5$

$1.5$

$5x/200 - 4x/200 = 1.5$

$x/200 = 1.5$

$x = 300 \text{ km}$

1 speed =  $40 + 50 = 90 \text{ km/h}$

time taken to meet =  $300/90 = 31/3 \text{ hours}$

$5 + 31/3 \text{ hours} = 1305 \text{ hours}$

Figure 1 = 13 cubes

Volume of each cube =  $832 \div 13 = 64 \text{ cm}^3$

Total Cubes to form figure 2 = 125

Volume =  $125 \times 64 = 8000 \text{ cm}^3$

Length of large cube :  $\sqrt[3]{(8000)} = 20 \text{ cm}$



$$\text{Area of ABC} = 3 \times 20 \times 20 = 1200 \text{ cm}^2$$

4)

A	B	C
D	E	F

$$\text{Shaded Area of C and F} = 5 \times 5 = 25 \text{ cm}^2$$

$$\text{Area of quadrant ABDE} = \frac{1}{4} \times 3.14 \times 10^2 = 78.5 \text{ cm}^2$$

$$\text{Area of square ABDE} = 10 \times 10 = 100 \text{ cm}^2$$

$$\text{Area of unshaded outer quadrant ABDE} = 2 \times (100 - 78.5) = 43 \text{ cm}^2$$

$$\text{Area of square E} = 5 \times 5 = 25 \text{ cm}^2$$

$$\text{Area of quadrant in E: } \frac{1}{4} \times 3.14 \times 5^2 = 19.625$$

$$\text{Area of triangle in E} = \frac{1}{2} \times 5 \times 5 = 12.5 \text{ cm}^2$$

$$\text{Area of unshaded inner area in E} = 2 \times (19.625 - 12.5) = 14.25$$

$$\text{Total area of unshaded parts} = 43 + 14.25 + 10 = 82.25 \text{ cm}^2$$

$$30 - 20 = 10$$

$$410 + 30 + 10 = 450$$

$$450 \div 3 = 150$$

$$150 - 10 = 140$$

$$150 - 30 = 120$$

$$5 - 2 = 3$$

$$120 \div 3 \times 5 = 200$$

$$200 - 120 = 80$$

$$140 - 80 = 60$$

$$60 \div 2 \times 3 = 90$$

$$15 \times 3 = 45$$

$$6 \div 2 \times 5 = 15$$

$$45 \div 15 = 3$$

$$3 - 1 = 2$$

$$14 \div 2 \times 3 = 21$$

$$21 - 14 = 7$$

$$7 \times 15 = 105$$

$$105 \times 3 = 315$$

$$P:O = 6:5 = 42:35$$

$$\text{Oranges : Mango} = 7:3 = 35:15$$

$$\text{Pear : oranges : mangos} = 42:35:15$$

$$42 + 15 = 57$$

$$456 \div 57 = 8$$

$$3 \times 35 + 168 = 448$$

$$3 \times 42 = 336$$

$$3 \times 15 = 120$$

148 Mango at first

Sold 192 pears and mangos

$$100\% - 10\% = 90\%$$

$$90\% \times \frac{2}{3} = 60\%$$

$$650 \times (100\% - 15\%) = 552.5$$

$$60\% \times 80 = 48$$

$$48 \times 650 = 31200$$

$$30\% \times 80 = 24$$

$$24 \times 552.5 = 13260$$

$$13260 + 31200 = 44460$$

$$44460 - 1620 = 42840$$

$$42840 \div (48+24) = 595$$