



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 EXAMINATION  
TAO NAN · AI TONG · CHONGFU · NAN CHIAU · KONG HWA

2008

数学 MATHEMATICS  
BOOKLET A

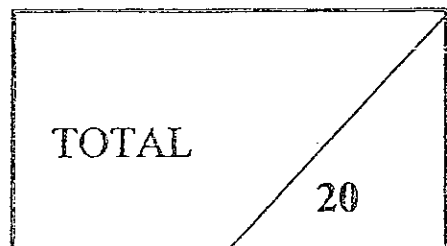
Total Time for Booklets A and B: 2 h 45 min

INSTRUCTIONS TO CANDIDATES

- √ Do not open this booklet until you are told to do so.
- √ Follow all instructions carefully.
- √ Answer all questions.

This booklet consists of 5 printed pages.

School : \_\_\_\_\_  
Name : \_\_\_\_\_ ( )  
Class : \_\_\_\_\_  
Date : 22 August 2008



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 oval (1, 2, 3 or 4) on the Optical Answer Sheet (OAS).

[20 marks]

1 2060 m is the same as \_\_\_\_\_.

- (1) 2 km 6 m
- (2) 2 km 60 m
- (3) 20 km 6 m
- (4) 20 km 60 m

2 What is the value of  $32 + 36 \div 4 - 14$  ?

- (1) 58
- (2) 55
- (3) 3
- (4) 27

3  $3.015 = 3 + 0.001 \times \square$

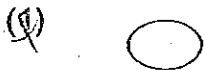
What is the missing number in the box?

- (1) 1
- (2) 5
- (3) 15
- (4) 150

4 Find the value of  $\frac{2k-8}{4}$  when  $k = 8$ .

- (1) 0
- (2) 2
- (3) 8
- (4) 14

5 Which of the following has only 1 line of symmetry?



6 If  $\frac{1}{2}$  of a number is 60, what is  $\frac{1}{3}$  of the number?

- (1) 10
- (2) 40
- (3) 120
- (4) 360

7 Joel, Vincent and Nick shared some stickers in the ratio 3 : 4 : 1.  
What percentage of the stickers did Joel receive?

- (1) 12.5%
- (2) 25%
- (3) 37.5%
- (4) 50%

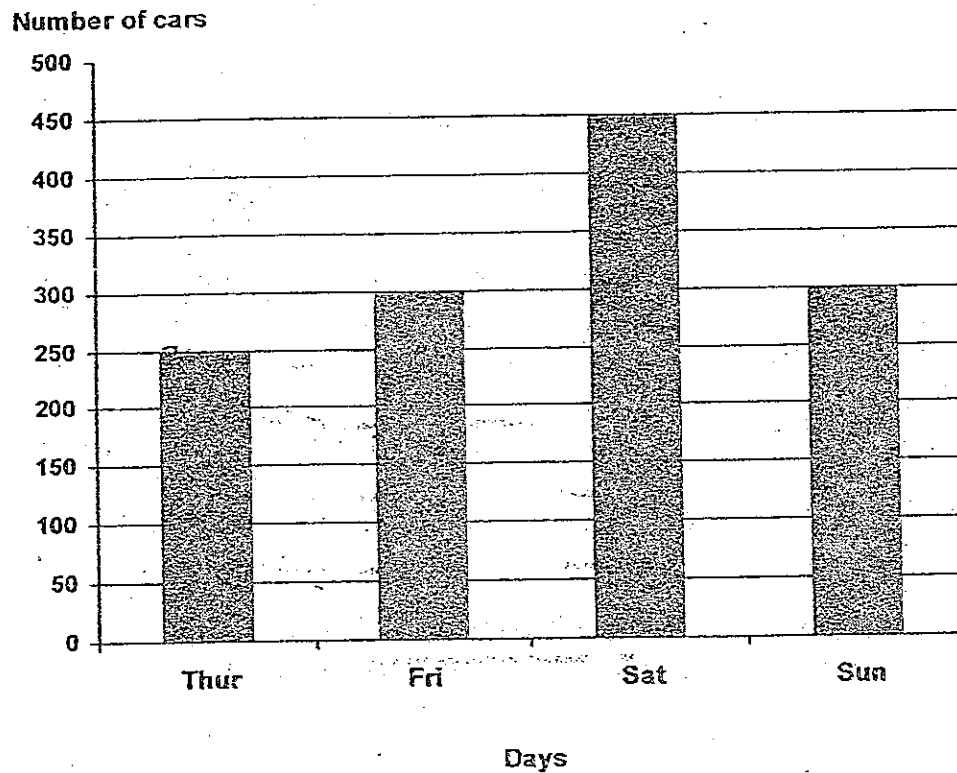
8 Jimmy takes 9 minutes to cycle from his home to his school. If he walks to school, he will take 24 minutes. How long will he take if he cycles  $\frac{2}{3}$  of the distance and walks the rest of the distance from his home to his school?

- (1) 14 min
- (2) 19 min
- (3) 22 min
- (4) 33 min

9 Ahmad has thrice as much money as Devi. If Ahmad gives Devi \$45, he will have the same amount of money as Devi. How much money does Ahmad have?

- (1) \$45
- (2) \$90
- (3) \$135
- (4) \$180

10 The graph below shows the number of cars sold in a town over 4 days.



What is the average number of cars sold over the four days?

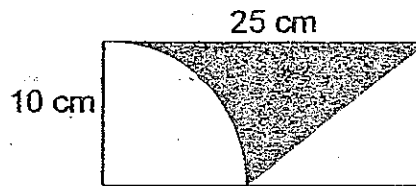
- (1) 300
- (2) 325
- (3) 1200
- (4) 1300

125

11 Deborah went shopping with a sum of money. She spent 0.4 of it on a pair of shoes and  $\frac{1}{6}$  of the remainder on a drink. If she had \$26.00 left, how much did the pair of shoes cost?

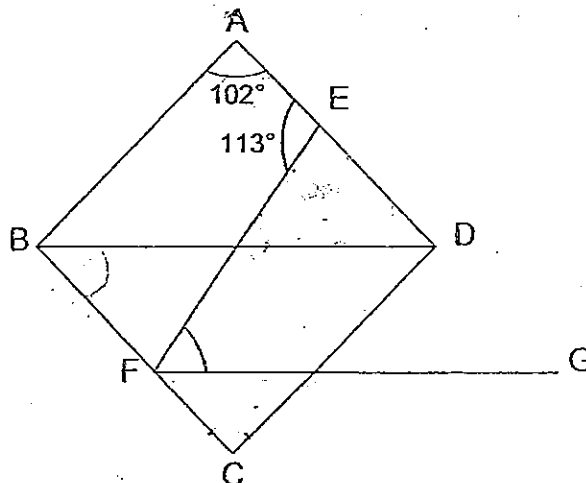
- (1) \$5.20
- (2) \$20.80
- (3) \$24.00
- (4) \$52.00

12 The figure, not drawn to scale, shows a quadrant and a triangle enclosed in a rectangle. Find the area of the unshaded parts. (Take  $\pi = 3.14$ )



- (1) 96.5 cm<sup>2</sup>
- (2) 141 cm<sup>2</sup>
- (3) 153.5 cm<sup>2</sup>
- (4) 250 cm<sup>2</sup>

13 In the figure below, not drawn to scale, ABCD is a rhombus. BD, EF and FG are straight lines and  $BD \parallel FG$ .  $\angle BAE = 102^\circ$  and  $\angle AEF = 113^\circ$ . Find  $\angle EFG$ .



- (1) 39°
- (2) 74°
- (3) 78°
- (4) 106°

14 512 marbles are arranged to form a square. There is an equal number of marbles on each side of the square. How many marbles are there on each side of the square?

- (1) 126
- (2) 127
- (3) 128
- (4) 129

15 The ratio of the length to the breadth of a rectangle is 5 : 3 . The rectangle has an area of  $240 \text{ cm}^2$ . What is the length of the rectangle?

- (1) 12 cm
- (2) 20 cm
- (3) 48 cm
- (4) 80 cm



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数学 MATHEMATICS  
BOOKLET B

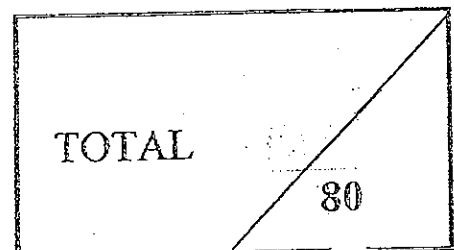
Total Time for Booklets A and B: 2 h 15 min

INSTRUCTIONS TO CANDIDATES

- √ Do not open this booklet until you are told to do so.
- √ Follow all instructions carefully.
- √ Answer all questions.

This booklet consists of 19 printed pages.

School : \_\_\_\_\_  
Name : \_\_\_\_\_ ( )  
Class : \_\_\_\_\_  
Date : 22 August 2008



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]

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16 Express 10.05 as a fraction in its simplest form.

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

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17 Find the value of  $\frac{2}{3} \div 4$ .  
Give your answer in its simplest form.

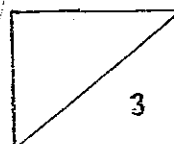
Ans: \_\_\_\_\_

---

18 Express 168 minutes in hours and minutes.

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

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- 19 Jay has a mass of 34.7 kg. He is half as heavy as Sam.  
What is Sam's mass?

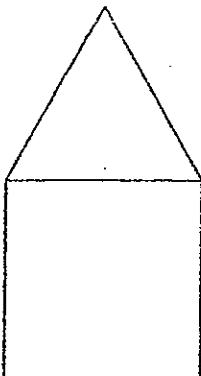
Ans: \_\_\_\_\_ kg

- 20 The table below shows the number of Pokemon cards collected by a group of boys. What is the total number of cards collected by all the boys?

Number of cards each boy collected	Number of boys
36	3
50	1

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

- 21 Ken used a piece of wire to bend into the figure shown below. It is made up of 1 square and 1 equilateral triangle. Find the area of the square if the wire is 42 cm long.



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

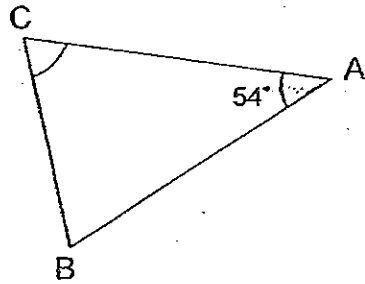


- 22 Janet takes 12 seconds to cut a rod into 4 equal parts. At this rate, how long will she take if she cuts it into 8 equal parts?

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

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- 23 The figure, not drawn to scale, shows an isosceles triangle.  $AB = AC$  and  $\angle BAC = 54^\circ$ . Find  $\angle ACB$ .



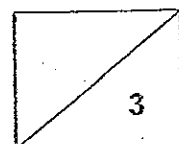
Ans: \_\_\_\_\_ °

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- 24 Mr. Tan takes 20 min to drive from his house to his office every day. If his average speed is 84 km/h, what is the distance between his office and his house?

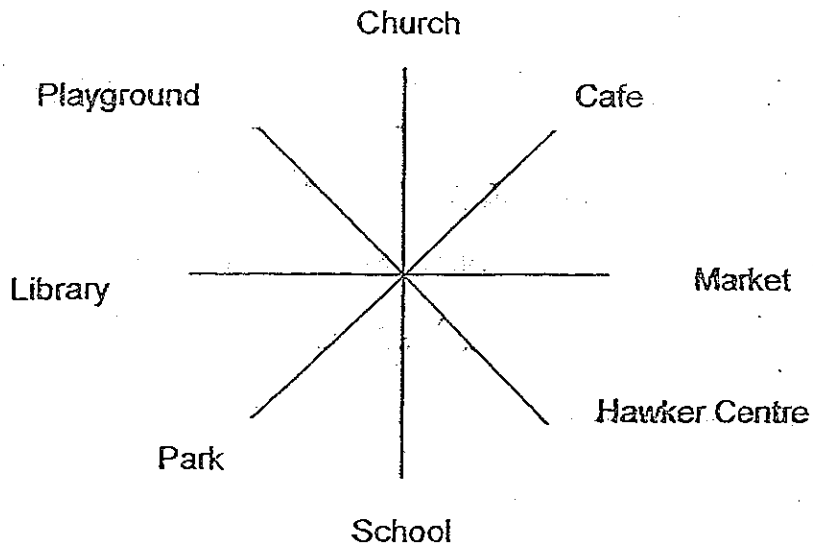
Ans: \_\_\_\_\_ km

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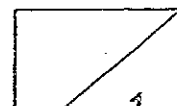


13.1

- 25 Study the map below carefully. Mrs Lee is standing in the centre and facing the school. When she turns  $225^\circ$  anti-clockwise, where will she be facing?



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



Questions 26 to 35 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

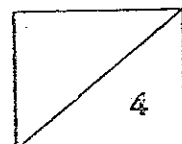
[20 marks]

- 
- 26 Box A contains  $\frac{4}{5}$  as many sweets as Box B. If there is a total of 288 sweets in the two boxes, how many sweets are there in Box A?

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

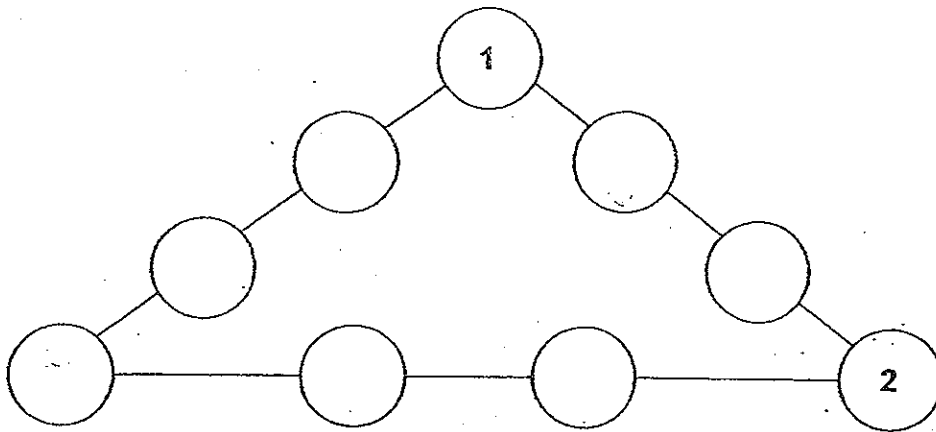
- 
- 27 A rectangular tank measures 20 cm by 12 cm by 15 cm. If water is flowing from a tap into the tank at a rate of  $800 \text{ cm}^3$  per min, how long does it take to fill the tank completely?

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

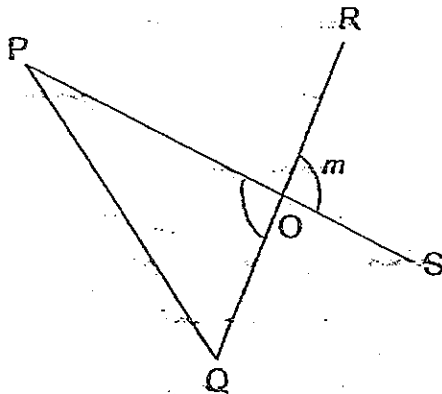


133

- 28 Put all the digits 3, 4, 5, 6, 7, 8 and 9 into the circles below, so that the sum of the numbers along each side of the diagram adds up to 17. (Each number can only be used once)



- 29 In the figure below, not drawn to scale, PQ, QR and PS are straight lines. PS and QR meet at Point O.

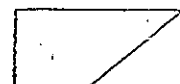


- a) Name an angle that has the same size as  $\angle m$ .

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

- b) Measure and write down  $\angle PQR$ .

Ans: \_\_\_\_\_<sup>o</sup>



30 Apples are sold in packs of 4 for \$2.25. What is the maximum number of apples I can buy with \$10?

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

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31 A roll of ribbon is cut into 3 pieces in the ratio 2 : 1 : 3. If the difference between the longest and shortest piece of ribbon is 1.4 m, how long is the roll of ribbon?

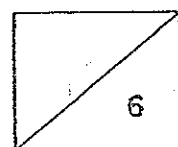
Ans: \_\_\_\_\_ m

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32 When Terence was 9 years old, his father was four times his age. In how many years' time would his father be twice his age?

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

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135

- 33 The table below shows the parking rate at the car park of Beauty Shopping Complex.

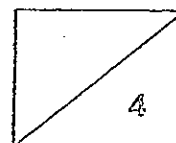
First hour	\$1.80
Every additional half an hour or <u>part thereof</u>	\$0.80

How much did Mr Chong have to pay if he parked his car at the car park from 1045 to 1330?

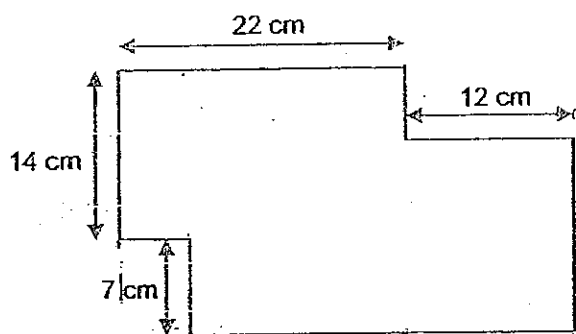
Ans: \$ \_\_\_\_\_

- 34 Ali had a sum of money in his savings account. His mother gave him another \$38 and his savings increased by 20%. How much money had he in the end?

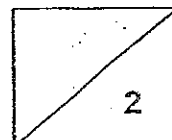
Ans: \$ \_\_\_\_\_



35 Find the perimeter of the figure below.



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



37



For questions 36 to 48, show your working clearly in the space provided for each question 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.

[50 marks]

- 
- 36 There are 1928 red and green buttons in a box. The number of red buttons is 246 fewer than the number of green buttons. How many green buttons are there?

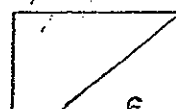
Ans: \_\_\_\_\_ [3]

- 
- 37 Tank A, 42 cm by 30 cm by 16 cm, is  $\frac{1}{4}$  filled with water.

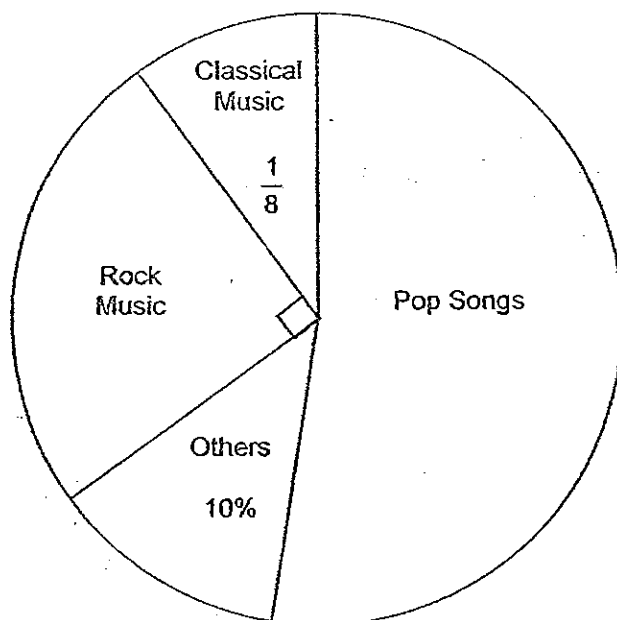
Tank B, with a square base of side 20 cm, is empty.

When all the water in Tank A is poured into Tank B, what is the water level in Tank B?

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



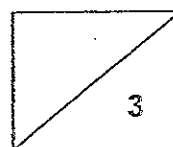
- 38 . The pie chart below shows the sale of compact discs in a shop on a Friday.



- a) What fraction of the compact discs sold was pop songs?
- b) If a total of 360 compact discs were sold on Friday, how many of these discs were pop songs?

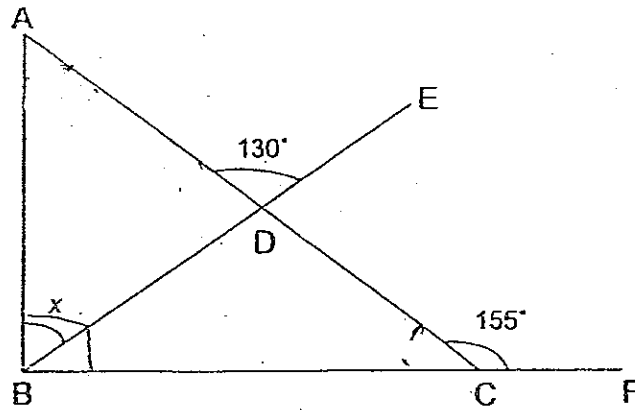
Ans: (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [1]



139

- 39 In the figure below, not drawn to scale,  $AD = DC$ ,  $\angle ADE = 130^\circ$  and  $\angle ACF = 155^\circ$ .  $ADC$ ,  $BCF$  and  $BDE$  are straight lines. Find  $\angle x$ .



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

- 40 Andy has  $k$  stamps. Muthu has thrice as many stamps as Andy but 8 stamps fewer than James.

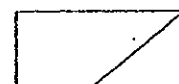
a) How many stamps do they have altogether?

(Express your answer in terms of  $k$ ).

b) If  $k = 9$ , how many stamps do the three children have altogether?

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

(b) \_\_\_\_\_ [1]

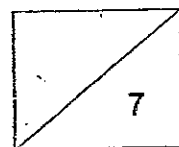


- 41 Mervin bought some pens from a bookshop. He paid \$11.20 for the pens. He then bought another 2 pens and paid \$2.50 for each of them. The average cost of all the pens was then \$2.70. How many pens did he buy at first?

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

- 42  $\frac{2}{7}$  of the marbles in a box are red.  $\frac{1}{6}$  of the remaining marbles are blue and the rest are yellow. There are 280 more yellow marbles than blue marbles. How many red marbles are there?

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



43 Figure 1 shows a big rectangular piece of cloth. Its breadth is  $\frac{1}{3}$  its length. Its breadth is 24.5 cm. Mrs Lim cut 4 smaller rectangular pieces of cloth, each measuring 5.6 cm by 2 cm from each corner of the big piece of cloth.

- What was the perimeter of the remaining piece of cloth?
- Mrs Lim arranged all the 4 smaller rectangular pieces of cloth so that they overlapped one another as shown in figure 2. Find the area of the figure.

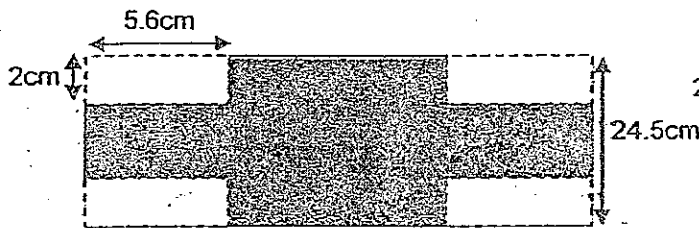


Figure 1

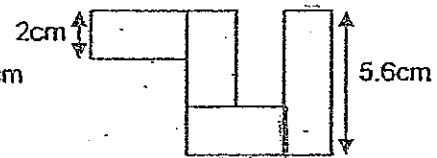
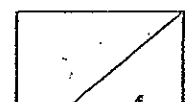


Figure 2

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

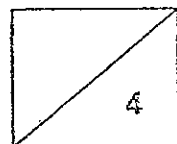
(b) \_\_\_\_\_ [2]



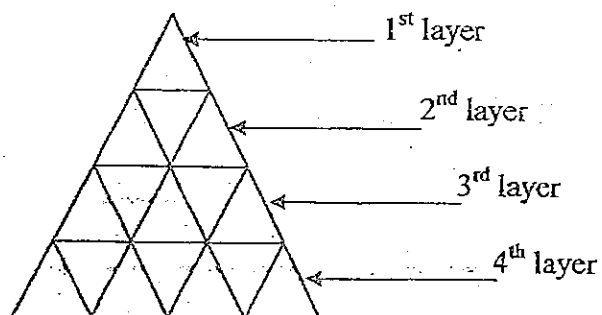
- 44 Mr Tan sold golf balls in packs of five. The original selling price of each pack of golf balls was \$20. He sold 60% of his golf balls at \$20 per pack and the rest at a discount of 30%. He collected \$1056 from the sale of all the golf balls. How many golf balls did he sell altogether?

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

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45) The figure is made up of identical triangles.

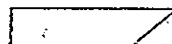


- a) Following this pattern, how many triangles will there be in the 5<sup>th</sup> layer and 10<sup>th</sup> layer?
- b) If each small triangle has a base of 3 cm and a perpendicular height of 4 cm, find the area of all the triangles in the 30<sup>th</sup> layer.

Ans: (a) 5<sup>th</sup> layer \_\_\_\_\_ [1]

10<sup>th</sup> layer \_\_\_\_\_ [1]

(b) \_\_\_\_\_ [3]

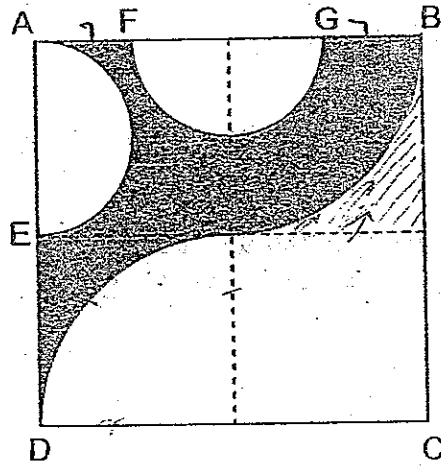


46) The figure is made up of a square ABCD, two identical quadrants and two identical semicircles.  $AE = DE = 14$  cm.

(a) Find the perimeter of the shaded part.

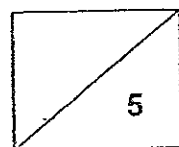
(b) Find the area of the shaded part.

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



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

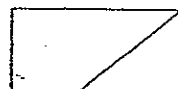
(b) \_\_\_\_\_ [3]



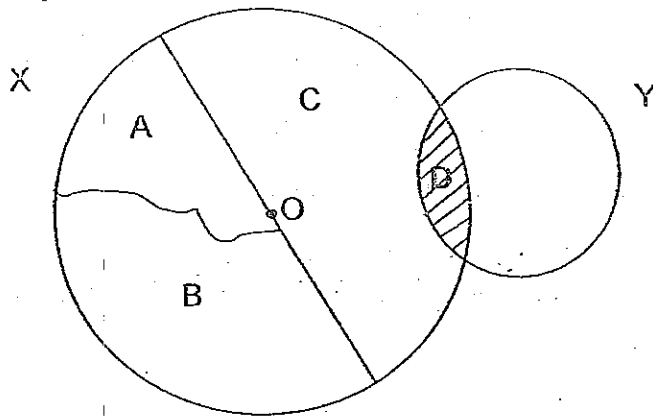


- 47) At 7.15 a.m., Mr Tan started driving from Town P to Town Q at a uniform speed of 60 km/h. 30 minutes later, Mr Lee started driving from Town Q to Town P. Mr Lee drove at a constant speed until he met Mr Tan at 9.45 a.m. along the way. At this point, Mr Tan had travelled  $\frac{3}{7}$  of the journey. Mr Lee decreased his speed by 10 km/h after driving past Mr Tan, and he drove at the new speed for the remaining journey. What time did Mr Lee reach Town P?

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



48)



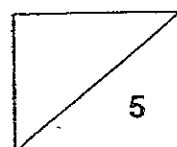
The figure above is made up of two circles X and Y. O is the centre of Circle X. Circle Y has a radius of 14 cm. The area of the shaded part D is  $\frac{1}{7}$  of the area of Circle Y. The ratio of Area A to Area B is 1 : 2. The ratio of Area D to Area C is 2 : 7.

- Find the area of the shaded part D.
- Find the ratio of Area A : Area B : Area C.
- Find Area A.

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

Ans: (a) \_\_\_\_\_ [1]  
 (b) \_\_\_\_\_ [3]  
 (c) \_\_\_\_\_ [1]

End Of Paper



47

# ANSWER SHEET

EXAM PAPER 2008

SCHOOL : HOKKIEN PRIMARY SCHOOL

SUBJECT : PRIMARY 6 MATHEMATICS

TERM : PRELIMINARY SA 2

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

16)  $10\frac{1}{20}$

17)  $\frac{1}{6}$

18) 2 h 28 min

19) 69.4kg

20) 158

21)  $49\text{cm}^2$

22) 28s

23)  $63^\circ$

24) 8km

25) Playground

26) 28

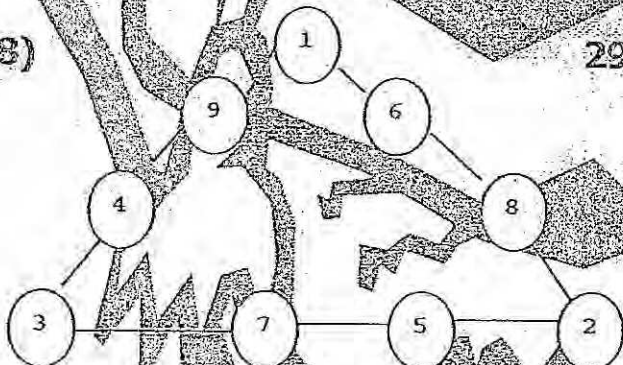
27) 4.5min

28)

1

29) a) POC

30) 16



31) 4.2m

32) 8 years

33) \$5

34) \$228

35) 110cm

36)  $1928 - 246 = 1682$

$1682 \div 2 = 841$

$841 + 246 = 1087$

37)  $\frac{1}{4} \times 2 \times 56 \times 16$

$= 5040\text{cm}^3$

$20 \times 20 = 400\text{cm}^2$

$5040 \div 400 = 12.6\text{cm}$

$$38) a) 1 - \frac{1}{10} - \frac{1}{8} - \frac{1}{4}$$

$$= \frac{21}{40}$$

$$b) 40u \rightarrow 360$$

$$21u \rightarrow 360 \times 21$$

$$= 189$$

$$39) x = 130 \div 2 = 65^\circ$$

$$40) a) 10x3 = 3k \text{ (M)}$$

$$3k = 8 = 3k + 8 \text{ (J)}$$

$$3k + 3k = 8 + k$$

$$= 7k + 8$$

$$b) 7 \times 9 = 8$$

$$= 63 - 8 = 71$$

$$41) 11.20 + 2.50 + 2.50$$

$$= \$16.20$$

$$\$16.20 - 2.70 = 6$$

$$6 - 2 = 4$$

$$42) 168$$

$$43) a) 1u \rightarrow 24.5 \text{ cm}$$

$$3u \rightarrow 24.5 \times 3 = 73.5 \text{ cm}$$

$$73.5 \times 2 = 147 \text{ cm}$$

$$5.6 \times 4 = 22.4 \text{ cm}$$

$$147 - 22.4 = 124.6 \text{ cm}$$

$$24.5 \times 2 = 49 \text{ cm}$$

$$2 \times 4 = 8 \text{ cm}$$

$$49 - 8 = 41 \text{ cm}$$

$$41 + 124.6 + 22.4 = 196 \text{ cm}$$

$$b) 5.6 - 2 = 3.6 \text{ cm}$$

$$2 \times 3.6 = 7.2 \text{ cm}^2$$

$$7.2 \times 3 = 21.6 \text{ cm}^2$$

$$2 \times 5.6 = 11.2 \text{ cm}^2$$

$$21.6 + 11.2 = 32.8 \text{ cm}^2$$

44) 300

45)a)  $5+4=9$  ( $5^{\text{th}}$ )  
 $10+9=19$  ( $10^{\text{th}}$ )

b)  $30+29=59$  triangles  
 $\frac{1}{2} \times 3 \times 4 = 6 \text{ cm}^2$   
 $59 \times 6 = 354 \text{ cm}^2$

46)a)  $22 \times 14 = 44 \text{ cm}$

$\frac{1}{7}$   
 $2 \times \frac{1}{4} \times 22 \times 28$

$= 44 \text{ cm}$   
 $14 + 14 + 44 + 44 = 116 \text{ cm}$

b)  $14 \times 2 = 28 \text{ cm}$   
 $28 \times 14 = 392 \text{ cm}^2$   
 $14 \div 2 = 7 \text{ cm}$   
 $22 \times 7 \times 7 = 154 \text{ cm}^2$

Shaded  $\rightarrow 392 - 154 = 238 \text{ cm}^2$

47)  $7.15 + 30 = 7.45 \text{ a.m.}$

$9.45 - 7.15 \rightarrow 2 \text{ h } 30 \text{ min}$

$1 \text{ h} = 60 \text{ min}$

$2 \text{ h } 30 \text{ min} = 2.5 \text{ h}$

$2.5 \text{ h} \rightarrow 60 \times 2.5 = 150 \text{ km}$

$\frac{1}{3}$   
 $3u \rightarrow 150 \text{ km}$

$4u \rightarrow 150 \times 4 = 200 \text{ km}$

$\frac{3}{3}$

$9.45 - 7.45 = 2 \text{ h}$

$200 \div 2 = 100 \text{ km/h}$  (Lee's first speed)

$100 - 10 = 90 \text{ km/h}$  (Lee's change speed)

$90 \text{ km/h} \rightarrow 1 \text{ h } 60 \text{ min}$

$150 \text{ km/h} \rightarrow 60 \times 150 = 100 \text{ min}$

$\frac{90}{90}$

$= 1 \text{ h } 40 \text{ min}$

$9.45 + 1 \text{ h } 40 \text{ min} \rightarrow 11.25 \text{ a.m.}$

48)a)  $22 \times 14 \times 14 = 616 \text{ cm}^2$

7

$7u \rightarrow 616 \text{ cm}^2$

$1u \rightarrow \frac{616}{7} \times 1 = 88 \text{ cm}^2$

7

b) Circle Y

shaded : Unshaded

1

6

2

12

Shaded : Area C

3

7

Area A + B = shaded + area C = 9u

Area A : Area B

1

2

2

6

A : B : C

3 : 6 : 7

$6u \rightarrow 88 \text{ cm}^2$

$3u \rightarrow 88 \times 3 = 132 \text{ cm}^2$