

NANYANG PRIMARY SCHOOL  
PRELIMINARY EXAMINATION  
2013  
PRIMARY 6  
MATHEMATICS  
PAPER 1  
DURATION: 50 MINUTES

Booklet A	/ 20
Booklet B	/ 20

Paper 1 Total: / 40
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Name: \_\_\_\_\_ (       )

Class: Primary 6 (       )

Date: \_\_\_\_\_

Parent's Signature: \_\_\_\_\_

Any query on marks awarded should be raised by **2 September 2013**.  
We seek your understanding in this matter as any delay in the  
confirmation of marks will lead to delays in the generation of results.

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**PAPER 1 (BOOKLET A)**

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

(20 marks)

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1 Which one of the following numbers is the smallest odd number?

(1) 99 889

(2) 98 998

(3) 99 989

(4) 99 898

2 Find the value of  $980 - 285 + 177$ .

(1) 518

(2) 872

(3) 1088

(4) 1442

3 Which one of the following numbers is a common multiple of 10 and 14?

(1) 35

(2) 70

(3) 80

(4) 84

4 12 tenths, 34 hundredths and 56 thousandths is \_\_\_\_\_.

(1) 1.02

(2) 1.29

(3) 1.596

(4) 1.794

5 Find the value of  $65.94 \div 7$ .

(1) 0.942

(2) 0.982

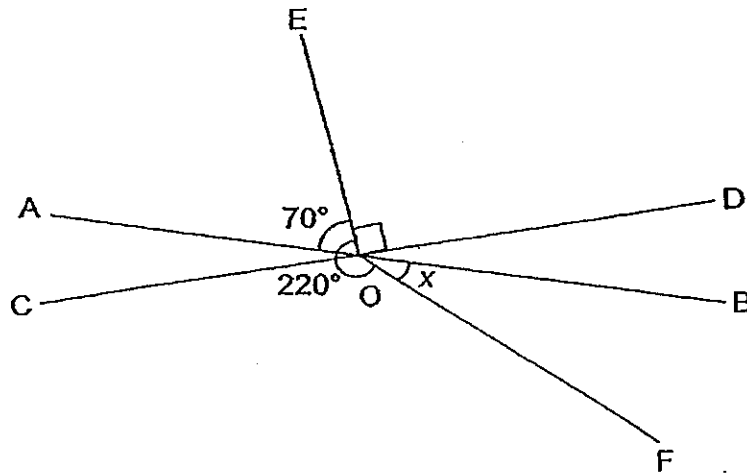
(3) 9.42

(4) 9.82

6 A cuboid measures 1.1 m by 40 cm by 10 cm. Find its volume.

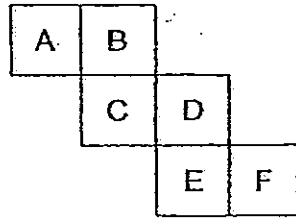
- (1)  $440 \text{ cm}^3$
- (2)  $4400 \text{ cm}^3$
- (3)  $44\,000 \text{ cm}^3$
- (4)  $440\,000 \text{ cm}^3$

7 In the figure below not drawn to scale, AOB and COD are straight lines.  $\angle AOE = 70^\circ$  and  $\angle EOF = 220^\circ$ . Find  $\angle x$ .



- (1)  $20^\circ$
- (2)  $25^\circ$
- (3)  $30^\circ$
- (4)  $35^\circ$

- 8 The diagram below shows the net of a cube. Which face is opposite to C when it is folded to form a cube?



- (1) A  
(2) B  
(3) E  
(4) F
- 9 A box contains 180 white and black marbles. The number of white marbles is 20 fewer than the number of black marbles. What fraction of the marbles is white?

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

**10** Alice bought a bag for \$10 700 which was inclusive of 7% GST. How much did she pay for the GST?

(1) \$100

(2) \$107

(3) \$700

(4) \$749

**11** Find the value of  $6 \times 4 + 12 + (8 - 4 \div 2)$ .

(1) 9

(2) 16

(3) 26

(4) 30

**12.** The total mass of Kai, Leo and Muthu is 72 kg. Kai is twice as heavy as Leo. Muthu is 3 kg lighter than Kai. What is the mass of Muthu?

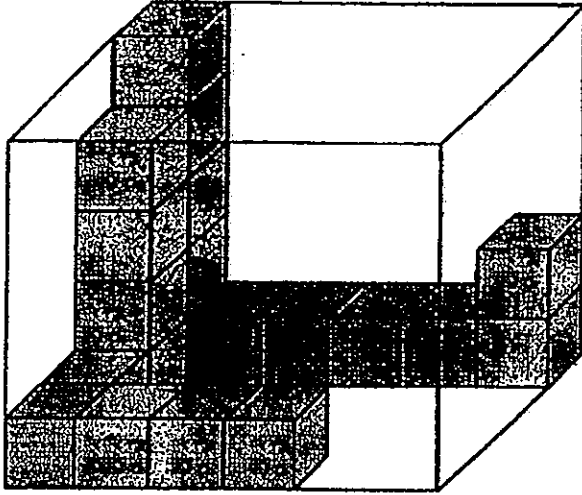
(1) 21 kg

(2) 23 kg

(3) 25 kg

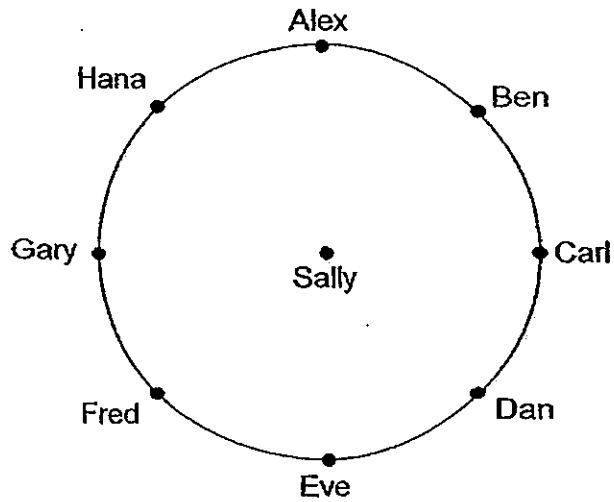
(4) 27 kg

- 13 The figure below shows a rectangular glass box partly filled with identical unit cubes. How many more unit cubes are needed to fill it completely?



- (1) 98
- (2) 99
- (3) 100
- (4) 101

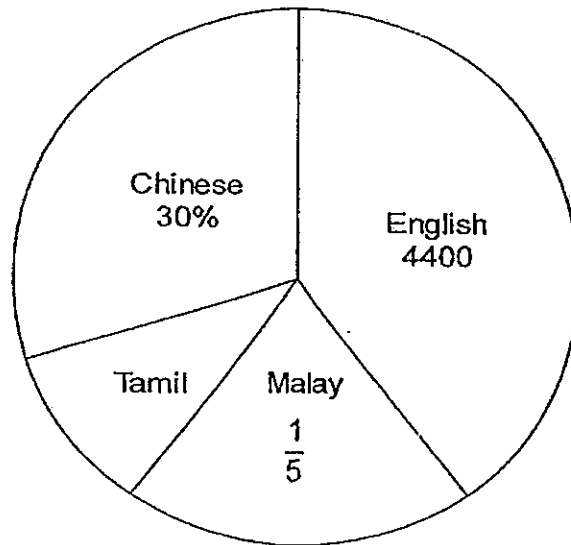
- 14 Eight points are marked on a circle at equal distances. Eight children are standing at the points as shown below. Sally is standing in the centre of the circle, facing Eve. Sally makes a  $90^\circ$  clockwise turn and then a  $225^\circ$  anti-clockwise turn. Who will she be facing now?



- (1) Ben
- (2) Dan
- (3) Fred
- (4) Hana



15. The pie chart below shows the number of books in a school library. The number of Tamil books is  $\frac{1}{2}$  of the number of Malay books. How many Chinese books are there in the library?



- (1) 1100
- (2) 2200
- (3) 3300
- (4) 5500



18 Find the value of  $1\frac{11}{12} \times 84$ . Leave your answer in its simplest form.

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

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19 Express  $4\frac{6}{7}$  as a decimal. Give your answer correct to 2 decimal places.

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

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20 A supermarket opens from 7.45 a.m. to 9.30 p.m. every day.  
How many hours and minutes does the supermarket open each day?

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

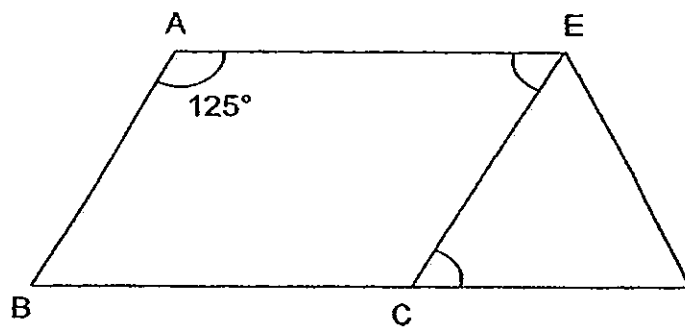
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21 What is 20.4 metres in centimetres?

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

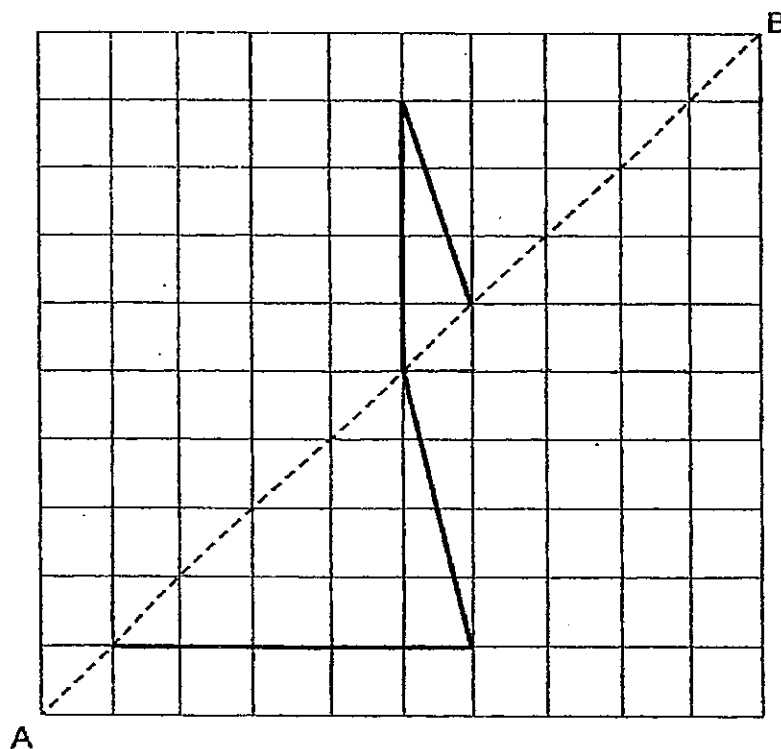
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- 22 In the figure below not drawn to scale, ABDE is a trapezium and ABCE is a parallelogram. Given that  $\angle BAE = 125^\circ$ , find the sum of  $\angle AEC$  and  $\angle ECD$ .



Ans: \_\_\_\_\_°

- 23 Complete the figure below such that AB is the line of symmetry.



- 24 A tortoise crawled 2.4 m in 40 seconds.  
Find its average speed in cm/s.

Ans: \_\_\_\_\_ cm/s

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- 25 The table below shows the different types of fruits sold in a day.

Type of Fruit	Number of Fruits
Pear	28
Orange	36
Apple	?

The ratio of the number of apples sold to the total number of fruits sold is 3 : 7. How many apples are sold?

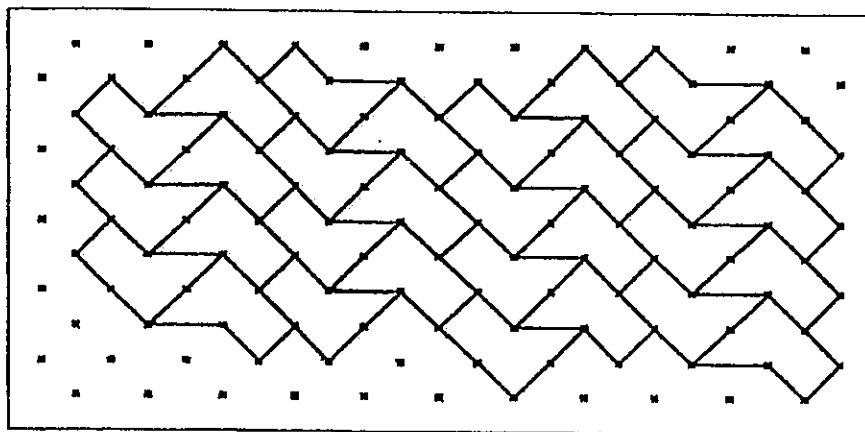
Ans: \_\_\_\_\_

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Questions 26 to 30 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.

(10 marks).

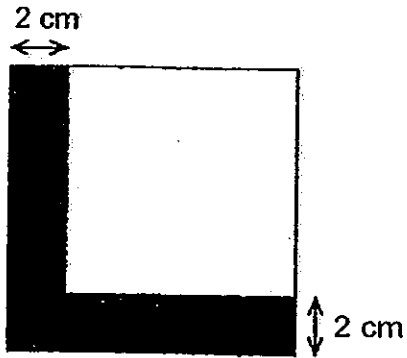
- 26 The pattern in the box shows part of a tessellation. Extend the tessellation by drawing two more unit shapes in the space provided in the box.



- 27 Find the value of  $\frac{3}{4} \div \frac{5}{6} - \frac{2}{7}$ .

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

- 28 The figure below is made up of 2 overlapping squares. The area of the shaded part is  $44 \text{ cm}^2$ . What is the length of the smaller square?



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

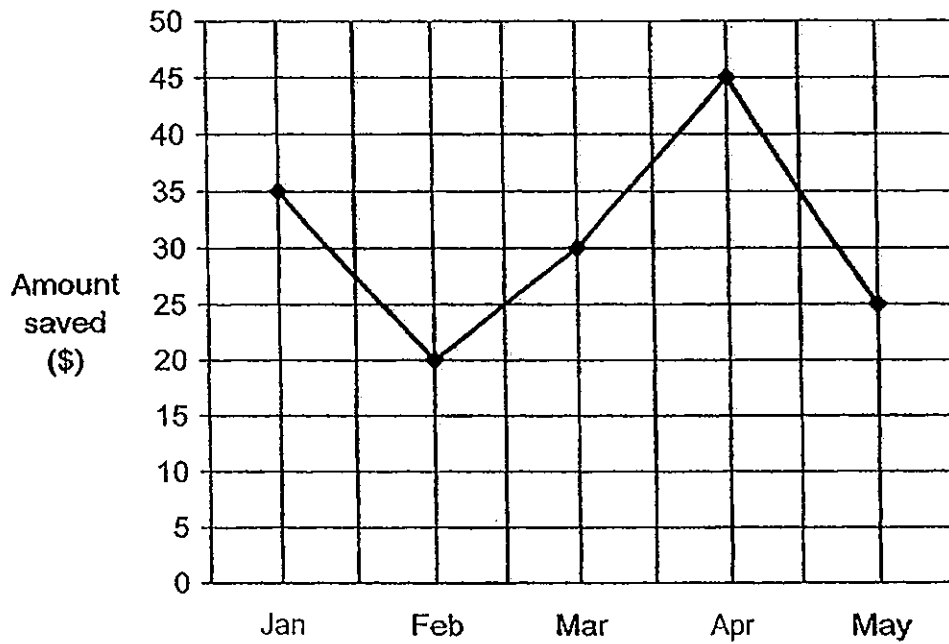
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- 29 In a carton, cans were packed into 8 rows and there were  $5y$  cans in each row. After the carton was fully packed, there were 23 cans left. How many cans were there at first? Give your answer in terms of  $y$ .

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

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- 30 Krishnan received \$120 from his father each month for his pocket money. The line graph below shows the amount of pocket money he saved each month.



Write down all the months in which Krishnan saved more than 25% of his pocket money.

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

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END OF PAPER





NANYANG PRIMARY SCHOOL  
PRELIMINARY EXAMINATION  
2013  
PRIMARY 6  
MATHEMATICS  
PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	/ 60
GRAND TOTAL	/ 100

Name: \_\_\_\_\_ (       )

Class: Primary 6 (       )

Date: \_\_\_\_\_

Parent's Signature: \_\_\_\_\_

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**PAPER 2**

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.

(10 marks)

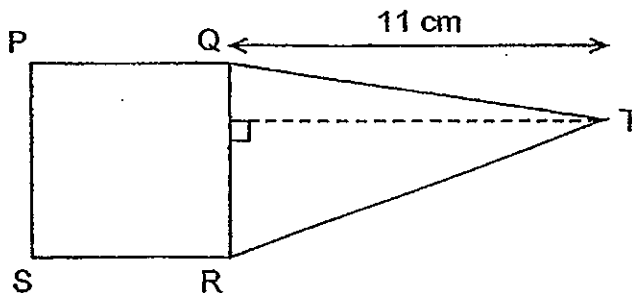
- 1 Given that  $a = 5$ , find the value of  $4a + 7a + 9 - 3 - 3a$ .

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

- 2 Peter's Mathematics score for the mid-year examination was 96. His Mathematics score for the year-end examination was 80. Find the percentage decrease in his Mathematics score. Express your answer as a mixed number.

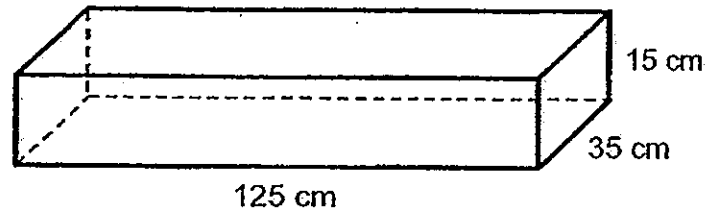
Ans: \_\_\_\_\_ %

- 3 The figure below is made up of a square and a triangle. Square QPSR has an area of  $36 \text{ cm}^2$ . Find the area of triangle QRT.



Ans: \_\_\_\_\_  $\text{cm}^2$

- 4 The figure shows an empty rectangular tank measuring 125 cm by 35 cm by 15 cm.



14 litres of water are poured into the empty tank. Find the height of the water level in the tank.

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

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- 5 There were 4 participants who took part in a fitness programme. Their masses are shown in the table below.

Participant	Mass (kg)
Andy	165
Benny	87
Carl	155
Dan	108

When 1 participant dropped out of the programme, the average mass of the 3 remaining participants was 120 kg. Who had dropped out of the programme?

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

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

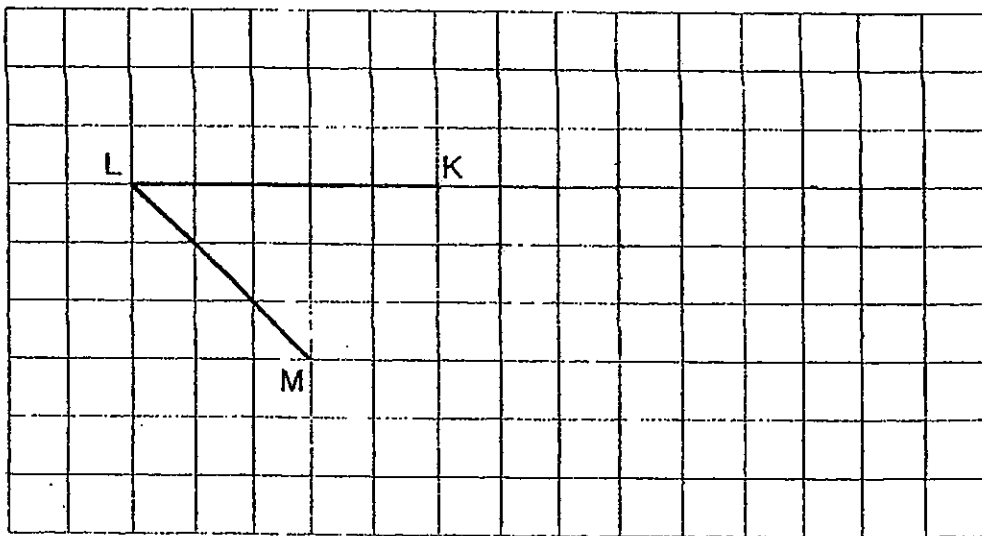
The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(50 marks)

6 In the square grid given below, two sides of a parallelogram KLMN have been drawn.

(a) Complete the drawing of the parallelogram KLMN.

(b) KN also forms one side of a triangle KNT in which  $\angle KNT$  is a right angle and  $KN = NT$ . Complete the drawing of the triangle KNT within the grid. Label your drawings.



[3]

- 7 John had \$200 more than Mimi. When Mimi gave John \$50, John had 5 times as much as Mimi. How much money did Mimi have at first?

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

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- 8 Every day, Michelle saved \$0.40 and Peiyong saved \$0.80 more than Michelle. Peiyong started saving 2 weeks later than Michelle but had saved \$3.20 more than Michelle. How many days had Peiyong been saving?

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

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9

**YUMMY RESTAURANT**

For every 5 dining vouchers purchased,  
a 20% discount will be given to the 5<sup>th</sup> voucher.

Mrs Lee bought \$1386 worth of dining vouchers. Given that each voucher cost \$45 before discount, how many vouchers did she buy?

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

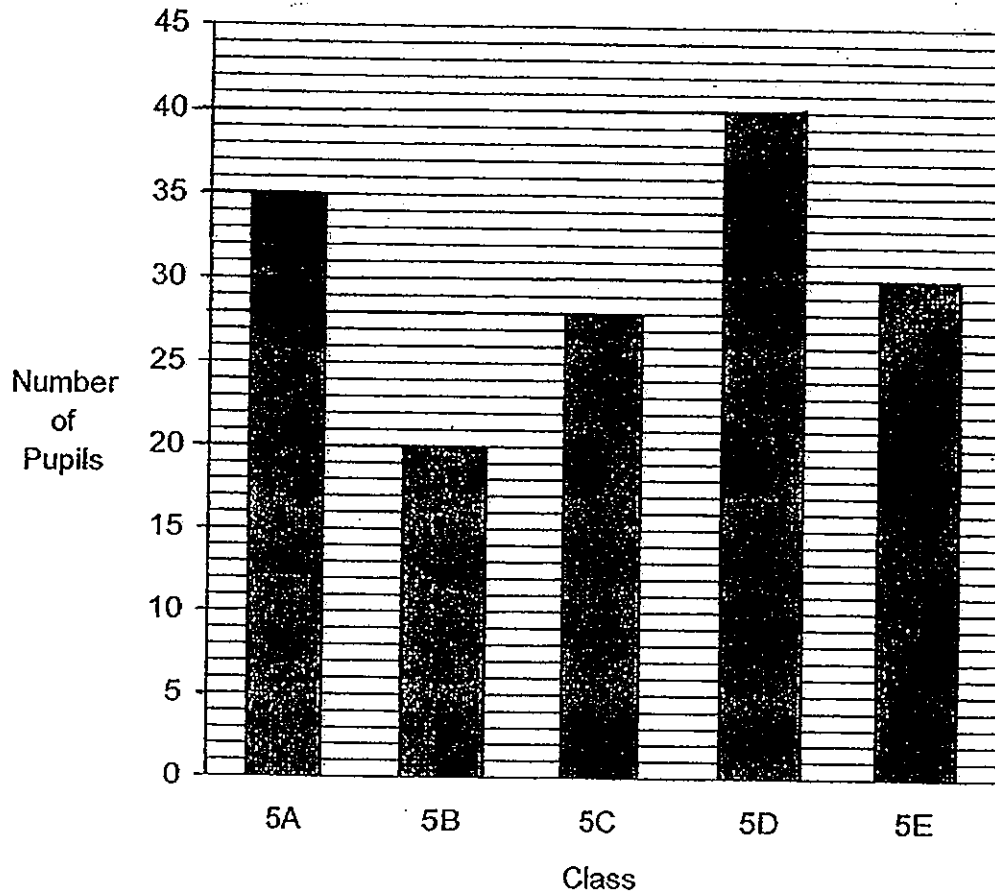
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- 10 Fang cycled at a constant speed of 200 m/min from her house to a park. Without spending any time at the park, she walked back to her house along the same route at a constant speed of 80 m/min. She took a total of 42 minutes to make the round trip. Find the distance between her house and the park.

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

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- 11 The bar graph below shows the number of pupils in 5 classes who passed a Science test. There are 40 pupils in each class.



- (a) How many pupils in 5E passed the Science test?
- (b) Which class has the most number of pupils who failed the Science test?
- (c) Express the total number of failures in 5A and 5B as a fraction of the total number of pupils in the 5 classes. Leave your answer in its simplest form.

Ans: (a) \_\_\_\_\_ [1]

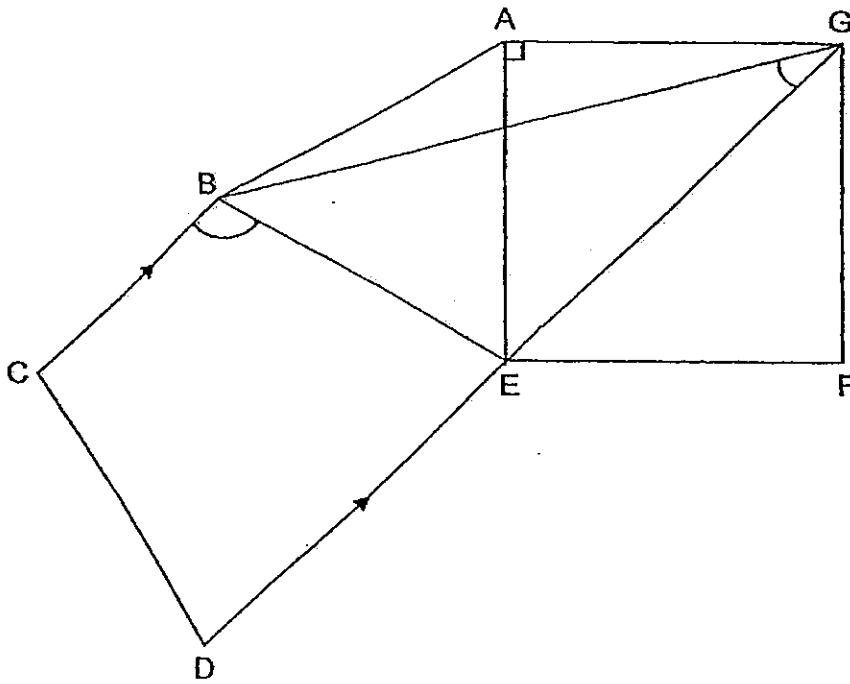
(b) \_\_\_\_\_ [1]

(c) \_\_\_\_\_ [2]

12 In the figure below, BCDG is a trapezium with CB parallel to DG. ABE is an equilateral triangle and AEFG is a square.

(a) Find  $\angle BGE$ .

(b) Find  $\angle CBE$ .

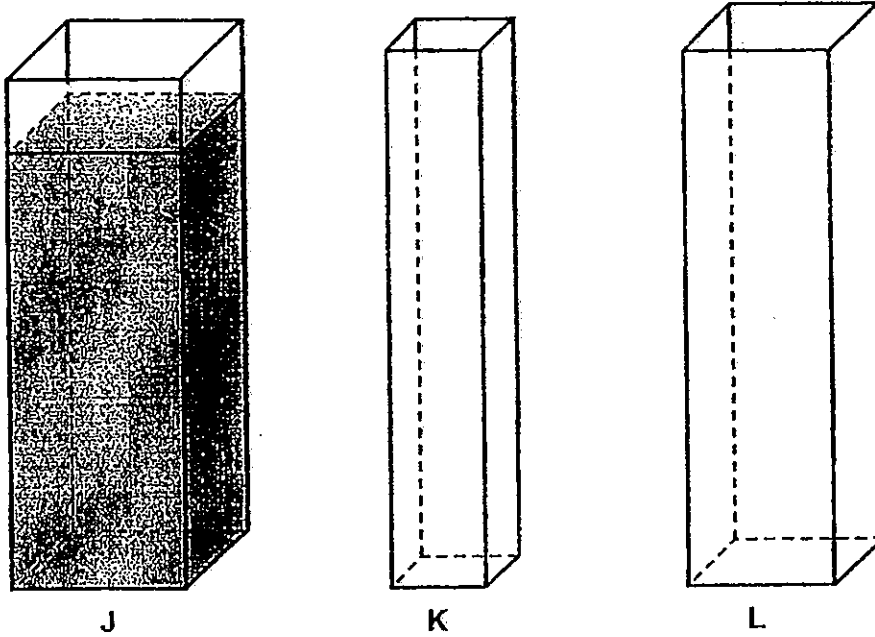


Ans: (a) \_\_\_\_\_ [2]

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



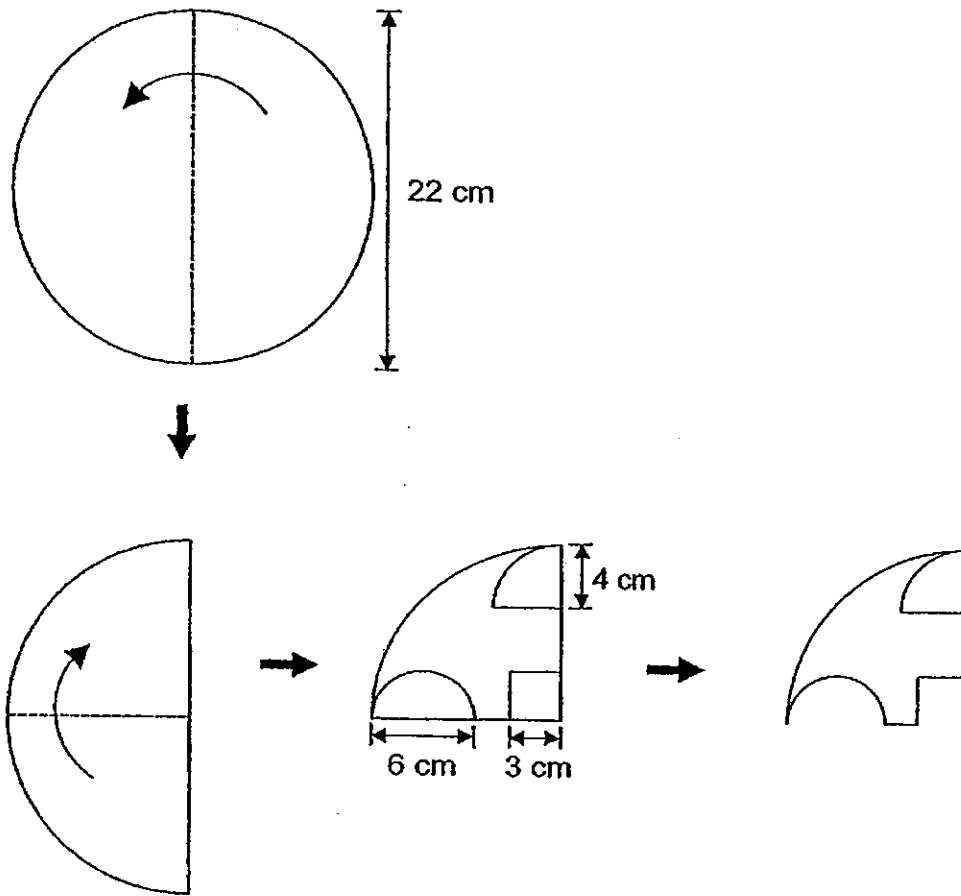
- 13 J, K and L are three rectangular containers. The base areas of J, K and L are  $120 \text{ cm}^2$ ,  $50 \text{ cm}^2$  and  $80 \text{ cm}^2$  respectively. At first J contained  $4960 \text{ cm}^3$  of water while K and L were empty as shown below.



Minah then poured some water from J into K and L. After that, the height of the water level in L was 4 cm lower than that in K and 8 cm lower than that in J. Find the difference in the volume of water between J and L in the end.

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

- 14 Elvina had a circular piece of paper. She folded it into quarters and then cut away a semicircle, a quarter circle and a square from the corners as shown below. Find the perimeter of the paper left after Elvina unfolded the paper. (Take  $\pi = 3.14$ )



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

15 David had  $\frac{1}{2}$  the number of marbles Ted had at first. Their father had a box of marbles. He gave  $\frac{1}{3}$  of the marbles in the box to David and the remaining marbles to Ted. After that, David gave Ted half of his total marbles.

- (a) David had 80 marbles at first and 60 marbles in the end. How many marbles did their father have?
- (b) Express the number of marbles David had in the end as a fraction of the number of marbles Ted had in the end. Give your answer in its simplest form.

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

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

- 16 Amy, Brenda and Carrie shared a bag of 31 coins with a total value of \$12.20. The bag only contained 20¢ coins and 50¢ coins. Amy received only 20¢ coins. Brenda received 3 more coins than Amy and Brenda's 3 extra coins added up to 90¢. Carrie received 7 more coins than Brenda and Carrie's 7 extra coins added up to \$2.60. How much money did Carrie receive?

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

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- 17 Alice bought some beads and gave  $\frac{1}{3}$  of them to Eve. Eve bought some stamps and gave  $\frac{1}{3}$  of them to Alice. Alice lost 32 beads and Eve lost 26 stamps. After that, the number of beads and stamps Alice had were in the ratio 8 : 5 and the number of beads and stamps Eve had were in the ratio 3 : 2. How many beads did Alice buy?

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

18 Ms Ho numbered thirty pupils by writing 1, 2, 3, ... , 28, 29 and 30 on their name tags.

(a) How many digits did she write in all?

(b) She arranged all the thirty pupils to stand in a row, starting from Number 1 to Number 30.

Next, for every second pupil, she asked each pupil to sit.

Then, for every third pupil, she asked each standing pupil to sit and each sitting pupil to stand.

She followed the same pattern (which is to ask each standing pupil to sit and each sitting pupil to stand) for every fourth pupil, every fifth pupil, and so on till the 30<sup>th</sup> pupil.

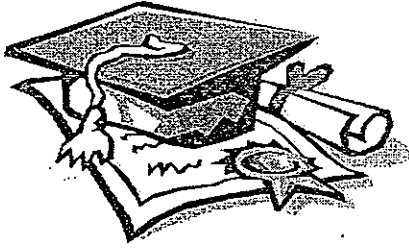
How many pupils were standing after the whole process was completed?

Ans: (a) \_\_\_\_\_ [1]

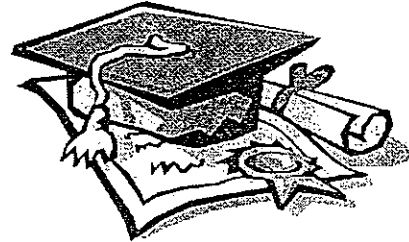
(b) \_\_\_\_\_ [3]

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END OF PAPER



# ANSWER SHEET



**EXAM PAPER 2013**

**SCHOOL : NAN YANG PRIMARY SCHOOL**

**LEVEL : PRIMARY 6**

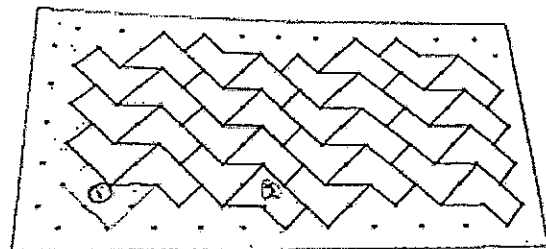
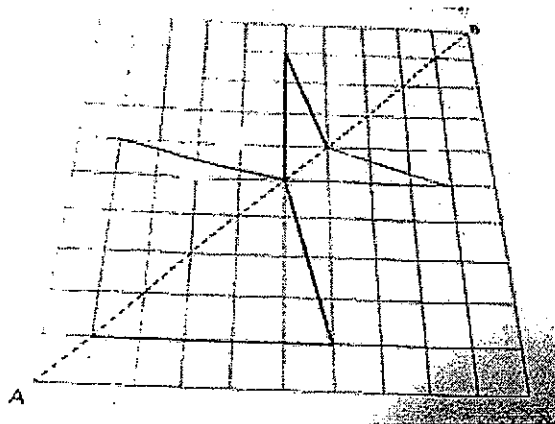
**SUBJECT : MATHS**

**TERM : SA2**

**Booklet A**

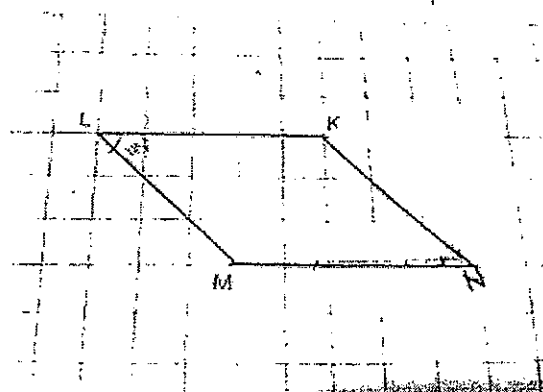
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1	2	2	3	3	3	3	4	3	3	3	4	3	1	3	

- 16) 6
- 17) 61/72
- 18) 161
- 19) 4.86
- 20) 13 h 45 min
- 21) 2040 cm
- 22) 110°
- 23)
- 24) 6 cm /s
- 25) 48
- 26)
- 27) 43/70
- 28) 10cm
- 29) 40y + 23
- 30) Jan , April



**Paper 2**

- 1)  $(4 \times 5) + (7 \times 5) + 9 - 3 - (3 \times 5) = 46$
- 2)  $96 - 80 = 16$   
 $\frac{16}{96} \times 100\% = 16\frac{2}{3}\%$
- 3)  $\frac{1}{2} \times 6 \times 11 = 33$
- 4)  $14l = 14000 \text{ cm}^3$   
 $14000 \div (125 \times 35) = 3.2 \text{ cm}$
- 5)  $165 + 87 + 155 + 108 = 515$   
 $120 \times 3 = 360$   
 $515 - 360 = 155$   
 Carl
- 6) .
- 7)  $200 + 50 + 50 = 300$   
 $1u \dots 300 \div 4 = 75$



- $75+50 = \$125$   
 8)  $14 \times 0.40 = 5.60$   
 $5.60 + 3.20 = 8.80$   
 $8.80 \div 0.8 = 11$   
 9)  $45 \times 4 = 180$   
 $80\% \times 45 = 36$   
 $180 + 36 = 216$   
 $1386 \div 16 = 6R90$   
 $90 \div 45 = 2$   
 $6 \times 5 + 2 = 32$   
 10) Total --- 42mions  
 1 trip - 200m/min  
 2<sup>nd</sup> trip - 80m/min  
 Distance is the same for both trips  
 $200 \times 12 = 2400$   
 $30 \times 80 = 2400$   
 11) a) 30  
 b) 5B  
 c)  $40 - 35 = 5$   
 $40 - 120 = 20$   
 $20 + 5 = 25$   
 $40 \times 5 = 200$   
 $25 / 200 = 1/8$   
 12) A)  $180 - 60 - 90 = 30^\circ$   
 $30 \div 2 = 15$   
 $45 - 15 = 30$   
 b)  $60 + 45 = 105^\circ$   
 13)  $4 \times 50 = 200$   
 $8 \times 120 = 960$   
 $4960 - 200 - 960 = 3800$   
 $120 \times H + 50 \times H + 80 \times H = 3800$   
 $H = 23.2$   
 $120 \times 23.2 - 80 \times 15.2 = 1568$   
 14)  $6 \times 6 = 36$   
 $3.14 \times 22 = 69.08$   
 $2 \times 3.14 \times 6 = 37.68$   
 $2 \times (1/2 \times 3.14 \times 8 \times 8) = 41.12$   
 $6 \times 4 = 24$   
 $41.12 + 24 + 37.68 + 69.08 = 171.88 \text{cm}$   
 15) a)  
 $60 \times 2 = 120$   
 $120 \times 3 = 360$   
 $80 \times 2 = 160$   
 $120 - 80 = 40$   
 $40 \times 3 = 120$   
 b)  
 $40 \times 2 = 80$   
 $160 + 80 = 240$   
 $3240 + 60 = 300$   
 $60 / 300 = 1/5$   
 16) 3u ---  $31 - 3 - 3 - 7 = 18$   
 $18 \div 3 = 6$



$$\text{Amy --- } 6 \times 0.2 = \$1.20$$

$$12.20 - 1.20 = 11$$

$$\text{If all 31 coins are 50cent --- } 31 \times 0.5 = 15.50$$

$$\text{Different --- } 50\text{cents} - 20\text{ cents} = 30\text{ cents}$$

$$15.50 - 12.20 = 3.30$$

$$3.30 \div 0.3 = 11$$

$$31 - 11 = 20$$

$$3 \times 0.2 + 13 \times 0.5 = \$ 7.1$$

$$\$7.10$$

$$17) \text{ Beads Alice Bought --- } 8u + 3p + 32 = 9p$$

$$\text{Stamps Eve bought --- } 5u + 2p + 26$$

$$2/3 \text{ of alice --- } 8u + 312$$

$$1/3 \text{ of beads --- } 3p$$

$$3/3 \text{ --- } 3 \times 3p = 9p$$

$$8u + 3p + 32 \text{ --- } 9p$$

$$80u \text{ --- } 60p - 320$$

$$1/3 \text{ of stamp --- } 5u$$

$$3/3 \text{ of stamp --- } 15u$$

$$50u + 2p + 20 \text{ --- } 150$$

$$15u - 5u \text{ --- } 2p + 26$$

$$10u \text{ --- } 2p + 26$$

$$80u \text{ --- } 16p + 208$$

$$60p - 320 \text{ --- } 16 + 208$$

$$1p \text{ --- } 12$$

$$9p - 12 \times 96 = 108$$

$$18) \text{ a) } 1 \text{ to } 9 = 9$$

$$10 \text{ to } 20 = 22$$

$$20 \text{ to } 30 = 20$$

$$9 + 22 + 20 = 51$$

$$\text{b) } 1 \times 1 = 1$$

$$2 \times 2 = 4$$

$$3 \times 3 = 9$$

$$4 \times 4 = 16$$

$$5 \times 5 = 25$$

$$\text{Ans : } 5$$

