Tao Nan School
Primary 6 Mathematics Mid-Year Examination – 2012

Name : _____ ( ) Date : 11 May 2012

Class : Primary 6 ( ) Time : 8.00a.m.- 8.50 a.m.

Parent's Signature : _____ Marks : _____ / 100

Paper 1 comprises 2 booklets, A and B.

MATHEMATICS

PAPER 1

(BOOKLET A)

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided.
6. You are **not** allowed to use a calculator.

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.

(20 marks)

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1) Which of the following numbers has the digit '9' in the ten thousands place?

(1) 497 500

(2) 549 700

(3) 754 900

(4) 975 400

2) Which one of the following is likely to be the speed of a sprinter running in a 100-metre dash?

(1) 1 m/s

(2) 10 m/s

(3) 1 m/min

(4) 10 m/min

3) How many litres are there in 10 000 cm^3?

(1) 1 ℓ

(2) 10 ℓ

(3) 100 ℓ

(4) 1000 ℓ

4) Which one of the following is equivalent to 30%?

(1) $\frac{3}{5}$

(2) $\frac{18}{60}$

(3) $\frac{3}{100}$

(4) $\frac{15}{60}$

5) The value of the digit '6' in 963 975 is _____ times as large as the number 6.

(1) 1000
(2) 6000
(3) 10 000
(4) 60 000

6) Ahmad left Johor Bahru at 18 45. He arrived in Singapore 55 min later. What time did he reach Singapore?

(1) 7 a.m.
(2) 7 p.m.
(3) 7.40 a.m.
(4) 7.40 p.m.

7) In a class of 40 pupils, there are 25 girls. What percentage of the pupils are boys?

(1) 15%
(2) 37.5%
(3) 60%
(4) 62.5%

8) Leonard is facing Southwest. If he turns 135° in the anticlockwise direction, which direction will he be facing?

(1) North
(2) South
(3) East
(4) West

9) At a farm, there are 33 more ducks than chickens. If there are 11 chickens, what is the ratio of the number of ducks to the number of chickens?

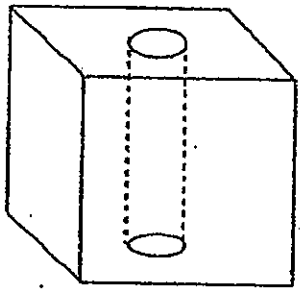
(1) 1 : 3

(2) 1 : 4

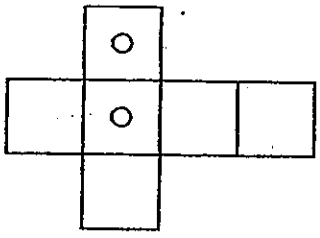
(3) 3 : 1

(4) 4 : 1

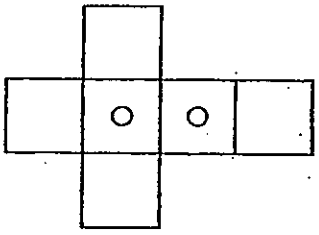
10) The figure below shows a cube with a hollow centre.



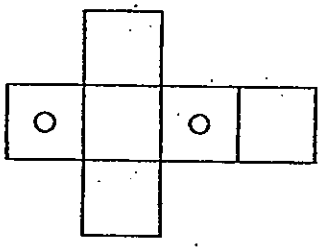
Which one of the following is a net of the cube?



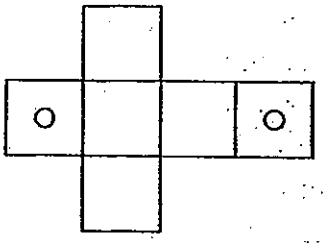
(1)



(2)



(3)



(4)

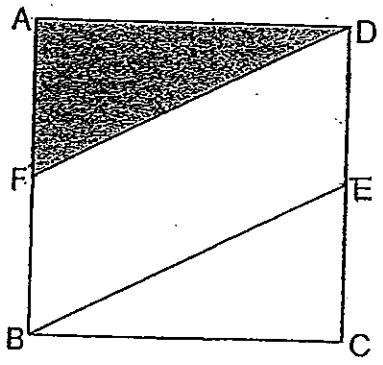
11) Points E and F are mid-points of Square ABCD. What fraction of the square is unshaded?

(1) $\frac{1}{4}$

(2) $\frac{1}{3}$

(3) $\frac{2}{3}$

(4) $\frac{3}{4}$



12) The length of a rectangle is twice its breadth. What is the ratio of the breadth to its perimeter?

(1) 1 : 6

(2) 1 : 2

(3) 2 : 3

(4) 1 : 3

13) It takes 60 painters 12 days to paint a school. How many painters are required to paint the same school in 20 days?

(1) 36

(2) 40

(3) 100

(4) 180

14) Jasmine, Susan and Yvonne shared a sum of money. The ratio of Jasmine's share to Susan's share was 3 : 2. The ratio of Susan's share to the sum of Jasmine's and Yvonne's share was 3 : 5. If Yvonne received \$8, find the sum of money shared by the three of them.

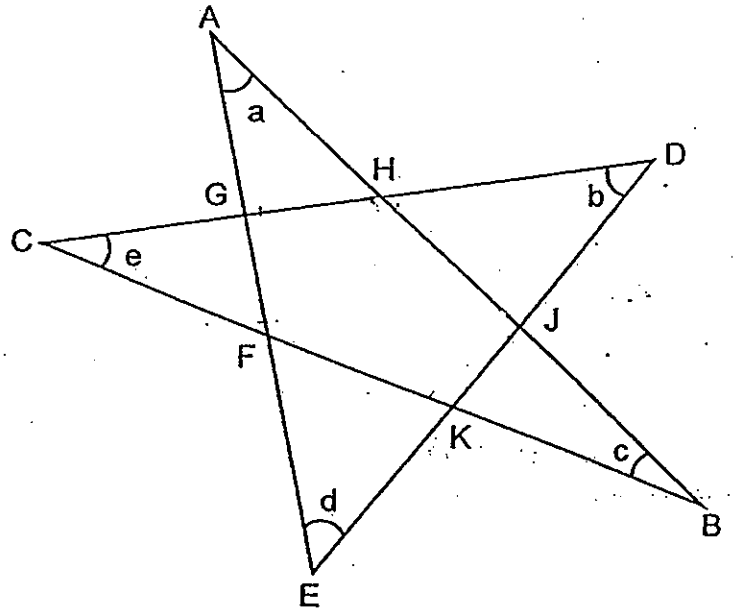
(1) \$32

(2) \$52

(3) \$128

(4) \$248

15) In the figure below, AB, BC, CD, DE, and EA are straight lines. Find the value of $\angle a + \angle b + \angle c + \angle d + \angle e$.



(1) 150°

(2) 180°

(3) 300°

(4) 360°

Name : _____ ( )

Class : Primary 6 ( )

Parent's Signature : _____

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MATHEMATICS

PAPER 1

(BOOKLET B)

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet.
6. You are **not** allowed to use a calculator.

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)

16) Find the value of $54.48 \div 6$.

Ans: _____

17) Round off 19 999 to the nearest thousand.

Ans: _____

18) Express 1.05 as a mixed number in the simplest form.

Ans: _____

19) The area of a square is 121 cm^2. What is the perimeter of the square?

Ans: _____ cm

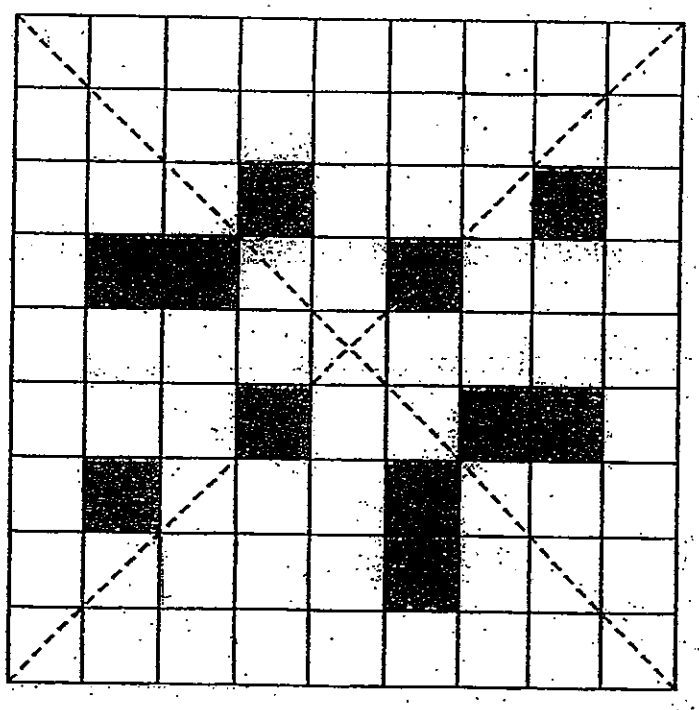
20) The table below shows the prices of identical toy guns sold at two stalls in a market.

Stall	Price of toy guns
X	2 for $3
Y	3 for $4

Which stall offers a lower price for a toy gun?

Ans: **Stall** _____

21) The figure below is made up of squares. Shade <u>three more squares</u> so that the figure has two lines of symmetry.



22) Express $\frac{1}{6}$ as a percentage.

Ans: _____ %

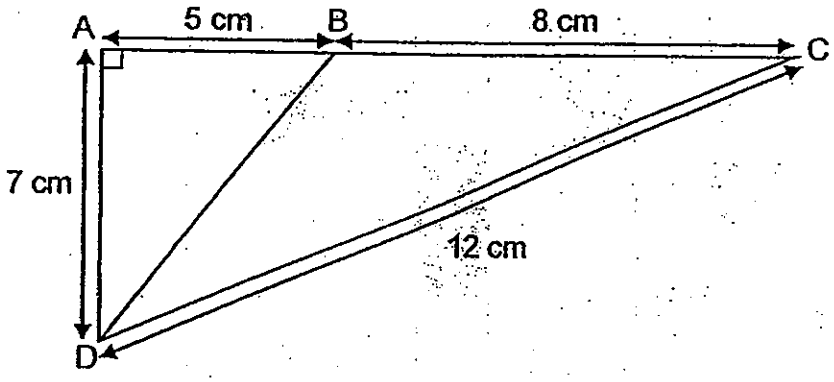
23) Simplify $14k - 3 - 6k + 6$.

Ans: _____

24) How many one-thirds are there in $5\frac{1}{3}$?

Ans: _____

25) ACD is a right-angled triangle. Find the area of Triangle BCD.



Ans: _____ cm^2

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)

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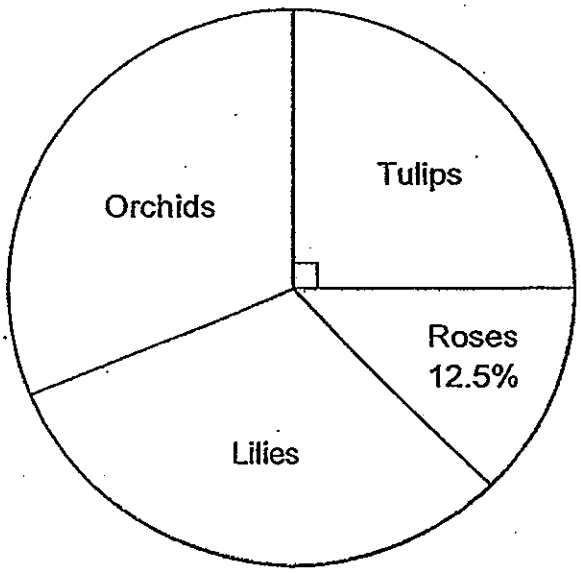
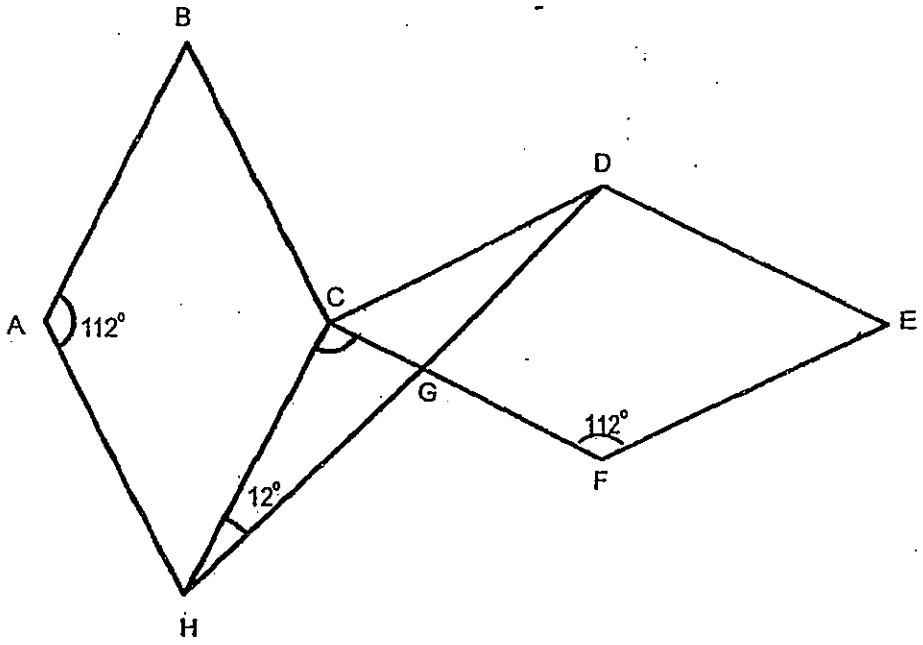
26) The pie chart shows the types of flowers in a nursery.
The number of orchids is equal to the number of lilies.



What fraction of the flowers are orchids and lilies?

Ans: _____

27) The figure below is made up of two identical rhombuses, ABCH and CDEF. ∠HAB is 112°, ∠EFC is 112° and ∠CHG is 12°. Find ∠GCH.



Ans: _____°

28) Malik and Jonas have some coins. If Malik gives 41 coins to Jonas, both of them will have an equal amount of coins. If Jonas gives 41 coins to Malik, Malik will have thrice as many coins as Jonas. How many coins does Jonas have?

Ans: _____

29) Square tiles are used to form the patterns as shown below.

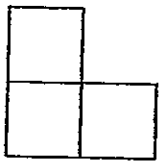


Figure 1

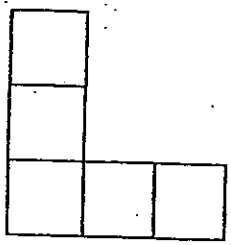


Figure 2

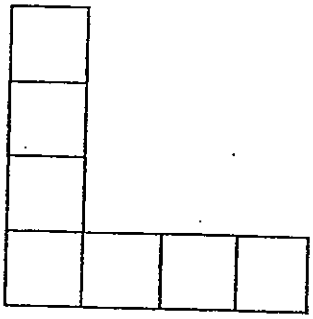
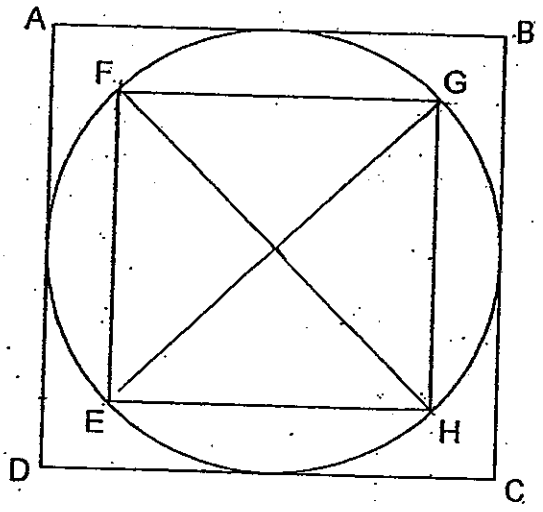


Figure 3

How many tiles are needed to form **Figure 10** ?

Ans: _____

30) The figure below is made up of 2 squares and a circle.
The area of the Square EFGH is 98 cm^2, what is the area of Square ABCD?



Ans: _____ cm^2

End of Paper 1

Tao Nan School
Primary 6 Mathematics Mid-Year Examination – 2012

Name : _____ (Date : 11 May 2012

Class : Primary 6 ( ) Time : 10.00 a.m. – 11.40 a.m.

Parent's Signature : _____

MATHEMATICS

PAPER 2

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INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Show your working clearly as marks are awarded for correct working.
6. You are allowed to use a calculator.

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)

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1) Mrs Tan is now 36 years old and is four times as old as her daughter. Find the sum of their ages two years ago.

Ans: _____ years

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2) The table below shows the number of cups of Milo drank by pupils in a school.

Number of cups of Milo	0	1	2	3
Number of pupils	10	130	110	150

What fraction of the pupils drank at least 2 cups of Milo?

Ans: _____

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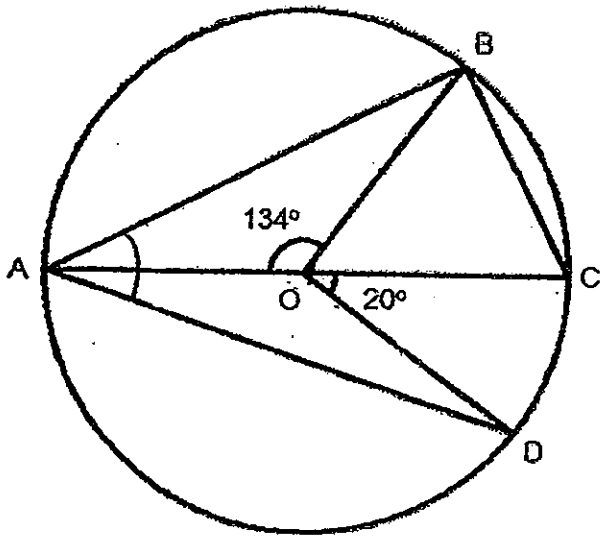
3) In the figure below, ABC and AOD are triangles. O is the centre of the circle. AC is the diameter of the circle. Find ∠DAB.



Ans: _____ °

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4) Mr Lee spent some money on a trip and used 20% of the remaining amount to pay for his household bills amounting to $100. He then gave what was left to his wife. How much money did Mr Lee have at first if his wife received 50% of it?

Ans: $ _____

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5) There were 52 questions in a Mathematics quiz. 3 points were awarded for each correct answer and 1 point was deducted for each incorrect answer. If Amy attempted all 52 questions and scored 108 points, how many questions did she answer correctly?

Ans: _____

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) Joan completed $\frac{1}{5}$ of a jigsaw puzzle on the first day. On the second day, she completed $\frac{2}{3}$ less than the first day. If she completed 48 pieces on the second day, how many pieces are there in the jigsaw puzzle?

Ans: _____ [3m]

7) Faizal and Zainal took part in a marathon. When Faizal finished the marathon in 5 hours, Zainal had completed $\frac{4}{7}$ of the race. Faizal's speed was 6 km/h faster than Zainal's. Find Zainal's speed.

Ans: _____ [3m]

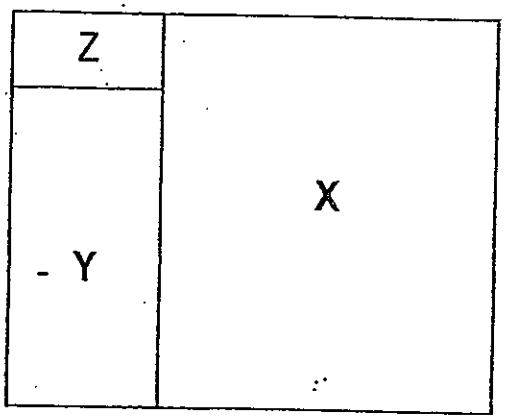
8) Suhailin and Muthu shared some sweets. Suhailin had 80 more sweets than Muthu. After Suhailin gave 20% of her sweets to Muthu, Muthu had 20 more sweets than Suhailin. How many sweets did Suhailin give to Muthu?

Ans: _____ [3m]

9) Joshua is studying for a Science test. He has read $\frac{1}{4}$ of the textbook. After reading another 15 pages, the number of pages he has read became $\frac{2}{3}$ of the number of pages left unread. How many pages did Joshua read?

Ans: _____ [3m]

10) The area of Rectangle Y is 4 times that of Rectangle Z. The area of Rectangle X is 2.5 times that of Rectangle Y. Express the total area of Rectangle X and Rectangle Z as a fraction of the whole figure.

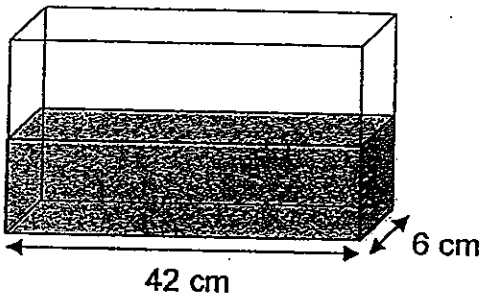


Ans: _____ [3m]

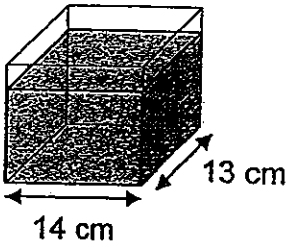
11) The sum of Abel's and Beth's money was 3 times as much as Carl's money. Abel and Beth each gave $\frac{1}{3}$ of their money to Carl. Carl then had $40 more than Abel while Beth had $100 less than Carl. How much money did they have altogether?

Ans: _____ [3m]

12) Water is poured into Tank A and Tank B as shown below. The height of the water level in both tanks is the same. If the difference in the volume of water of both tanks is 1400 cm^3, what is the volume of water in Tank B?
(Diagrams are not drawn to scale)



Tank A



Tank B

Ans: _____ [4m]

13) At a birthday party, the ratio of the number of adults to the number of children was 1 : 4. Each boy was given 3 chocolates, each girl was given 2 chocolates while each accompanying adult received 1 chocolate. Given that 403 chocolates were distributed and that the ratio of the number of boys to the number of girls was 1 : 2, how many children were there at the birthday party?

Ans: _____ [4m]

14) Huiling had 160 less marbles than George. George gave 75% of his marbles to Huiling. Huiling then gave 20% of her marbles to George. If Huiling had 192 more marbles than George in the end, how many marbles did Huiling have at first?

Ans: _____ [4m]

15) $\frac{2}{3}$ of the beads in Bag A is the same as $\frac{3}{4}$ of the beads in Bag B.
23 beads were added to Bag A while 27 beads were removed from Bag B.
The ratio of the number of beads left in Bag A to the number of beads in Bag B became 2 : 1. How many beads were there in Bag A in the end?

Ans: _____ [5m]

16) The following figures are formed by unshaded and shaded triangles.

Figure 1

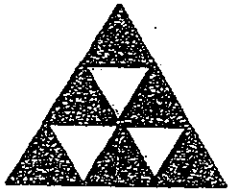


Figure 2

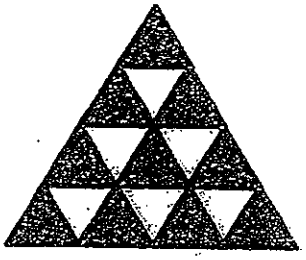


Figure 3

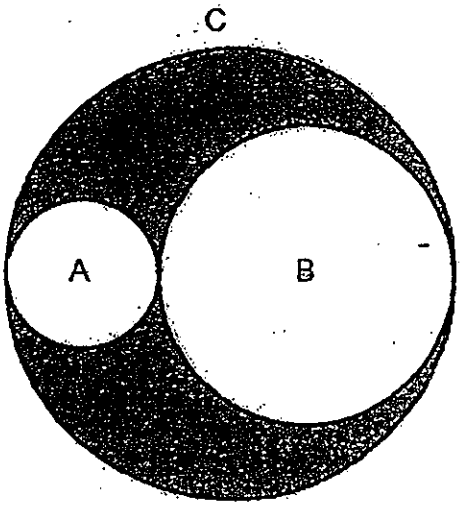
Figure	Number of unshaded triangles	Number of shaded triangles
1	1	3
2	3	6
3	6	10
4	[1m]	[1m]

(a) Complete the table for **Figure 4.**
(b) Find the number of unshaded triangles in **Figure 50.**
(c) Find the figure that has 4095 shaded triangles.

Ans: (b) _____ [1m]

(c) **Figure**_____ [2m]

17) The figure below is made of 3 circles. The ratio of the area of Circle A to the area of Circle B is 1 : 4. If the diameter of Circle A is 14 cm, find the perimeter of the shaded region in the figure.
(Give your answer in terms of π)



Ans: _____ [5m]

18) At 08 35, Tom started driving his lorry from Town A to Town B at an average speed of 70 km/h. At 10 05, Roy started driving his sports car from Town A to Town B at an average speed of 100 km/h.

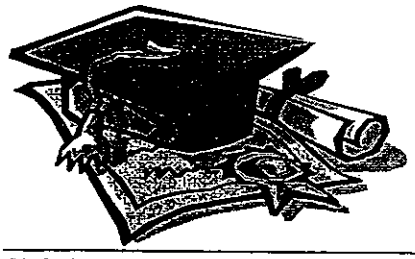
(a) At what time did Roy catch up with Tom on the road?

(b) Find the distance between Town A and Town B if Roy reached Town B in $\frac{3}{4}$ h after overtaking Tom.

Ans: (a) _____ [3m]

(b) _____ [2m]

END OF PAPER 2



ANSWER SHEET

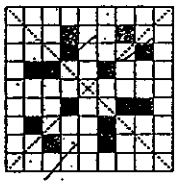
EXAM PAPER 2012

SCHOOL : TAO NAN
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : SA1

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

16)9.08 **17)20000** **18)1 1/20** **19)44cm** **20)Y**

21) 

22)16 2/3 **23)8k+3** **24)16**

25)28cm² **26)5/8** **27)88°**

28)123 **29)21** **30)196cm²**

Paper 2

1)36 ÷ 4 = 9
9 − 2 = 7
36 − 2 = 34
34 + 7 = 41 years.

2)10 + 130 + 110 + 150 = 400
110 + 150 = 260
260/400 = 13/20

3)∠AOD = 180° − 20° = 160°
∠CAD = (180° − 160°) ÷ 2 = 10°
∠CAB = (180° − 134°) ÷ 2 = 23°
∠DAB = 23° + 10° = 33°

4)100% - 20% = 80%
80% ÷ 20% = 4
100 x 4 = 400
100% ÷ 50% = 2
400 x 2 = $800

5)52 x 3 = 156
156 − 108 = 48
3 + 1 = 4
48 ÷ 4 = 12
52 − 12 = 40

6)1/5 x (1 − 2/3) = 1/15
48 x 15 = 720
There were 720 pieces in the jigsaw puzzle.

7)6 x 5 = 30
7 − 4 = 3
30 ÷ 3 = 10
10 x 4 = 40
40 ÷ 5 = 8
His speed was 8km/h.

8)80 + 20 = 100
100 ÷ 2 = 50
Suhailin gave Muthu 50 sweets.

9)2 + 3 = 5
2/5 − ¼ = 3/20
15÷3 x 20 x 2/5 = 40
He read 40 pages.

10)1 x 4 = 4
4 x 2.5 = 10
10 + 1 = 11
11 + 4 = 15
10/15 + 1/15 = 2/3 + 1/15
= 11/15
The fraction is 11/15

11)Abel + Beth : Carl
3 : 1

Abel + Beth : Carl
2 : 2
1 : 1

(100+40)x 2 = 280
It is $280

12)42 x 6 = 252
14 x 13 = 182
252 − 182 = 70
1400÷70 = 20
20 x 14 x 13 = 3640
The volume is 3640cm3

13)Adults : Children
1 : 4
3 : 12

Boys : Girls
1 : 2
4 : 8

4 x 3 = 12
8 x 2 = 16
3 x 1 = 3
12 + 16 + 3 = 31
403÷31 = 13
13 x 12 = 156
There were 156 children.

14)Huling→10u
George→10u + 160

(10u+160)x 75% =7.5u + 120
10u + 160 − 7.5u − 120 = 2.5u + 40
10u + 7.5u + 120 = 17.5u + 120
17.5u + 120 x 20% = 3.5u + 24
2.5u + 40 + 3.5u + 24 = 6u + 64
17.5u + 120 − 3.5u − 24 = 14u + 96
14u + 96 − 6u − 64 = 192
(14u - 6u)+(96 − 64)= 8u + 32 = 192
192 − 32 = 160
160÷8 = 20
20 x 10 = 200
She had 200 marbles at first.

15)Bag A →2/3 = 6/9
Bag B →3/4 = 6/8
Bag A : Bag B
9 : 8
Bag A : Bag B
2 : 1

9u + 23 = 2p
8u − 27 = 1p
16u − 54 = 2p
16u − 54 = 9u + 23
16u − 9u = 54 + 23
7u = 77
U = 77÷7
U = 11
11 x 9 + 23 = 122
There were 122 beads in Bag A.

16)a)10, 15
b)1275
c)89

17)$14 \times \Pi = 14\Pi$

$14 \div 2 = 7$

$7 \times 7 \times \Pi = 49\Pi$

$49\Pi \times 4 = 196\Pi$

$\sqrt{196\Pi} = 14\Pi$

$14\Pi \div \Pi = 142$

$14 \times 2 = 28$

$28 \times \Pi = 28\Pi$

$(14 + 28) \times \Pi = 42\Pi$

$42\Pi + 14\Pi + 28\Pi = 84\Pi$

The perimeter is 84Πcm.

18) $70 \times 1.5 = 105$

$100 - 70 = 30$

$105 \div 30 = 3.5$

$\frac{3}{4}$ h = 45min

$100 \times \frac{3}{4} = 75$

75 (100x3.5) = 425

a)He caught up at 1.35pm.

b)The distance is 425km.