AI TONG SCHOOL

2013
SEMESTRAL ASSESSMENT 1
PRIMARY 6

MATHEMATICS
Paper 1
(Booklets A and B)

DURATION : 50 min

DATE : 15 May 2013

INSTRUCTIONS
Do not open the booklet until you are told to do so.
Follow all instructions.
Answer all questions.
You are not allowed to use a calculator.

Name : ( )

Class : Primary 6 ( ) / 6M ( )

Paper 1	/40
Paper 2	/60
Total	/100

Parent's Signature :

Date :

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)

1 In 62.78, what does the digit '8' stand for?

(1) 8 hundredths

(2) 8 tenths

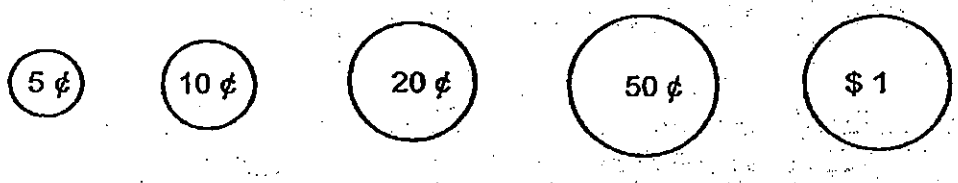
(3) 8 ones

(4) 8 tens

2 Which of the following has the same value as 5030 g?

(1) 5 kg 3 g
(2) 5 kg 30 g
(3) 50 kg 3 g
(4) 50 kg 30 g

3 Sammie had only the following five coins.

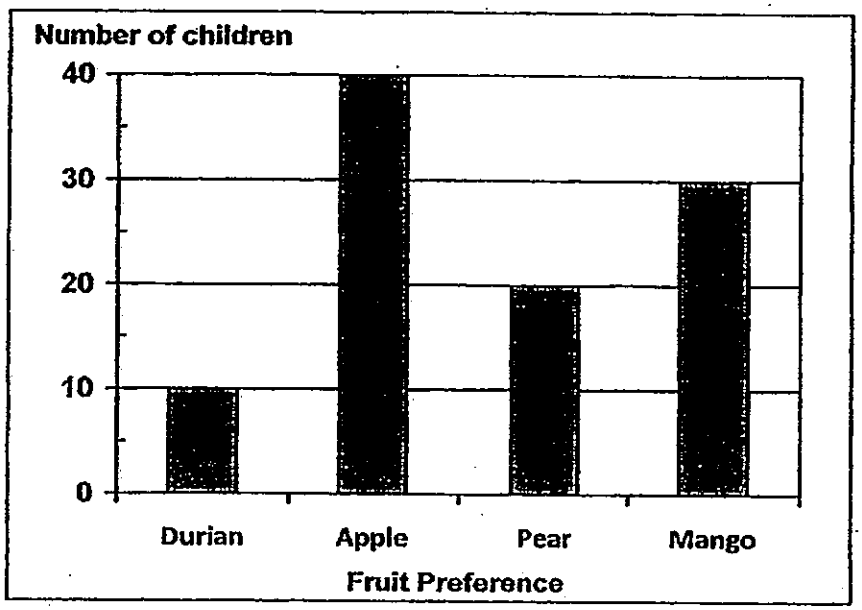


She gave three coins to her sister. Which of the following is the amount she had given to her sister?

(1) 55 ¢
(2) 75 ¢
(3) $1.05
(4) $1.35

Use the information below to answer Questions 4 and 5.

The bar graph below shows the fruit preference of a number of children.



4 Based on the bar graph, the number of children who prefer Apple is _____ of the number of children who prefer Mango.

(1) $\frac{4}{7}$

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

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

(4) $\frac{7}{4}$

5 Which choice of fruit makes up 20% of the total number of fruits?

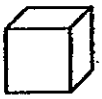
(1) Pear

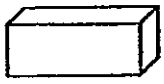
(2) Apple

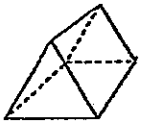
(3) Mango

(4) Durian

6 Which of the following is <u>not</u> a prism?

(1) 

(2) 

(3) 

(4)

7 Malcolm and Sean took part in a 15-minute quiz. On average, Malcolm answered 4 more questions than Sean, for every minute. If both of them answered a total of 250 questions, how many questions did Sean answer?

(1) 60
(2) 95
(3) 155
(4) 190

8 The number of rulers is $\frac{1}{3}$ the number of pencils. If the ratio of the number of erasers to the number of pencils is 3 : 4, what is the ratio of the number of rulers to the number of erasers?

(1) 1 : 3
(2) 3 : 1
(3) 4 : 9
(4) 9 : 4

9 The number of cars sold in May was 150. In June, the number of cars sold decreased to 120. Find the percentage decrease in the number of cars sold between May and June.

(1) 20%

(2) 25%

(3) 30%

(4) 80%

10 Hock Sim has $\$w$. Chia Poh has 4 times as much money as Hock Sim. Macey has \$25 more than Chia Poh. How much does Macey have in terms of w?

(1) $\$(4 + w)$

(2) $\$(25 + w)$

(3) $\$(25 + 4w)$

(4) $\$(100 + w)$

11 A cat is chasing a rat. They are 135 metres apart. For every 9 metres that the cat runs, the rat runs 6 metres. How much further must the cat run in order to catch the rat?

(1) 45 m

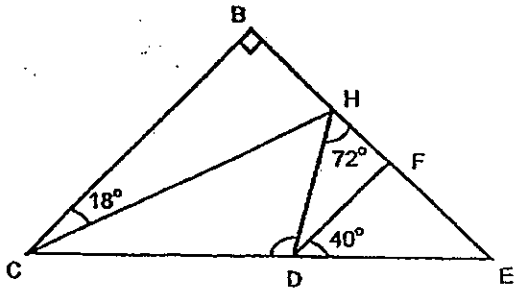
(2) 54 m

(3) 270 m

(4) 405 m

12 The figure below is not drawn to scale BCDF is a trapezium. Find ∠CDH.

(1) 108°
(2) 122°
(3) 126°
(4) 162°



13 Singapore and Kuala Lumpur is 315 km apart. A motorist travelled for 1.5 hours from Singapore towards Kuala Lumpur at a speed of 120 km/h. How far more must he travel to reach Kuala Lumpur?

(1) 135 km
(2) 180 km
(3) 195 km
(4) 315 km

14 The ratio of the number of children to the number of adults at a funfair was 2 : 3. $\frac{2}{5}$ of the children were boys. If there were 125 more adults than children, how many girls were there at the funfair?

(1) 100
(2) 125
(3) 150
(4) 375

15 Shalene is m years old. Her mother is 32 years older than her. What was their total age 8 years ago in terms of m?

(1) $(2m + 16)$ years
(2) $(2m + 24)$ years
(3) $(2m + 32)$ years
(4) $(2m + 48)$ years

Booklet B

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 Bakery Bliss made 126 720 cupcakes last year. Express this number to the nearest ten thousand.

Ans: _____

17 Find the value of $\frac{4}{7} \div \frac{2}{3}$.

Ans: _____

18 What is the missing number in the box?

$6.52 \times 3 = 195.6 \times \square$.

Ans: _____

19 **Each pack of 5 toy cars is sold for $9. Joshua has $47. How many toy cars can Joshua buy at most?**

Ans: _____

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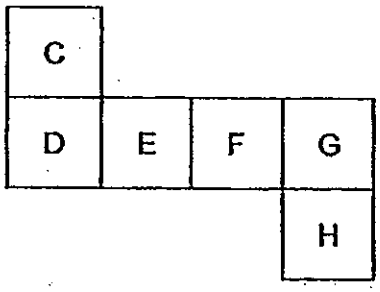
20 The figure below shows the net of a cube. If the letter 'D' is at the top of the cube, which letter is at the bottom of the cube?



Ans: _____

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21 What is the value of $156 - 18 + 6 \times (3 + 13)$?

Ans: _____

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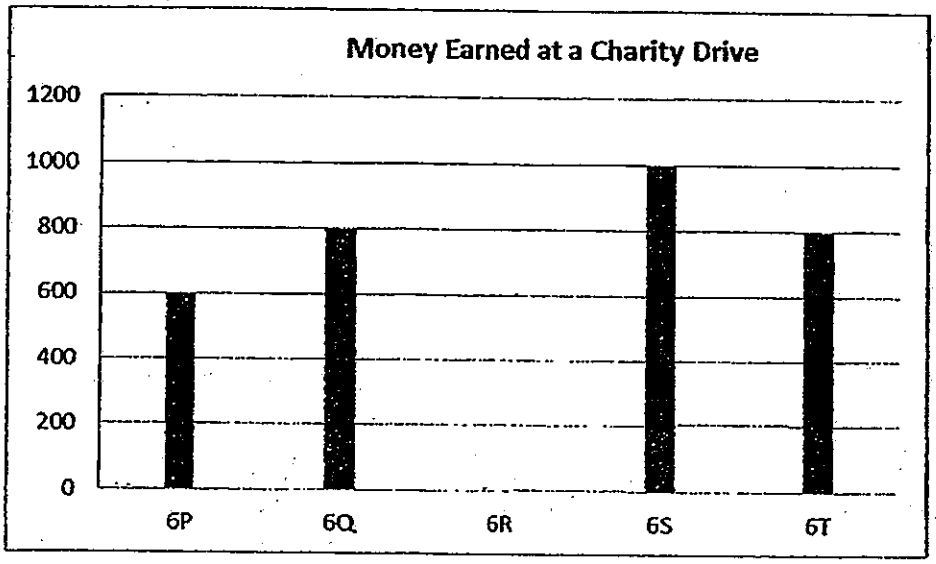
22 The bar graph below shows the amount of money earned by 5 classes during a charity drive.



If the total amount of money earned by the 5 classes is $3600, **draw** the bar in the graph to represent the amount Class 6R earned.

23 7 similar blouses cost $126. What is the cost of 3 such blouses?

Ans: $_____

---

24 Express $\frac{2}{5}$% as a decimal.

Ans:_____

---

25 Triangle A has a base of 6 cm and a height of r cm. Triangle B has an area that is $(5r + 7)$ cm^2 more than the area of Triangle A. Find the area of Triangle B in terms of r.

Ans:_____cm^2

Total: ____/10

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 There are a total of 84 marbles in Bag E and Bag F. Bag F and Bag G have a total of 82 marbles while Bag G and Bag H have 85 marbles. How many marbles are there in Bag E and Bag H altogether?

Ans: _____

---

27 Harry has a box measuring 11 cm by 6 cm by 4 cm. He wants to fill the box with cubes of edge 2 cm. What is the maximum number of cubes that can fit into the box?

Ans: _____

---

28 3 identical rectangles are each divided into equal parts. The shaded parts represent a fraction for each figure. Shade the number of equal parts in Figure C to show the sum of the fractions represented by the shaded parts in Figure A and Figure B.

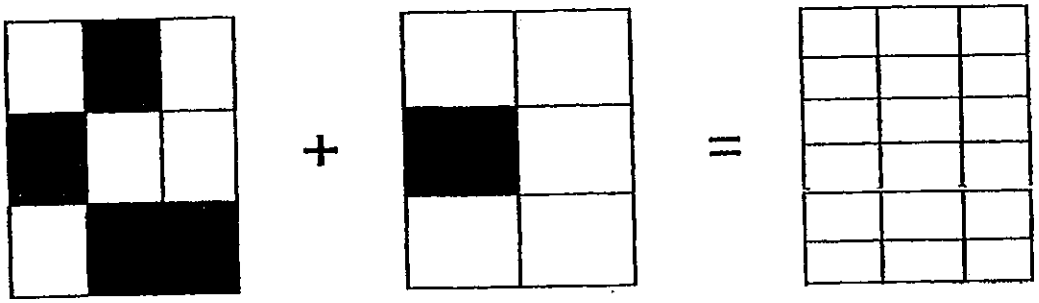


Figure A Figure B Figure C

29 Jen baked 77 blueberry muffins and chocolate muffins. After giving away 12 blueberry muffins, there were $\frac{2}{3}$ as many blueberry muffins as chocolate muffins left. How many chocolate muffins did Jen bake?

Ans: _____

30 Mother bought $\frac{1}{5}$ kg of prawns and 3 kg of squids for $43. 1 kg of prawns and 3 kg of squids cost $67. Find the cost of 1 kg of prawns.

Ans: $ _____

Total: /10

AI TONG SCHOOL

2013
SEMESTRAL ASSESSMENT 1
PRIMARY 6

MATHEMATICS
Paper 2

DURATION : 1 h 40 min

DATE : 15 May 2013

INSTRUCTIONS
Do not open the booklet until you are told to do so.
Follow all instructions.
Answer all questions.
You are allowed to use a calculator.

Name : _____( )

Class : Primary 6 ( ) / 6M ( )

Parent's Signature : _____

Date : _____

Total	/ 60

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.

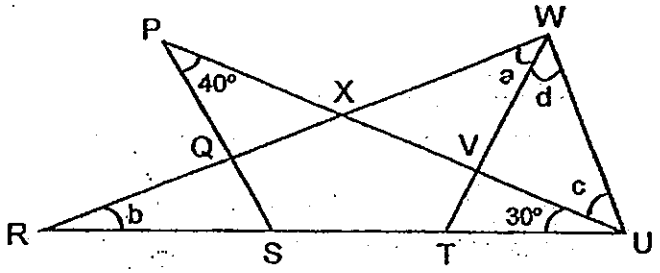
(10 marks)

Do not write in this space

1 Nicholas scored an average of 165 points for his first 11 online games. How many points must he score on his 12th game to obtain an average of 248 points for all 12 games?

Ans: _____

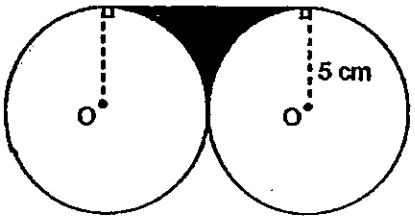
2 The figure below is not drawn to scale. It is made up of straight lines, forming triangles. ∠PUR = 30° and ∠UPS = 40°. Find the value of ∠a + ∠b + ∠c + ∠d.



Ans: _____ °

3 The figure is made up of 2 identical circles with 'O' as the centre of the circles. The radius of each circle is 5 cm. Find the perimeter of the shaded area. (Take $\pi = 3.14$)

Do not write in this space



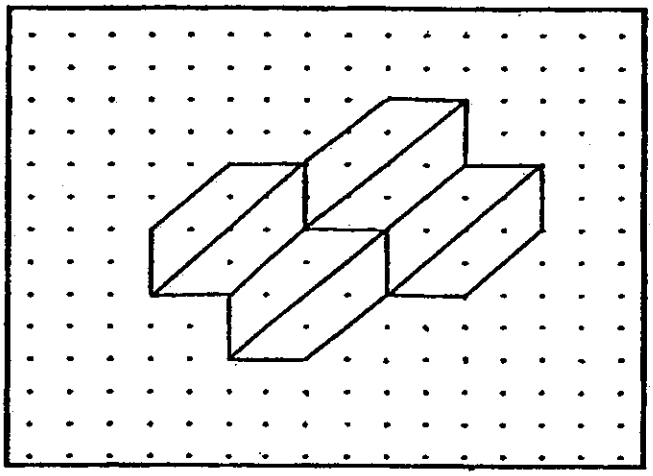
Ans: _____ cm

4 $\frac{3}{7}$ of Shermaine's money is $\frac{5}{9}$ of Ryan's money. What is the ratio of Ryan's money to Shermaine's money?

Ans: _____

5 Form a tessellation by drawing 2 more unit shapes in the space provided in the box.

Do not write in this space.



For questions **6** to **18**, show your working clearly in the space provided for each question and write the 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 James used $\frac{3}{8}$ of his money to buy a birthday present. He then lent $\frac{4}{7}$ of the remainder to his friend and found that he had $45 left. What was his original amount of money?

Ans: _____ [3]

7 Meixin, Isabel and Devi had some stamps in the ratio of 2 : 5 : 7. After Mr Lim gave the girls 8 stamps each, the ratio of the number of stamps Meixin had to the number of stamps Isabel had to the number of stamps Devi had become 10 : 19 : 25. Find the total number of stamps they had at first.

Ans: _____ [3]

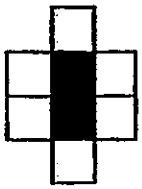
8 Construct a square PQST and an equilateral triangle QSR.
Square PQST shares side QS with the equilateral triangle QSR.
QS = 4 cm. [3]

Do not write in this space

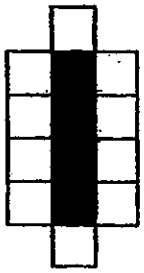
9 Black and white squares are used to form the pattern as shown below.

Do not write in this space

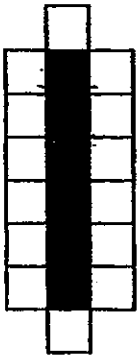
Pattern 1



Pattern 2



Pattern 3



(a) How many black squares will there be in Pattern 5?

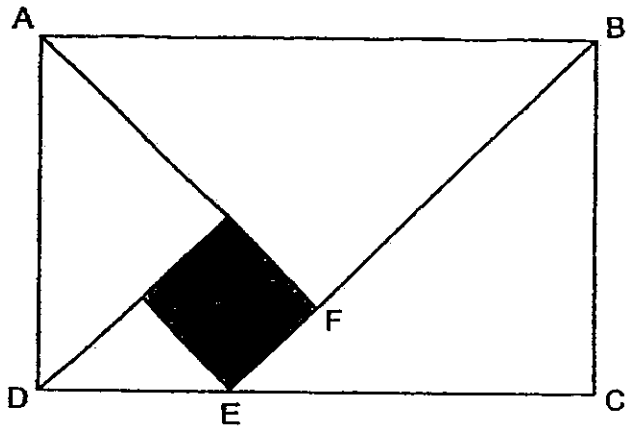
(b) If there are 86 white squares, which pattern will be formed?

Ans: (a) _____ [1]

(b) _____ [2]

10 In the figure below, not drawn to scale, Rectangle ABCD is made up of 4 isosceles right-angled triangles and a square. The ratio of the area of Triangle ABF to the area of Triangle BCE is 9 : 8. The perimeter of the square is 56 cm. Find the area of Rectangle ABCD.

Do not write in this space



Ans: _____ [3]

11 Kenneth's savings was $\frac{7}{10}$ of Eric's savings. After Kenneth increased his savings by 10% and Eric's savings decreased by 25%, Kenneth's savings was $900 more than Eric's. What was Kenneth's savings in the end?

Do not write in this space

Ans: _____ [4]

12 For every box of cookies Colleen sells, he earns $1.40. A bonus of $4 is given to him for every 25 boxes of cookies sold. How many boxes of cookies must he sell to earn $964?

Do not write in this space

Ans: _____ [4]

13 Wei Kang bought three times as many notebooks as storybooks and spent a total of $186. He spent $42 more on the storybooks than the notebooks. Given that a storybook cost $9 more than a notebook, find the cost of a notebook.

Do not write in this space

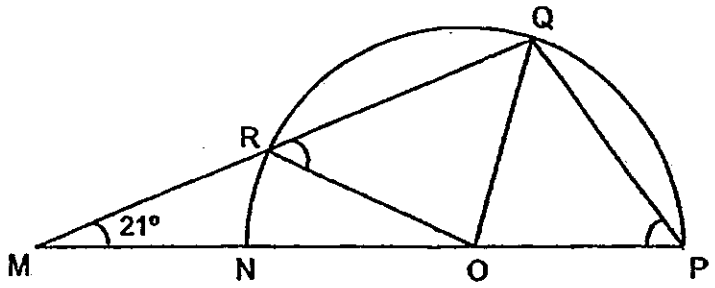
Ans: _____ [5]

14 in the figure below not drawn to scale, O is the centre of the semi-circle. MRQ and MNP are straight lines. MR = OP and ∠RMN = 21°. Find

Do not write in this space

(a) ∠ORQ

(b) ∠OPQ



Ans: (a) _____ [1]

(b) _____ [3]

15 Car A and Car B travelled between Cape Town and Maxi Town. Car A took 8 hours to travel from Cape Town to Maxi Town while Car B took 10 hours to travel from Maxi Town to Cape Town. Both Car A and Car B left for their destination at the same time. After travelling for $4\frac{1}{3}$ hours, Car A stopped at a petrol kiosk. How long would Car B take to pass this petrol kiosk?

Do not write in this space

Ans: _____ [4]

16 Brendan has some blue and green marbles in the ratio of 2 : 5. The next day, he bought 18 more blue marbles and gave 6 green marbles to his sister. The ratio of the number of blue marbles to the number of green marbles became 5 : 4. How many marbles did Brendan have at first?

Do not write in this space

Ans: _____ [4]

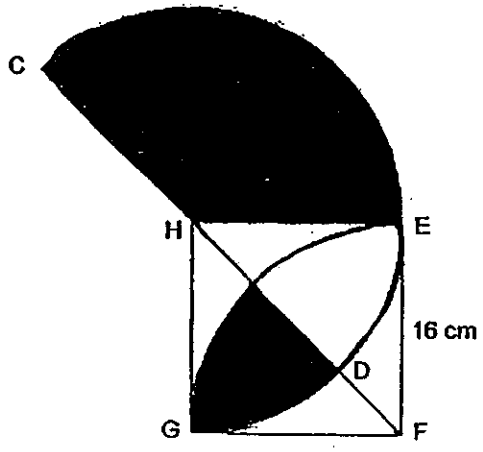
17 Ted had \$300 less than Amy. Amy decided to give $\frac{1}{5}$ of her money to Ted. In return, Ted gave $\frac{1}{3}$ of his money back to Amy. Amy now has \$400 more than Ted. How much money did Ted have at first?

Do not write in this space

Ans: _____ [5]

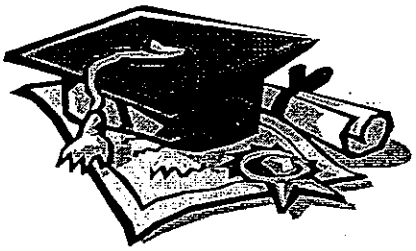
18 The figure is made up of a semi-circle, a square and two quadrants. H is the centre of the semi-circle. EFGH is a square with sides 16 cm and CF is a straight line. Find the shaded area, rounding off to 1 decimal place. (Use the calculator value of π)

Do not write i this space



Ans: _____ [5]

END OF PAPER
CHECK YOUR WORK CAREFULLY !



ANSWER SHEET

EXAM PAPER 2013
SCHOOL : AITONG
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : SA1

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

16)130000 17)6/7 18)0.1 19)25 20)F

21)108 22)6R draw 400 23)$54 24)0.004 25)(8r+7)

26)87 27)30 28)11/18 29)39 30)$30

Paper 2

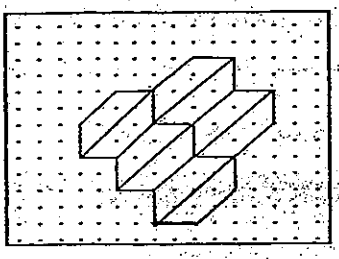
1)165 x 11 = 1815
248 x 12 = 2976
2976 – 1815 = 1161

2)180° – 30° = 150°

3)¼ x 3.14 x 10 = 7.85

4)27:35

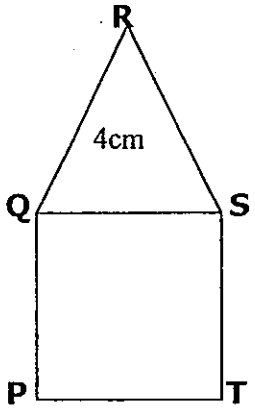
5)



6)45 ÷ 3 = 15
15 x 7 = 105
105 ÷ 5 = 21
21 x 8 = $168

7)8 ÷ 4 = 2
6 + 15 + 21 = 42
42 x 2 = 84

8)



9)a)6 + 2 + 2 = 10
b)86 – 2 = 84
84 ÷ 2 = 42 (B)
42 ÷ 2 = Pattern 21

10)56cm ÷ 4 = 14cm
14cm x 14cm = 196cm^2
196cm^2 ÷ 2 = 98cm^2
98cm^2 x 24 = 2352cm^2

11)K→70% E→100%

10/100 x 70 = 7

<u>After</u>
K→70% + 7% = 77%
E→75%
77% - 75% = 2%
2% →900
1% →450
77% →450 x 77 = $34650

12)25 x 1.4 = 35
35 + 4 = 39 (25 boxes)

964 ÷ 39 ≈ 24
24 x 39 = 936
964 – 936 = 28
28 ÷ 1.4 = 20
24 x 25 = 600
600 + 20 = 620 boxes.

13)186 – 42 = 144
144 ÷ 2 = 72

Total cost of NB → 72
Total cost of SB → 186 – 72 = 114

No.of NB □□□
No. of SB□
3u of SB → 114
114 – 24 = 90
90 ÷ 9 = 10
24 ÷ 10 = $2.40

14)a) ∠ORG = 21° + 21° = 42°
b) ∠ORG = ∠RQO
∠RQO = 180° – 42° – 42° = 96°
∠QOP = 180° – 96° – 21° = 63°
∠OPQ = (180° – 63°) ÷ 2 = 58.5°

15)

	A	:	B
Time	8	:	10
	4	:	5
Speed	5	:	4

8 x 5 = 40

In $4\frac{1}{3}$h → $4\frac{1}{3} \times 5 = 21\frac{2}{3}$

$40 - 21\frac{2}{3} = 18\frac{1}{3}$

Time = $18\frac{1}{3} \div 4 = 4\frac{7}{12}$h

16)25 – 8 = 17
72 + 30 = 102
102÷17 = 6
2 + 5 = 7
6 x 7 = 42

17)Ted→15u
Amy→15u + 300
1/5 x 15u = 3u
1/5 x 300 = 60

Ted→18u + 60
Amy→12u + 240
1/3 x 18u = 6u
1/3 x 60 = 20

Ted→12u + 40
Amy→18u + 260
18u + 260 + 2u – 40→400
6u+ 220→400
6u→180
1u→30
15u→30 x 15 = $450

18)16 x 16 = 256
¼ xΠx 16 x 16 ≈ 201.06
256 – 201.06 = 54.94
256 – 54.94 – 54.94 = 146.12
146.12÷ 2 = 73.06(A)
54.94÷2 = 27.47©
½ x Πx 16 x 16 ≈ 402.12
402.12 – 27.47 = 374.65
ANS: 374.7cm2