



## PRIMARY 6 SEMESTRAL ASSESSMENT 2 – 2014

Name \_\_\_\_\_

Date: 24 July 2014

Class : Primary 6

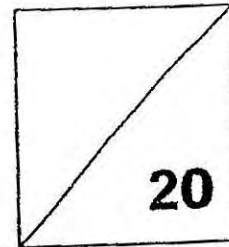
Time: 8.00 a.m. - 8.50 a.m.

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

Marks: \_\_\_\_\_ / **100**

Paper 1 comprises 2 booklets, A and B.

### MATHEMATICS PAPER 1 (BOOKLET A)



#### INSTRUCTIONS TO CANDIDATE

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

(20 marks)

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1. Round off 548 605 to the nearest thousand.

- (1) 548 000
- (2) 549 000
- (3) 550 000
- (4) 558 000

2. Pole A is 200 cm long. Pole B is 60 m long.  
What is the ratio of the length of Pole A to the length of Pole B?


- (1) 1 : 30
- (2) 1 : 300
- (3) 30 : 1
- (4) 300 : 1

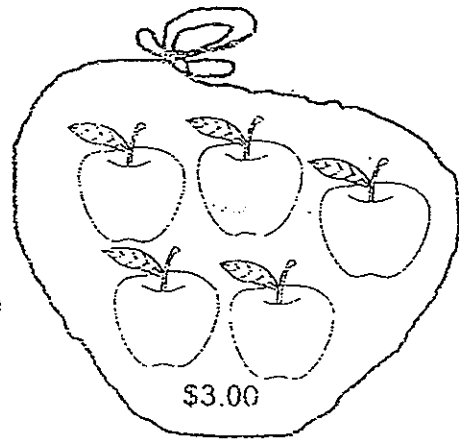
3. Salim ran 5 times round a circular track of radius 100 m. How far did he run?  
(Take  $\pi = 3.14$ )

- (1) 314 m
- (2) 628 m
- (3) 1 570 m
- (4) 3 140 m

4. What is the least amount to pay for 16 apples?

- (1) \$15.70
- (2) \$11.20
- (3) \$9.70
- (4) \$3.70

  
Each apple  
costs 70¢



5. Auntie Kim bought  $1\frac{2}{5}$  kg of noodles. She divided the noodles equally into 14 bowls. How much noodles was in each bowl?

- (1)  $\frac{6}{35}$  kg
- (2)  $\frac{1}{10}$  kg
- (3)  $\frac{1}{16}$  kg
- (4)  $\frac{1}{35}$  kg

6. Five years ago, May was  $p$  years old. Her brother is 3 years younger than her now. What is their total age now?

- (1)  $(2p + 7)$  years old
- (2)  $(2p + 2)$  years old
- (3)  $(2p + 8)$  years old
- (4)  $(2p + 13)$  years old

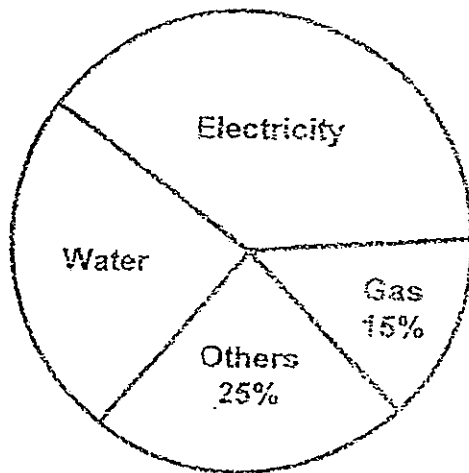
7. Betty had 2 boxes of cubes. After transferring  $\frac{1}{9}$  of the cubes from Box A to Box B, the ratio of the number of cubes in Box A to the number of cubes in Box B becomes 2 : 3. What is the ratio of the number of cubes in Box A to the number of cubes in Box B at first?

- (1) 12 : 8
- (2) 11 : 9
- (3) 9 : 11
- (4) 8 : 12

8. Find  $\frac{1}{5}$  % of 200.

- (1) 1
- (2) 0.4
- (3) 40
- (4) 100

9. The pie chart shows the breakdown of Mr Ye's household bill.



The amount of money spent on water is  $\frac{2}{3}$  the amount of money spent on electricity. What percentage of the total bill was spent on water?

- (1) 20%
- (2) 24%
- (3) 30%
- (4) 36%

10.  $3\frac{1}{100} = 10 \times \boxed{?}$

What is the missing number in the box?

- (1) 0.031
- (2) 0.301
- (3) 3.1
- (4) 30.1

11. Nellie has 7 more pieces of \$5 notes than \$2 notes. She has a total of \$175.  
How many pieces of \$2 notes does she have?

- (1) 32
- (2) 27
- (3) 25
- (4) 20

12. The parking charges of Car Park A is shown below:

Parking Charges	
From 6 a.m. to 6 p.m.:	
First hour	\$1.50
Subsequent $\frac{1}{2}$ h or part thereof	\$1.00
After 6 p.m. to the next day	\$5.00

Alice parked her car at the car park from 3.30 p.m. to 9 p.m.  
How much parking charges did she pay?

- (1) \$6.50
- (2) \$7.00
- (3) \$8.50
- (4) \$9.50

13. May and Carrie shared some sweets. After May gave  $\frac{1}{4}$  of her sweets to Carrie, Carrie had 3 times as many sweets as May. What fraction of May's sweets was Carrie's at first?

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

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

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

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

14. Siti was given a discount of \$2 for every tin of cookies she bought. For every 10 tins of cookies bought, she would receive an extra \$5 discount. How much discount would she receive if she bought 55 tins of cookies?

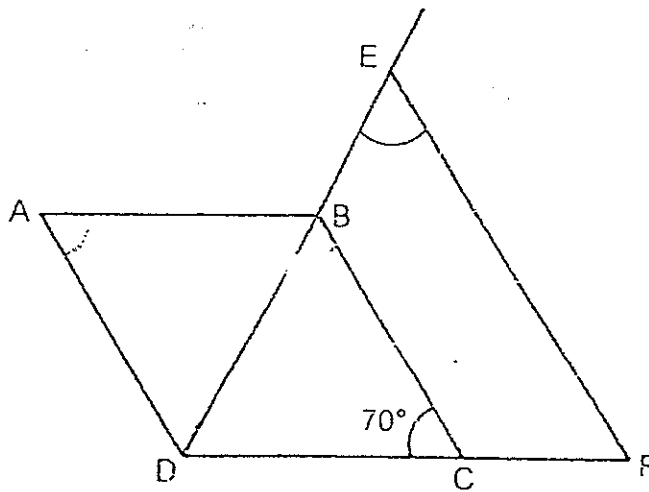
(1) \$115

(2) \$130

(3) \$135

(4) \$140

15. The figure below is not drawn to scale. ABCD is a rhombus. DBE is a straight line. BC is parallel to EF. Find  $\angle DEF$ .



- (1)  $55^\circ$
- (2)  $70^\circ$
- (3)  $110^\circ$
- (4)  $125^\circ$

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- End of Booklet A -





## PRIMARY 6 SEMESTRAL ASSESSMENT 2 – 2014

Name : \_\_\_\_\_

Date: 24 July 2014

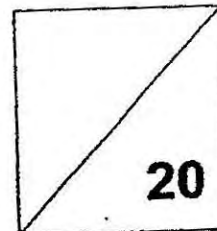
Class : Primary 6 ( )

Time: 8.00 a.m. - 8.50 a.m.

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

Paper 1 comprises 2 booklets, A and B.

### **MATHEMATICS PAPER 1 (BOOKLET B)**



#### **INSTRUCTIONS TO CANDIDATE**

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)

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16. What is the remainder when 9 030 is divided by 50?

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

17. Express  $5\frac{3}{7}$  as a decimal. Leave your answer correct to 2 decimal places.

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

18. The timings recorded by 4 athletes for a 100-metre sprint are shown below.  
Arrange the names of athletes starting from the fastest sprinter to the slowest.



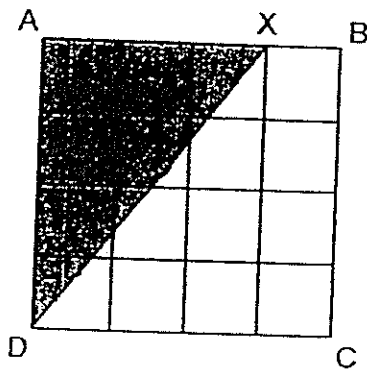
Arul	11.92 s
Ben	11.47 s
Carl	11.56 s
Daud	11.73 s

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

19. Express  $1\frac{1}{3}$  as a percentage.

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

20. ABCD is a square. AX is  $\frac{3}{4}$  of AB. What fraction of the square is shaded?



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

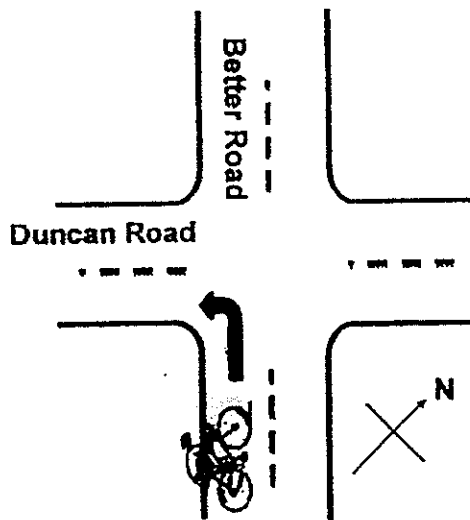
21. A box has a mass of 1.75 kg when it is completely filled with jellybeans. It has a mass of 1.15 kg when it is  $\frac{5}{8}$  filled. What is the mass of the box?

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

22. Ali gave 30% of his savings to his sister. She spent 60% of the money on a storybook. What percentage of Ali's savings had she spent?

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

23. John is cycling along Better Road. At the junction, he will turn left into Duncan Road. In which direction will he be cycling after he has turned left?



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

24. Find the value of  $59 - 36 \div 4 + (19 - 8 \times 2)$ .

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

25.  $\frac{3}{5}$  of Sam's age is equal to  $\frac{5}{7}$  of Meimei's age. Their age difference is 8 years. Find Meimei's age.

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

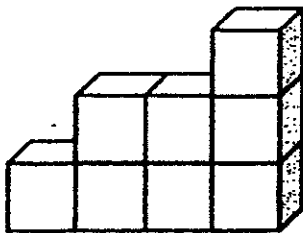
Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

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26. Find the value of  $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32}$ . Leave your answer in the simplest form.

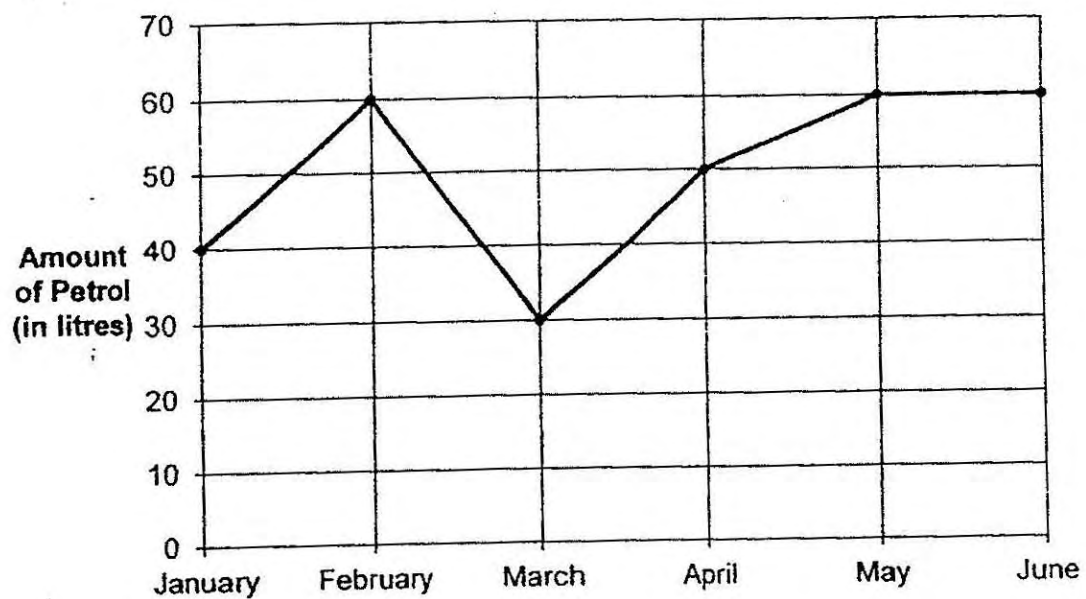
Ans: \_\_\_\_\_

27. The solid is made up of 8 pieces of 2-cm cubes glued together. The entire solid is painted yellow. Find the total surface area which is painted yellow.



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

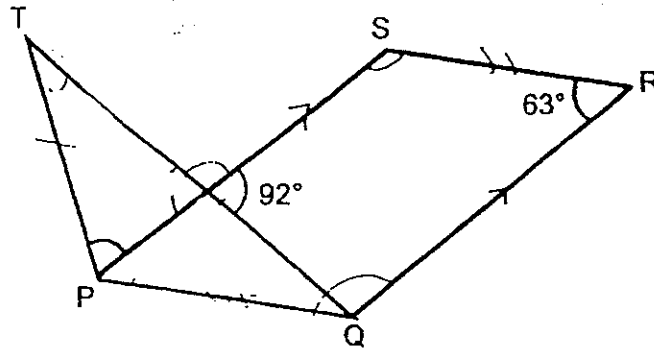
28. The line graph shows the amount of petrol used by Mrs Tan for the first 6 months of the year.



Mrs Tan paid \$2.00 (inclusive of GST) for each litre of petrol.  
What is the average amount of money spent?

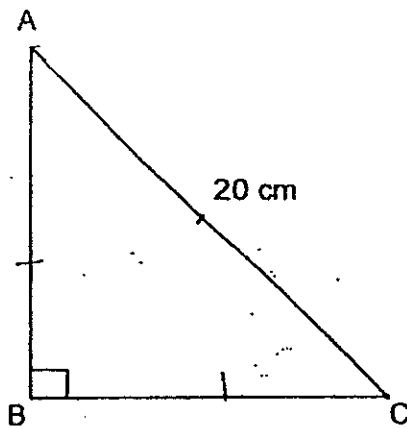
Ans: \$ \_\_\_\_\_

29. PQRS is a parallelogram. TP = PQ. Find  $\angle TPS$ .



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

30. Find the area of the right-angled triangle shown below. AB is equal to BC.



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

- End of Booklet B -





**PRIMARY 6 SEMESTRAL ASSESSMENT 2 – 2014**

Name: \_\_\_\_\_

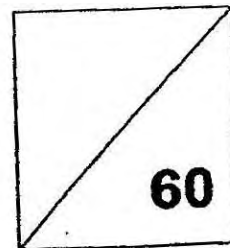
Date: 24 July 2014

Class : Primary 6

Time: 10.00 a.m. - 11.40 a.m.

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

**MATHEMATICS  
PAPER 2**



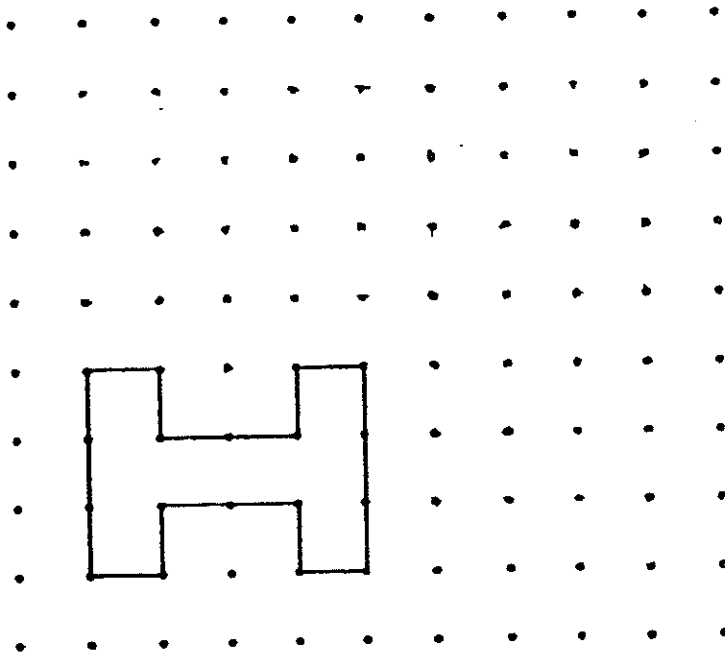
**INSTRUCTIONS TO CANDIDATE**

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. Use the given shape to form a tessellation in the space provided.  
Draw 4 more of the given shape.



2. The average of seven numbers is 49. If '1' is added to the first number, '2' is added to the second number, '3' is added to the third number and so on up to the seventh number, what is the new average?

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

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3. There are some red and blue cubes in a box. If 16 more red cubes are added, the percentage of blue cubes will decrease from 25% to 20%. How many blue cubes are in the box?

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

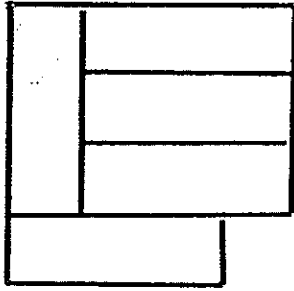
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4. Miss Ho baked 3 times as many chicken pies as vegetarian pies. She gave 16 chicken pies and 4 vegetarian pies to her friend. She had the same number of chicken pies and vegetarian pies left. How many chicken pies did she bake?

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

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5. The figure below is made up of 5 identical rectangles with a perimeter of 336 cm. Find the area of each rectangle.



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)

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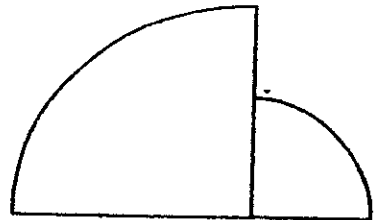
6. At 12 noon, a car left Town A for Town B at an average speed of 100 km/h while a bus left Town B for Town A at an average speed of 80 km/h. At 4.30 p.m., the two vehicles were 20 km apart. Find the distance between Town A and Town B.

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

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7. The figure is made up of 2 quadrants with radii 14 cm and 7 cm respectively.

Find the perimeter of the figure. (Take  $\pi = \frac{22}{7}$ )



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

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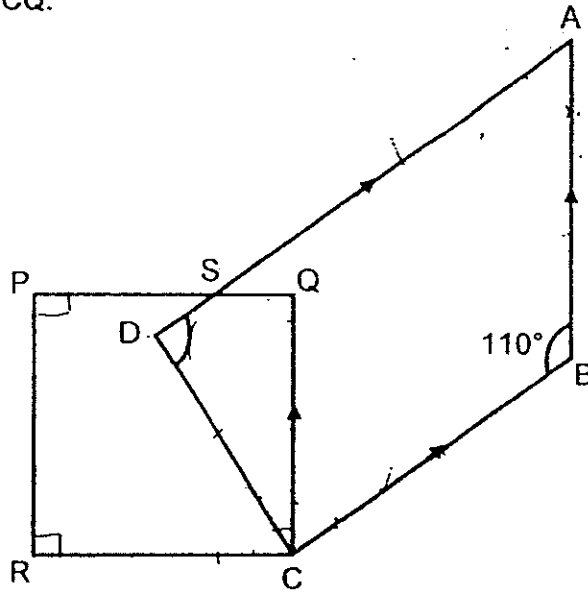
10. Tom and Jerry take 1 hour to clean the fish tank together. If Tom takes 3 hours to clean the tank on his own, how long will it take Jerry to clean the tank alone?

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

11. In the figure below, ABCD is a trapezium and PQCR is a square.  $AB \parallel CQ$ .

The size of  $\angle DCR$  is  $\frac{5}{4}$  of  $\angle DCQ$ .

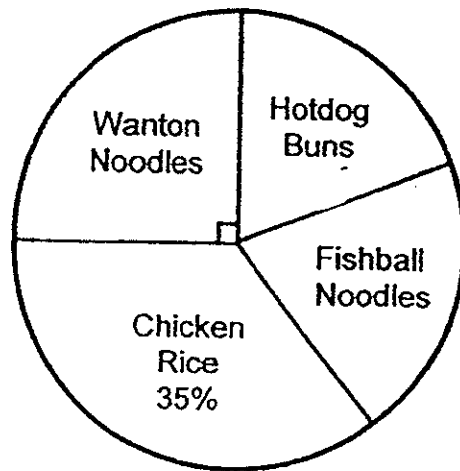
Find  $\angle SDC$ .



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



12. The pie chart shows the type of food ate by 1800 pupils in XYZ School.



The number of pupils who ate hotdog buns is the same as the number of pupils who ate fishball noodles.

- (a) How many pupils ate hotdog buns?
- (b) The pupils paid \$1.20 for each bowl of wonton noodles. What was the total amount of money spent on wonton noodles?

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

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

13. At a game stall, Keith and Beth shared some points. At first, Keith had 120 more points than Beth. When Keith gave away  $\frac{1}{6}$  of his points to Beth, he had 20 points less than Beth. What was the ratio of Keith's points to Beth's points at first? Leave your answer in the simplest form.

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

14. Jack started driving from Town X towards Town Y at 13 40 at an average speed of 70 km/h. Muthu began driving from Town X towards Town Y at 15 10 at an average speed of 100 km/h.

(a) At what time did Muthu pass Jack on the road?

(b)  $1\frac{2}{5}$  hours after passing Jack, Muthu reached Town Y. At what time did Jack reach Town Y?

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

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

15. Mark was training for a marathon. Each week, he jogged a distance of 10% more than the previous week. He jogged 36.3 km in Week 3.
- (a) What distance did he jog in Week 1?
  - (b) What was the total distance Mark jogged in 3 weeks?

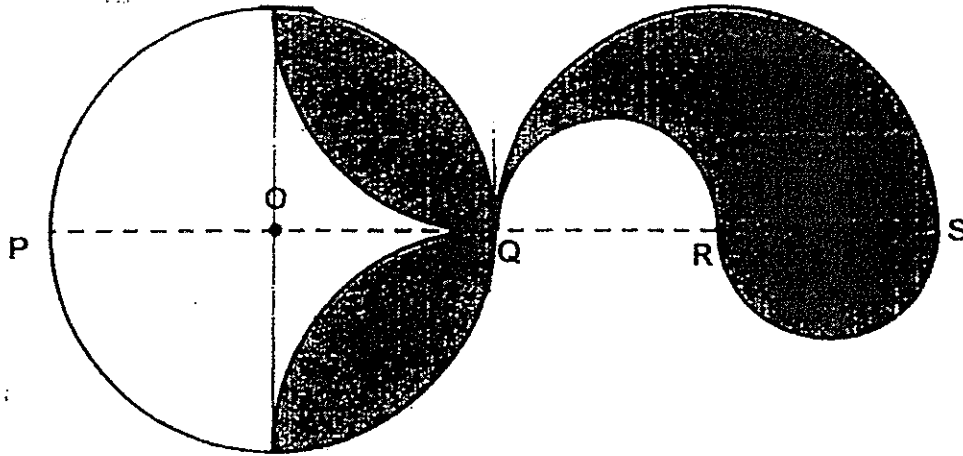
Ans: (a) \_\_\_\_\_ [3]

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

16. Mrs Raju spent \$72 on some mangoes, apples and peaches. The ratio of the amount of money she spent on the mangoes, apples and peaches was 3 : 2 : 1. Apples were sold at 5 for \$2. The number of mangoes she bought was  $\frac{2}{5}$  the number of apples. The number of peaches she bought was  $\frac{2}{3}$  the number of apples. Find the price of a mango.

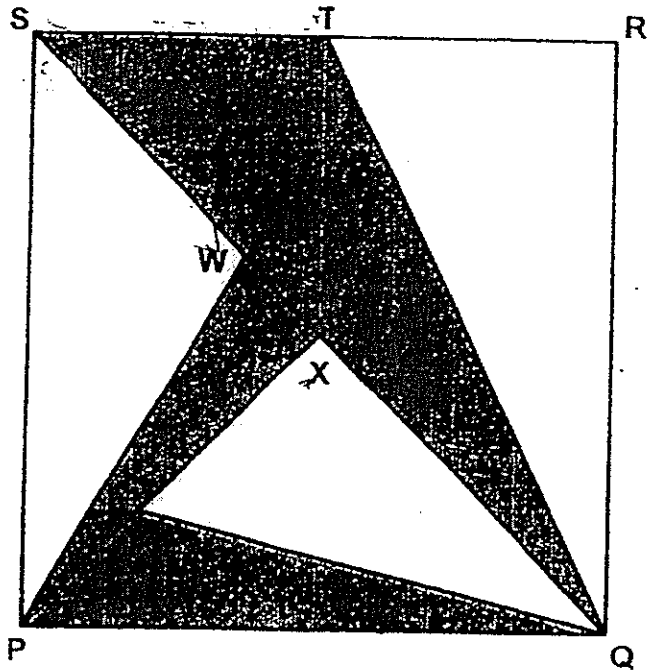
Ans: \_\_\_\_\_ [5]

17. The figure below is not drawn to scale.  
 O is the centre of the circle.  $OQ = QR = RS$ . Find the shaded area.  
 Leave your answer in terms of  $\pi$ .



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

18. In the figure below, PQRS is a square of sides 24 cm. X is the midpoint of QS.  $ST = TR$ . SX is 4 times of WX. PY is  $\frac{3}{8}$  of PX. Find the total shaded area.



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

- End of Paper -





**EXAM PAPER 2014**

**LEVEL : PRIMARY 6**  
**SCHOOL : TAO NAN**  
**SUBJECT : MATHS**  
**TERM : SA2**

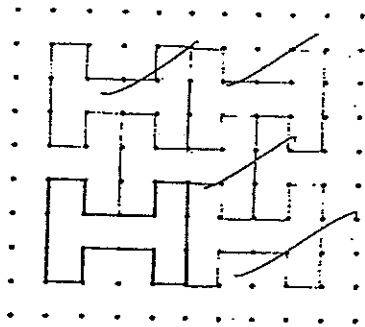
**Paper 1**

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

- Q16 30  
 Q17 5.43  
 Q18 Ben, Carl, David, Arul  
 Q19  $133\frac{1}{3}$   
 Q20  $\frac{3}{5}$   
 Q21 0.15kg  
 Q22 18%  
 Q23 South-West  
 Q24 53  
 Q25 42 years  
 Q26  $\frac{31}{32}$   
 Q27 120 cm<sup>2</sup>  
 Q28 \$100  
 Q29 59°  
 Q30 100cm<sup>2</sup>

**Paper 2**

Q1



- Q2  $49 \times 7 = 343$   
 $1 + 2 + 3 + 4 + 5 + 6 + 7 = 28$   
 $343 + 28 = 371$   
 $371 \div 7 = 53$

**The new average is 53.**

Q3

<u>new ratio</u>	<u>Original ratio</u>
blue : red	blue : red
20 : 80	25 : 75
1 : 4	1 : 3

4 units - 3 units → 1 unit  
 1 unit → 16

**There are 16 blue cubes in the box.**

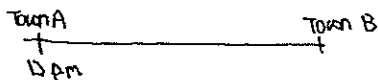
Q4 16 - 4 - 12  
 2 units → 12  
 1 unit → 6  
 6 x 3 = 18

**She baked 18 chicken pies.**

Q5 16 units → 336  
 1 unit → 21 (breadth)  
 3 units → 63 (length)  
 63 x 21 = 1323

**The area is 1323cm<sup>2</sup>.**

Q6



<u>car</u>	<u>Bus</u>
speed = 100km/h	speed = 80km/h
Time = 4.5h	Time = 4.5h
Distance = 450km	Distance = 360km
450km + 360km = 810	

12pm to 4pm → 4.5h

The distance between Town A and B is 810km.

Q7 circumference of big quadrant =  $\frac{1}{4} \times \frac{22}{7} \times 2 \times 14$   
 = 22

circumference of small quadrant =  $\frac{1}{4} \times \frac{22}{7} \times 2 \times 7$   
 = 11

Perimeter = 22 + 11 + 14 + 7 + 7 = 61

**The perimeter is 61cm.**

Q8

$$\begin{array}{l} \text{(a) Part K : Part L} \\ 5 : 3 \\ 10 : 6 \end{array} \qquad \begin{array}{l} \text{Part L : Part M} \\ 2 : 1 \\ 6 : 3 \end{array}$$

The ratio is 10 : 6 : 3.

$$\begin{array}{l} \text{(b) } 10+6=16 \text{ (half of rectangle)} \\ 16-3=13 \\ 13 \text{ units} \rightarrow 26\text{cm}^2 \\ 1 \text{ unit} \rightarrow 2\text{cm}^2 \\ 16 \times 2 = 32 \\ 32 \text{ units} \rightarrow 64\text{cm}^2 \end{array}$$

The area is  $64\text{cm}^2$ .

Q9

$$\begin{array}{l} \text{(a) Cathy : } (5p) \text{ kg} \\ \text{Jack : } (5p+2) \text{ kg} \\ \text{Mark : } (5p-2) \text{ kg} \end{array} \left. \vphantom{\begin{array}{l} \text{Cathy} \\ \text{Jack} \\ \text{Mark} \end{array}} \right\} (5p) \text{ kg}$$

Mark's mass is  $(5p-2)\text{kg}$ .

$$\begin{array}{l} \text{(b) } 5 \times 10 = 50 \\ 50 - 2 = 48 \end{array}$$

Mark's mass is 48kg.

Q10

$$\begin{array}{l} \text{Tom} \\ 3 \text{ hours} \rightarrow 1 \text{ tank} \\ 1 \text{ hour} \rightarrow \frac{1}{3} \text{ tank} \end{array}$$

Jerry

$$\begin{array}{l} 1 \text{ hour} \rightarrow \frac{2}{3} \text{ tank} \\ 1.5 \text{ hour} \rightarrow 1 \text{ tank} \end{array}$$

Jerry takes 1.5h.

Q11

$$\begin{array}{l} \angle DCT = (90^\circ \div 9) \times 5 \\ = 50^\circ \end{array}$$

$$\angle DCQ = 90^\circ - 50^\circ = 40^\circ$$

$$360^\circ - 110^\circ - 110^\circ = 140^\circ$$

$$140^\circ \div 2 = 70^\circ$$

$$\angle SDC = 70^\circ$$

Q12

$$\begin{aligned} (a) \quad 100\% - 25\% - 35\% &= 40\% \\ 40\% \div 2 &= 20\% \\ 100\% &\rightarrow 1800 \\ 20\% &\rightarrow 360 \end{aligned}$$

36 pupils are hotdog buns.

$$\begin{aligned} (b) \quad 35\% &\rightarrow 450 \\ 450 \times \$1.20 &= \$540 \end{aligned}$$

\$540 was spent.

Q13

Keith 

6 units	100
---------	-----

Beth 

6 units
---------

$$\begin{aligned} \text{Keith: } \frac{1}{6} \times 6 \text{ units} &= 1 \text{ unit} \\ \frac{1}{6} \times 100 &= 20 \end{aligned}$$

$$\begin{aligned} \text{Beth: } 6 \text{ units} - 1 \text{ unit} &= 5 \text{ units} \\ 100 - 20 &= 80 \end{aligned}$$

$$\begin{aligned} \text{Beth: } 6 \text{ units} + 1 \text{ unit} &= 7 \text{ units} \\ 5 \text{ units} + 100 + 20 &\rightarrow 7 \text{ units} + 120 \\ 100 + 20 - 20 &\rightarrow 7 \text{ units} - 5 \text{ units} \\ 100 &\rightarrow 2 \text{ units} \\ 1 \text{ unit} &\rightarrow 50 \\ 6 \text{ units} &\rightarrow 50 \times 6 \\ &= 300 \\ 300 + 120 &= 420 \\ &\text{(Keith)} \end{aligned}$$

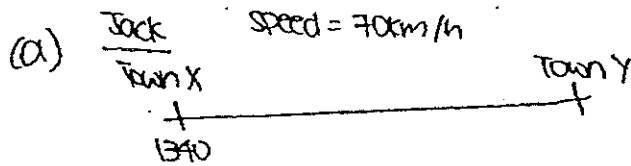
Keith : Beth

420 : 300

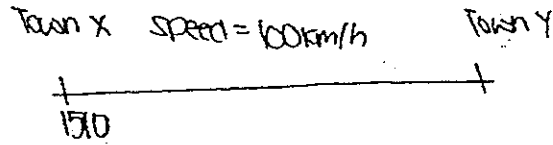
7 : 5

The ratio is 7 : 5.

Q14



Muthu



headstart  $\rightarrow$  Jack (1.5h)

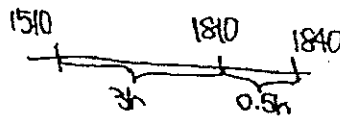
$$70 \times 1.5 = 105$$

$$100 \times 1 = 100$$

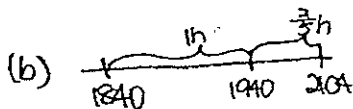
$$70 \times 1 = 70$$

$$100 - 70 = 30$$

$$105 \div 30 = 3.5$$



**Muthu passed Jack at 1840.**



$$3.5h + 1.4h = 4.9h$$

$$100 \times 4.9 = 490$$

$$490 \div 70 = 7$$

**Jack reached at 2040.**

- Q15 (a)  $36.3 \div 110 = 0.33\text{km}$   
 $0.33\text{km} \times 100 = 33\text{km}$  (2<sup>nd</sup> week)  
 $33\text{km} \div 110 = 0.3\text{km}$   
 $0.3\text{km} \times 100 = 30\text{km}$  (1<sup>st</sup> week)

**Mark jogged 30km in the first week.**

(b)  $30 + 33 + 36.3 = 99.3\text{km}$

**Mark jogged a total of 99.3km in 3 weeks.**

Q16 mangoes : apples : peaches : total  
3 : 2 : 1 : 6

$$\$72 \div 6 = \$12$$

$$\$12 \times 3 = \$36 \text{ (mangoes)}$$

$$\$12 \times 2 = \$24 \text{ (apples)}$$

$$\$12 \times 1 = \$12 \text{ (peaches)}$$

$$\$24 \div \$2 = 12$$

$$12 \times 5 = 60 \text{ (apples)}$$

$$\frac{2}{5} \times 60 = 24 \text{ (mangoes)}$$

$$\frac{2}{3} \times 60 = 40 \text{ (peaches)}$$

$$\$36 \div 24 = \$1.50$$

The price is \$1.50.

Q17

$$\text{semicircle} = \frac{1}{2} \times \pi \times 4 \times 4$$

$$= 8\pi$$

$$\frac{1}{4} \times \pi \times 4 \times 4 = 4\pi$$

$$\frac{1}{2} \times 4 \times 4 = 8$$

$$(4\pi - 8) \times 4 = 16\pi - 32$$

$$(16\pi - 32) + 8\pi = 24\pi - 32$$

The area is  $(24\pi - 32)\text{cm}^2$ .

Q18

$$\text{Area of square PQRS} \rightarrow 24\text{cm} \times 24\text{cm} \\ = 576\text{cm}^2.$$

$$\text{Area of } \triangle OST = \frac{1}{2} \text{ of } \triangle SRQ \\ = \frac{1}{4} \text{ of PQRS}$$

$$\text{Area of } \triangle PWX = \frac{1}{4} \text{ of } \triangle PSX \\ = \frac{1}{4} \text{ of } \frac{1}{4} \text{ of PQRS} \\ = \frac{1}{16} \text{ of PQRS}$$

$$\text{Area of } \triangle PYQ = \frac{3}{8} \text{ of } \triangle PXQ \\ = \frac{3}{8} \text{ of } \frac{1}{4} \text{ of PQRS} \\ = \frac{3}{32} \text{ of PQRS}$$

Total shaded area

$$= \left( \frac{1}{4} + \frac{1}{16} + \frac{3}{32} \right) \text{ of PQRS}$$

$$\frac{13}{32} \times 576\text{cm}^2 = 234\text{cm}^2$$

Total area is  $234\text{cm}^2$