PRIMARY 6 SEMESTRAL ASSESSMENT 2 – 2014

Name _____

Class : Primary 6

Parent's Signature : _____

Date: 2₄ July 2014
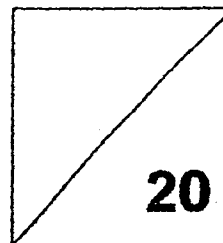
Time: 8.00 a.m. - 8.50 a.m.

Marks: _____ / **100**

Paper 1 comprises 2 booklets, A and B.

MATHEMATICS
PAPER 1
(BOOKLET A)

20

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)

---

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.
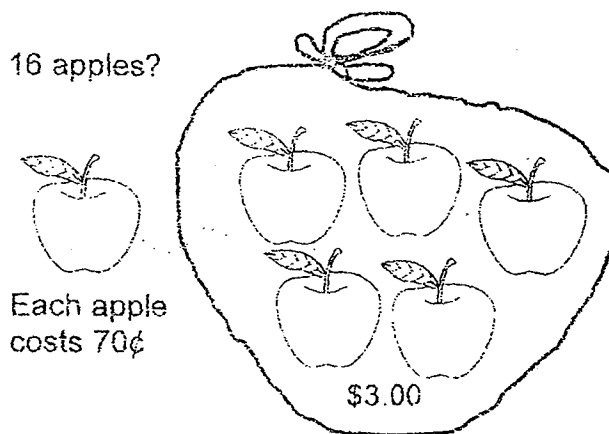   What is the ratio of the length of Pole A to the length of Pole B?

    (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 π = 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¢

   $3.00

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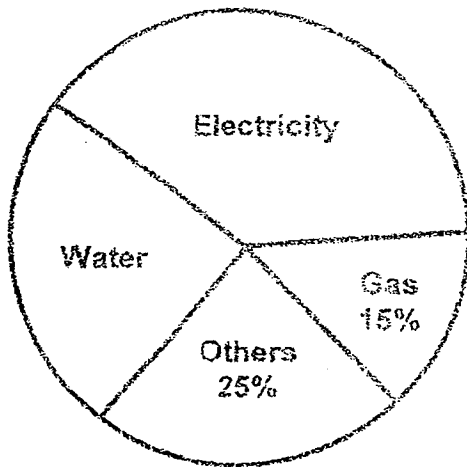
The amount of money spent on water is $\frac{2}{3}$ the amount of money spent on electricity. What percentage of the total bill was spent on water?

(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

4

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?
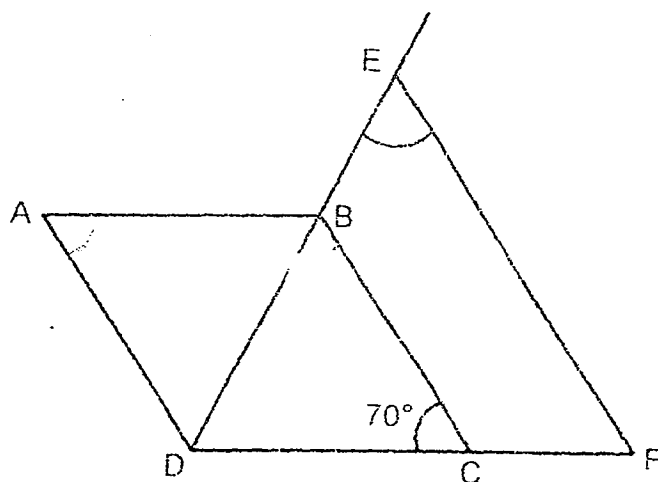
(1) $115
(2) $130
(3) $135
(4) $140

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

(1) 55°

(2) 70°

(3) 110°

(4) 125°

PRIMARY 6 SEMESTRAL ASSESSMENT 2 – 2014

Name : _____

Class : Primary 6 (   )

Parent's Signature : _____

Date: 24 July 2014

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

Paper 1 comprises 2 booklets, A and B.

MATHEMATICS

PAPER 1

(BOOKLET B)
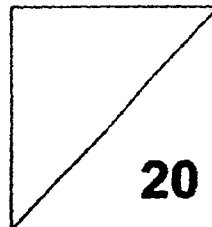
20

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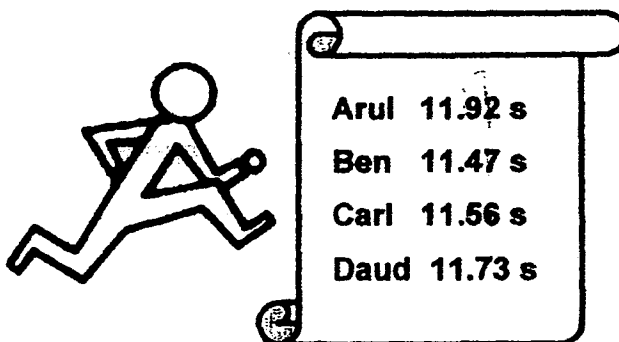
16.   What is the remainder when 9 030 is divided by 50?

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.
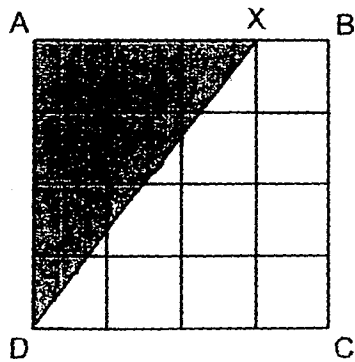Arrange the names of athletes starting from the fastest sprinter to the slowest.

Arul 11.92 s

Ben 11.47 s

Carl 11.56 s

Daud 11.73 s

Ans:_____ , _____ , _____ , _____

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

Ans: _____ %

20. ABCD is a square. AX is $\dfrac{3}{4}$ 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 $\dfrac{5}{8}$ filled. What is the mass of the box?

Ans: _____ kg

.... 2

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?
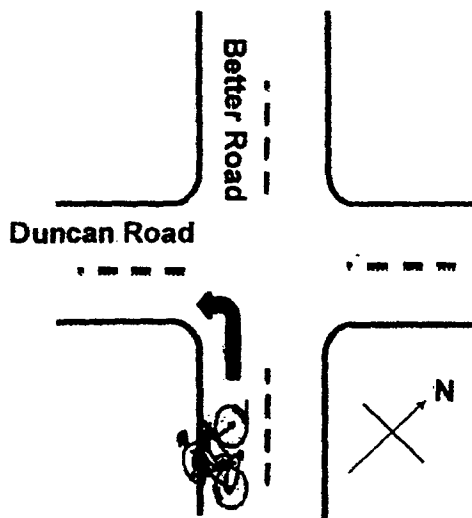
Ans: _____

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)

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.
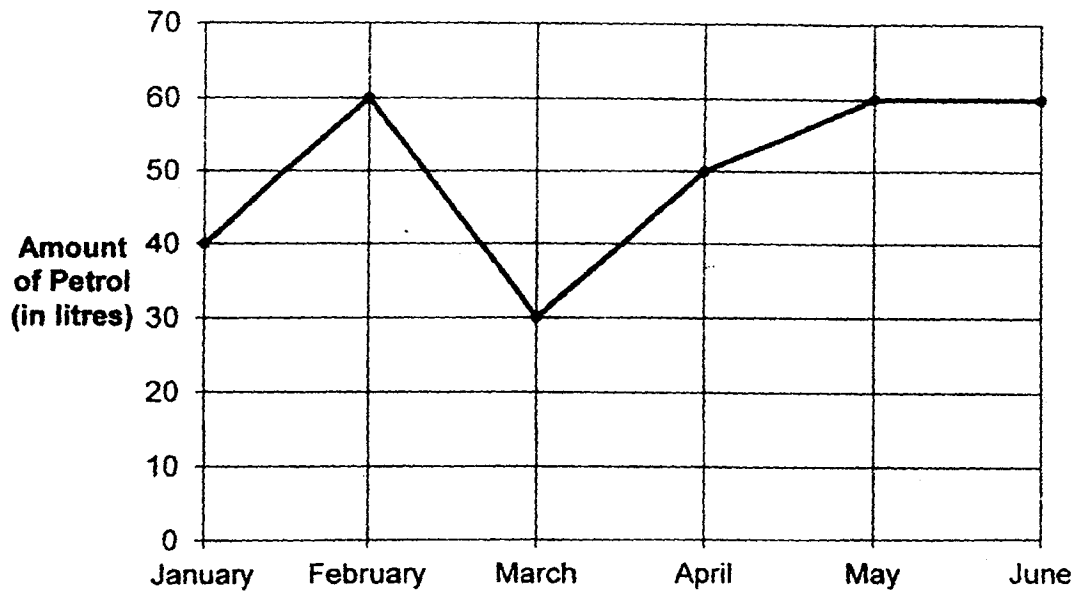
Ans: _____

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: _____ cm^2

5
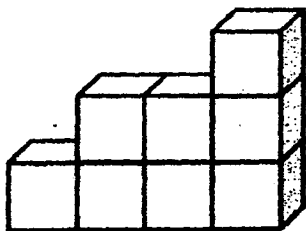
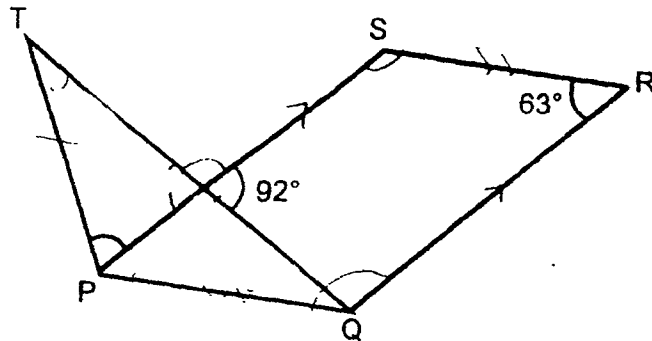28. The line graph shows the amount of petrol used by Mrs Tan for the first 6 months of the year.

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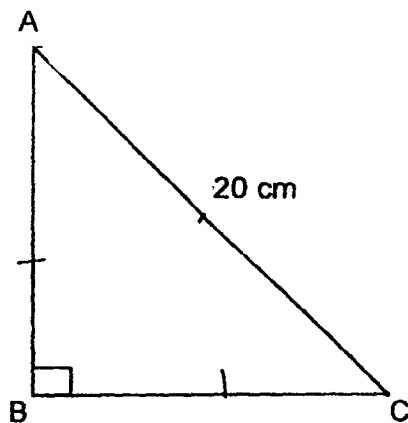
What is the average amount of money spent?

Ans: $_____

6

29. PQRS is a parallelogram. TP = PQ. Find ∠TPS.

T

S

63° R

92°

P

Q

Ans: _____ °

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

A

20 cm

B ⌐ C

Ans: _____ cm²

- End of Booklet B -

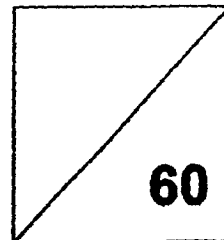# PRIMARY 6 SEMESTRAL ASSESSMENT 2 – 2014

Name : _____   Date: 2# July 2014

Class : Primary 6   Time: 10.00 a.m. - 11.40 a.m.

Parent's Signature : _____

MATHEMATICS

PAPER 2

60

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)

1. Use the given shape to form a tessellation in the space provided. Draw 4 more of the given shape.
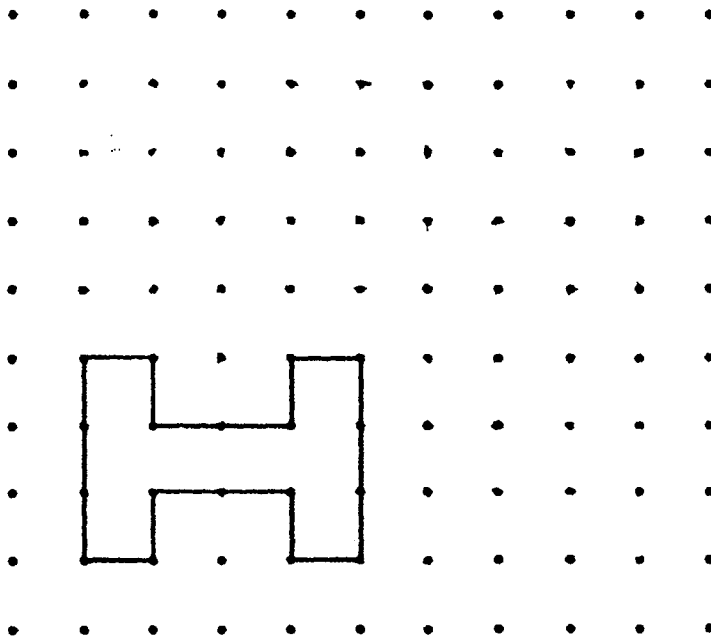
2. The average of seven numbers is 49. If '1' is added to the first number, '2' is added to the second number, '3' is added to the third number and so on up to the seventh number, what is the new average?

Ans: _____

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: _____

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: _____

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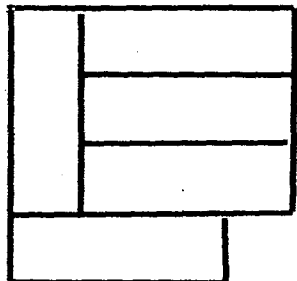
Ans: _____

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.
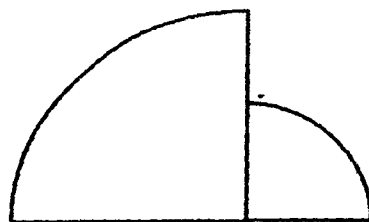
(50 marks)

6. 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.
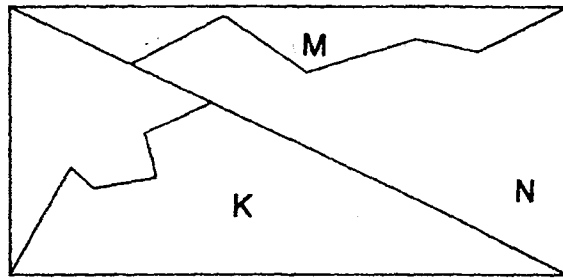
Ans: _____[3]

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]

8. The rectangle below is divided into four parts K, L, M and N.

The ratio of Part K to Part L is 5 : 3 and the ratio of Part L to Part M is 2 : 1.

(a) Find the ratio of Part K to Part L to Part M.

(b) Given that Part N is 26 cm², find the area of the rectangle.

Ans: (a)_____[1]

(b)_____[2]

9. The total mass of Cathy, Jack and Mark is 15p kg. Cathy has a mass of 5p kg. Jack is 2 kg heavier than Cathy.

(a) What is Mark's mass in terms of p?

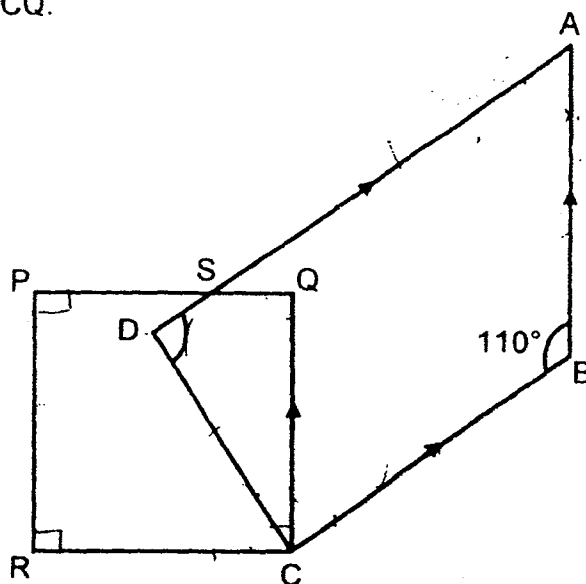(b) If p = 10, what is Mark's mass?

Ans: (a)_____[2]

(b)_____[1]

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]

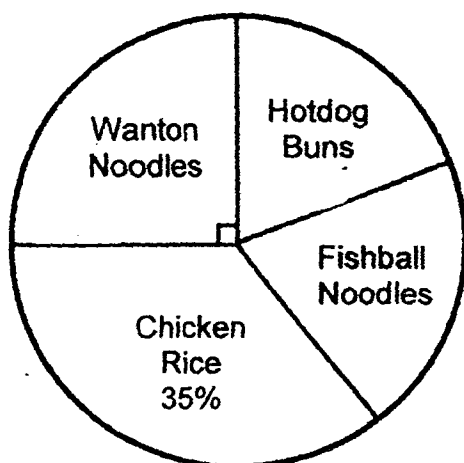11. In the figure below, ABCD is a trapezium and PQCR is a square. AB∥CQ.

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

Find ∠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 wanton noodles. What was the total amount of money spent on wanton 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.
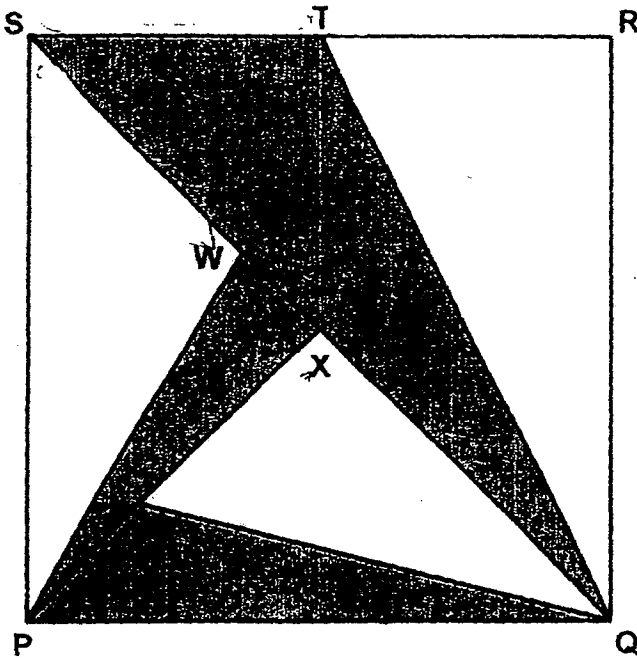
Ans: _____ [5]

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 π.
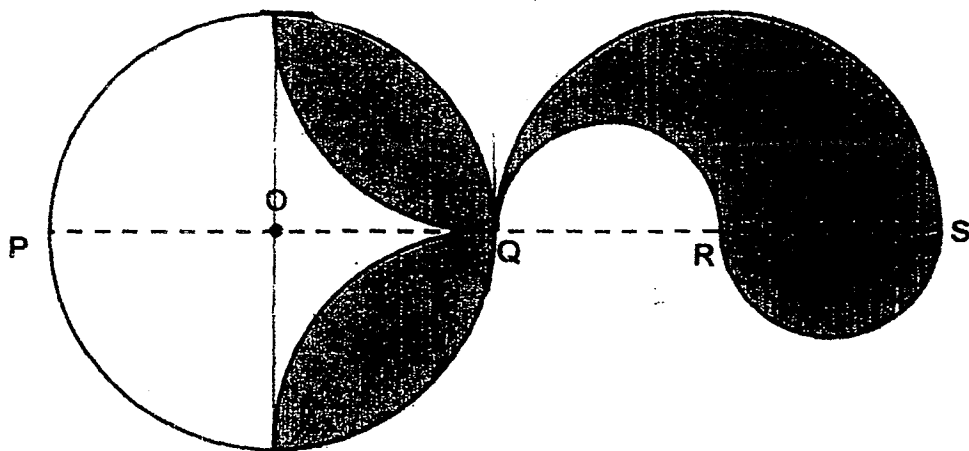
Ans: _____[4]

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]

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^2

Q28 $100

Q29 59°

Q30 100cm^2

Paper 2

Q1
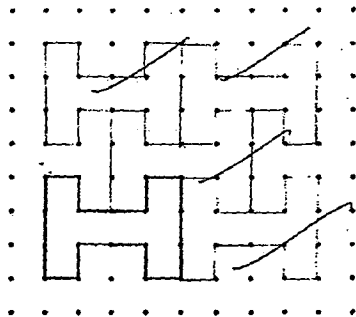
Q2   49 x 7 = 343
1 + 2 + 3 + 4 + 5 + 6 + 7 = 28
343 + 28 = 371
371 ÷ 7 = 53

The new average is 53.

Q3

new ratio	Original ratio
blue : red	blue : red
20 : 80	25 : 75
1 : 4	1 : 3

4 units − 3 units → 1unit
1unit → 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 1323cm².

Q6

Town A _____ Town B
1 pm

Car
Speed = 100km/h
Time = 4.5h
Distance = 450km

Bus
Speed = 80km/h
Time = 4.5h
Distance = 360km

1pm to 4pm → 4.5h

450km + 360km = 830

The distance between Town A and B is 830km.

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

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

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

The perimeter is 61cm.

Q8

(a) Part K : Part L   Part L : Part M
        5 : 3   2 : 1
        10 : 6   6 : 3

The ratio is 10 : 6 :3.

(b)   10 + 6 = 16 (half of rectangle)
       16 - 3 = 13
       13 units → 26cm²
       1 unit → 2cm²
         16 × 2 = 32
       32 units → 64cm²

The area is 64cm².

Q9

(a)   Cathy : (5p) kg
       Jack : (5p + 2) kg   } (15p) kg
       Mark : (5p - 2) kg

Mark's mass is (5p – 2)kg.

(b)   5 × 10 = 50
       50 - 2 = 48

Mark's mass is 48kg.

Q10   Tom
           3 hours → 1 tank
           1 hour → $\frac{1}{3}$ tank

           Jerry
           1 hour → $\frac{2}{3}$ tank
           1,5 hour → 1 tank

Jerry takes 1.5h.

Q11 $\angle DCT = (90° \div 9) \times 5$
                    $= 50°$
           $\angle DCQ = 90° - 50° = 40°$

           $360° - 110° - 110° = 140°$
           $140° \div 2 = 70°$

$\angle SDC = 70°$

Q12

(a) $100\% - 25\% - 35\% = 40\%$

  $40\% \div 2 = 20\%$

  $100\% \rightarrow 1800$

  $20\% \rightarrow 360$

36 pupils are hotdog buns.

(b) $25\% \rightarrow 450$

  $450 \times \$1.20 = \$540$

$540 was spent.

Q13

Keith: $\frac{1}{6} \times 6$ units = 1 unit   Left: 6 units - 1 unit = 5 units

  $\frac{1}{6} \times 120 = 20$ $120 - 20 = 100$

Beth: 6 units + 1 unit = 7 units

5 units + 100 + 20 $\rightarrow$ 7 units + 20

100 + 20 - 20 $\rightarrow$ 7 units - 5 units

      100 $\rightarrow$ 2 units

      1 unit $\rightarrow$ 50

      6 units $\rightarrow$ 50 × 6

          = 300

      300 + 120 = 420

          (Keith)

  Keith : Beth

  420 : 300

  7 : 5

The ratio is 7 : 5.

Q14

(a)

Jack
SPEED = 70km/h

Town X   Town Y
1340

Muthu

Town X   SPEED = 100km/h   Town Y
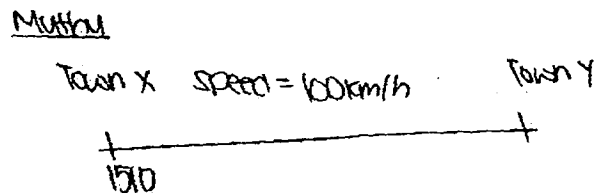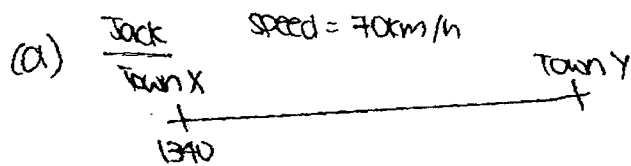
1510

headstart → Jack (1.5h)

$70 \times 1.5 = 105$

$100 \times 1 = 100$

$70 \times 1 = 70$

$100 - 70 = 30$

$105 \div 30 = 3.5$

1510   1810   1840

3h   0.5h
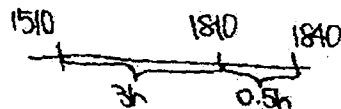
Muthu passed Jack at 1840.

(b)

1840   1940   2040

1h $\frac{2}{3}$h

$3.5h + 1.4h = 4.9h$

$100 \times 4.9 = 490$

$490 \div 70 = 7$
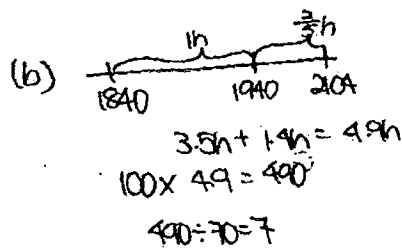
Jack reached at 2040.

Q15   (a) $36.3 \div 110 = 0.33km$
        $0.33km \times 100 = 33km$ (2nd week)
        $33km \div 110 = 0.3km$
        $0.3km \times 100 = 30km$ (1st week)

Mark jogged 30km in the first week.

(b) $30 + 33 + 36.3 = 99.3km$

Mark jogged a total of 99.3km in 3 weeks.

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

$72 ÷ 6 = $12
$12 x 3 = $36 (mangoes)
$12 x 2 = $24 (apples)
$12 x 1 = $12 (peaches)

$24 ÷ $2 = 12
12 x 5 = 60 (apples)
$\frac{2}{5}$ x 60 = 24 (mangoes)
$\frac{2}{3}$ x 60 = 40 (peaches)
$36 ÷ 24 = $1.50

The price is $1.50.

Q17

Semicircle = $\frac{1}{2}$ x π x 4 x 4

  = 8π

$\frac{1}{4}$ x π x 4 x 4 = 4π

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

(4π − 8) x 4 = 16π − 32

(16π − 32) + 8π = 24π − 32

The area is (24π − 32)cm².

Q18

Area of square PQRS → 24cm x 24cm
  = 576 cm².

Area of △OST = $\frac{1}{2}$ of △ SRQ
  = $\frac{1}{4}$ of PQR S

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

Area of △ PXQ = $\frac{3}{8}$ of PXQ
  = $\frac{3}{8}$ of $\frac{1}{4}$ of PQRS
  = $\frac{3}{32}$ of PQRS

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

$\frac{13}{32}$ x 576 cm² = 234 cm²

Total area is 234cm²