Continual Assessment 1 2017
Primary 6 Mathematics

Name: _____ Register No. _____

Class: Pr 6 - _____

Date: 2 March 2017 Parent's Signature: _____

Total Time for Booklets A and B : 50 minutes

PAPER 1
(Booklet A)

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. Shade your answers in the Optical Answer Sheet (OAS) provided.
4. You are **not** allowed to use a calculator.
5. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet A)	20	

***This booklet consists 7 printed pages (including this cover page)**

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.

All diagrams in this paper are not drawn to scale.

(20 marks)

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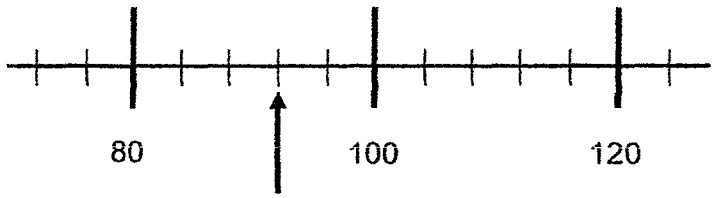
1. In the number line below, what is the number indicated by the arrow?



(1) 83
(2) 86
(3) 92
(4) 98

2. Which of the following fractions is the furthest from 1?

(1) $\frac{5}{9}$
(2) $\frac{5}{11}$
(3) $1\frac{1}{2}$
(4) $1\frac{2}{5}$

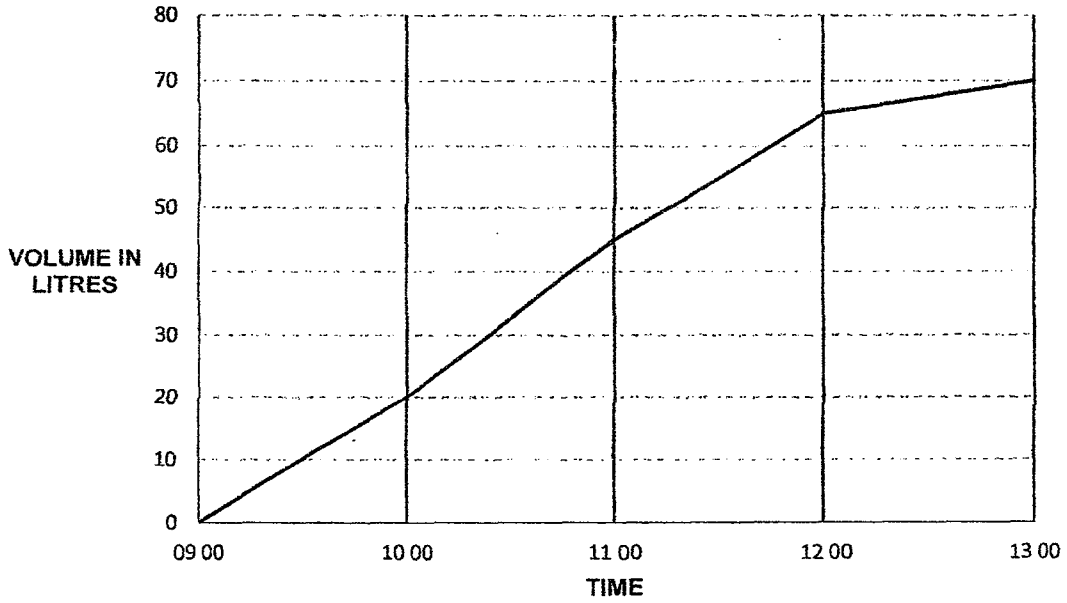
3. Liling and Siti spent some money on stationery. Siti's spending was $\frac{3}{5}$ of what Liling had spent. What was the ratio of Siti's spending to their total spending?

(1) 3 : 5
(2) 5 : 3
(3) 3 : 8
(4) 5 : 8

4. Express 1.4% as a decimal.

(1) 0.014
(2) 0.14
(3) 1.04
(4) 1.4

5. Water flowed into an empty tank from 09 00 to 13 00.
The line graph shows the amount of water in the tank from 09 00 to 13 00.

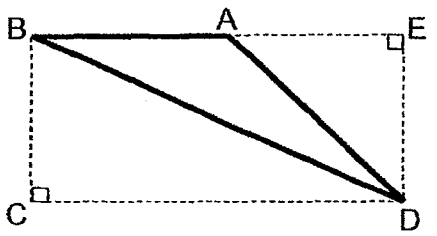


During which one-hour period was the increase in the volume of water the greatest?

(1) Between 09 00 and 10 00
(2) Between 10 00 and 11 00
(3) Between 11 00 and 12 00
(4) Between 12 00 and 13 00

(Go on to the next page)

6. Which lines represent the correct pair of height and base for the triangle ABD?

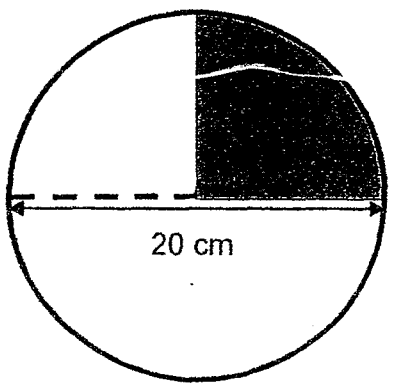


	Base	Height
(1)	BE	ED
(2)	BD	BC
(3)	AD	ED
(4)	AB	BC

7. Jane saved $m and her brother saved thrice as much money as her. Which of the following algebraic expression does not represent her brother's savings?

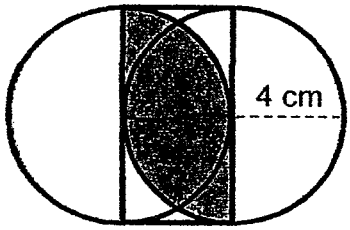
(1) $3m
(2) $m x 3
(3) $3 + $m
(4) $m + $m + $m

8. The figure shows a circle with a diameter of 20 cm. Find the area of the shaded quadrant. Take $\pi = 3.14$



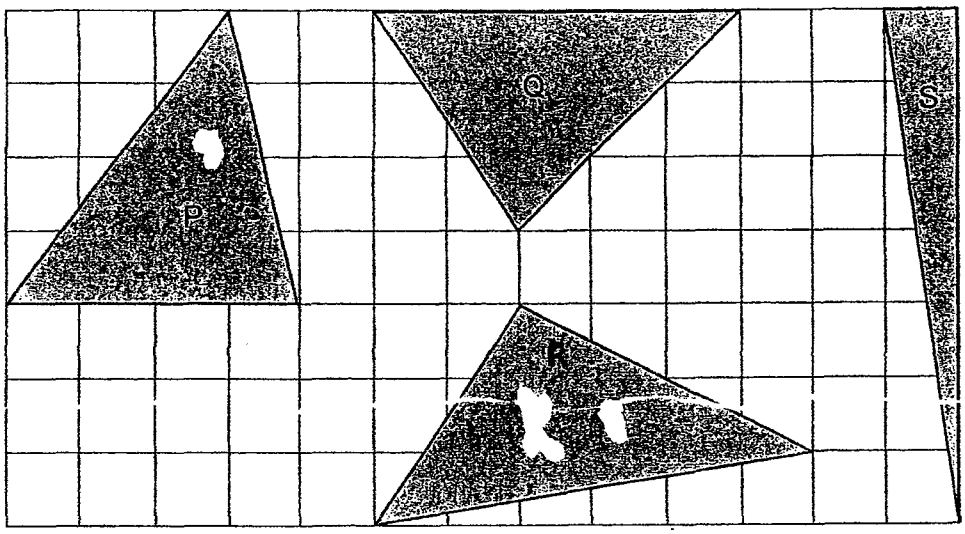
(1) 78.5 cm^2
(2) 157 cm^2
(3) 235.5 cm^2
(4) 314 cm^2

9. The figure is made up of 2 identical circles of diameter 8 cm. Find the area of the shaded parts.
Express your answer in terms of π.



(1) (8π) cm^2
(2) $(8\pi + 8)$ cm^2
(3) (16π) cm^2
(4) $(16\pi + 8)$ cm^2

10. Which triangles, P, Q, R and S, have the same area?



(1) Q and S
(2) Q and R
(3) P and Q
(4) P and R

(Go on to the next page)

11. Manisha collected some bookmarks and seashells. The number of bookmarks to the number of seashells was 8 : 5. There were 24 more bookmarks than seashells. What was the total number of bookmarks and seashells in her collection?

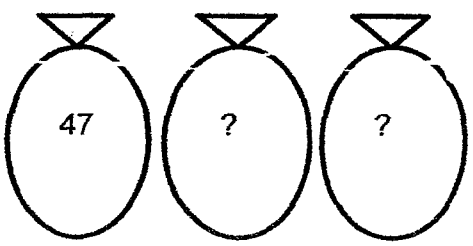
(1) 40
(2) 64
(3) 104
(4) 312

12. Sally's mark for a test is 80% of Krishan's mark for the same test. Krishan scored 90 marks for the test. How many more marks did Krishan score than Sally in the test?

(1) 10
(2) 18
(3) 20
(4) 28

13. Keith has 3 bags of marbles. Each bag has a different number of marbles. The largest number of marbles in a bag is 47. When the marbles in any 2 bags are added together, they would add up to 67, 76, and 85 marbles. What is the smallest number of marbles in one of the bags?

(1) 18
(2) 20
(3) 28
(4) 29



14. Shanise and Alynna bought a present. Shanise used $\frac{1}{3}$ of her money and Alynna used $\frac{2}{5}$ of her money to pay for the present. After paying for the present, they had the same amount of money left. What fraction of the cost of the present is paid by Alynna?

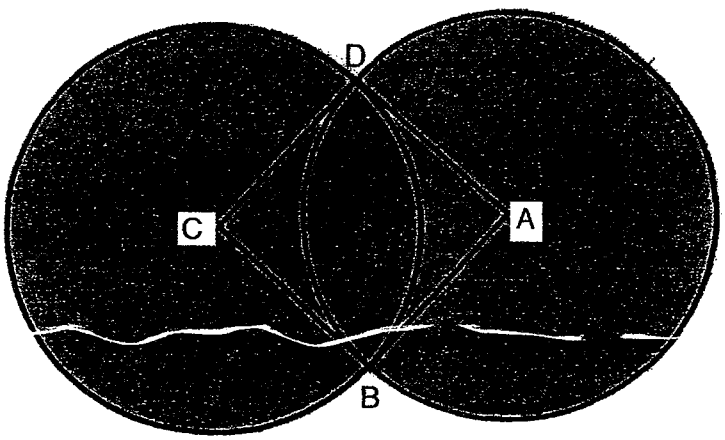
(1) $\frac{3}{5}$

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

(3) $\frac{2}{11}$

(4) $\frac{4}{19}$

15. The shaded figure is formed by two identical circles with centres at A and C. ABCD is a square and length AB is 3.5 cm. Find the perimeter of the shaded figure. Take $\pi = \frac{22}{7}$



(1) 23.5 cm
(2) 30.5 cm
(3) 33 cm
(4) 47 cm

(Go on to Booklet B)

Continual Assessment 1 2017
Primary 6 Mathematics

Name: _____ Register No. _____

Class: Pr 6 - _____

Date: 2 March 2017 Parent's Signature: _____

Total Time for Booklets A and B : 50 minutes

PAPER 1
(Booklet B)

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. You are **not** allowed to use a calculator.
4. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet B)	20	

*** This booklet consists of 7 printed pages (including this cover page).**

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)

Do not write in this space

All diagrams in this paper are not drawn to scale unless stated otherwise.

16. Find the value of $182.4 \div 60$.

Ans: _____

17. Find the value of $\frac{3}{4} \div 24$.

Express your answer in the simplest form.

Ans: _____

18. Find the value of $\frac{6k-2}{4}$ when $k = 5$.

Ans: _____

19. Use all the digits 1, 3, 9, 4 to form a number closest to 4000.

Ans: _____

(Go on to the next page)

20. In a Primary 6 class, there were 16 boys and 24 girls. When 4 of the girls left, what fraction of the remaining pupils in the class are girls? Express your answer in the simplest form.

Do not write in this space

Ans: _____

21. A television set cost $500 in May. The same television set cost $380 in June. What was the percentage discount given for the television set in June?

Ans: _____%

22. The table below shows the number of computers that each student has in his/her household.

Number of computers per household	0	1	2	3
Number of pupils	5	32	4	1

How many pupils have at least 2 computers in his/her household?

Ans: _____

(Go on to the next page)

23. In the figure drawn below, the dotted line is the line of symmetry. Shade the squares to complete the symmetrical figure in the square grid.

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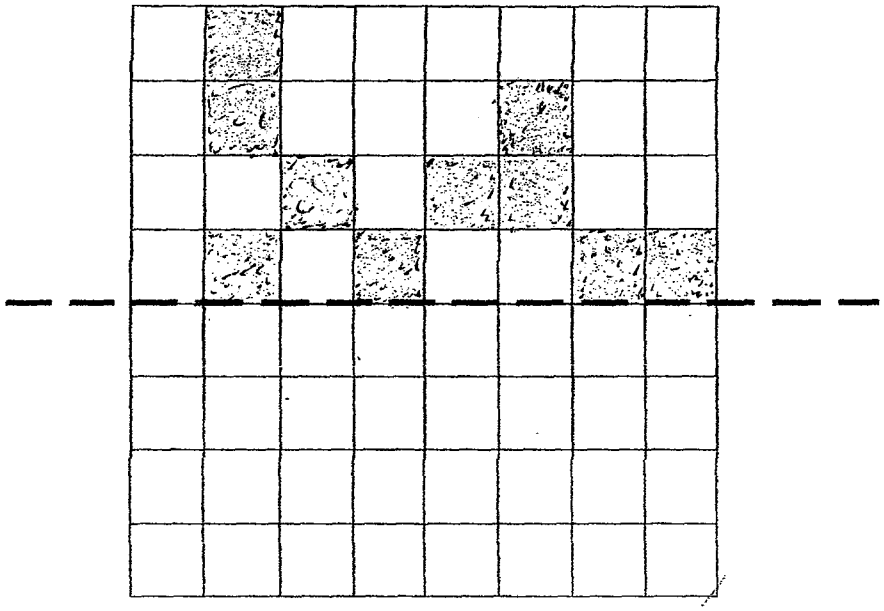
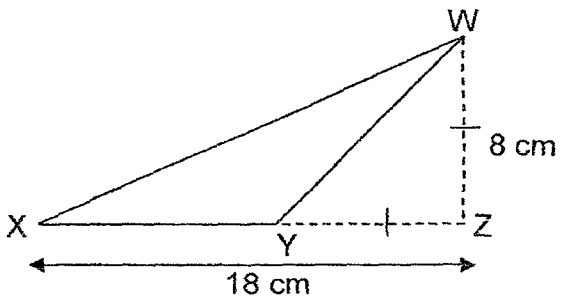


24. Mr Teo sold $(5w + 11)$ fruits on Friday. He sold $7w$ more fruits on Saturday than on Friday. What is the total number of fruits he sold on Friday and Saturday? Express your answer in terms of w in the simplest form.

Ans: _____

25. In the figure below, XYZ is a straight line and WZ = YZ.
What is the area of triangle WXY?



Ans: _____ cm^2

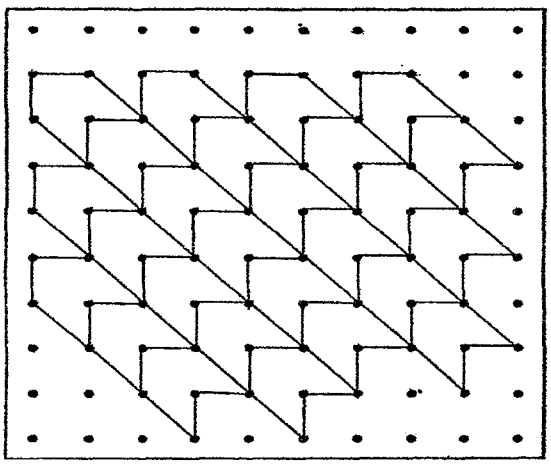
Questions **26** to **30** carry 2 marks each. Show your workings clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

Do not write in this space

All diagrams in this paper are not drawn to scale unless stated otherwise.

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. Linda and Rani collected stickers in the ratio 5 : 1. After Linda gave 20 stickers to Rani, their ratio became 5 : 7. How many stickers did Rani have in the end?

Ans: _____

(Go on to the next page)

28. The bar graph shows the number of points scored by Ken in 3 attempts.

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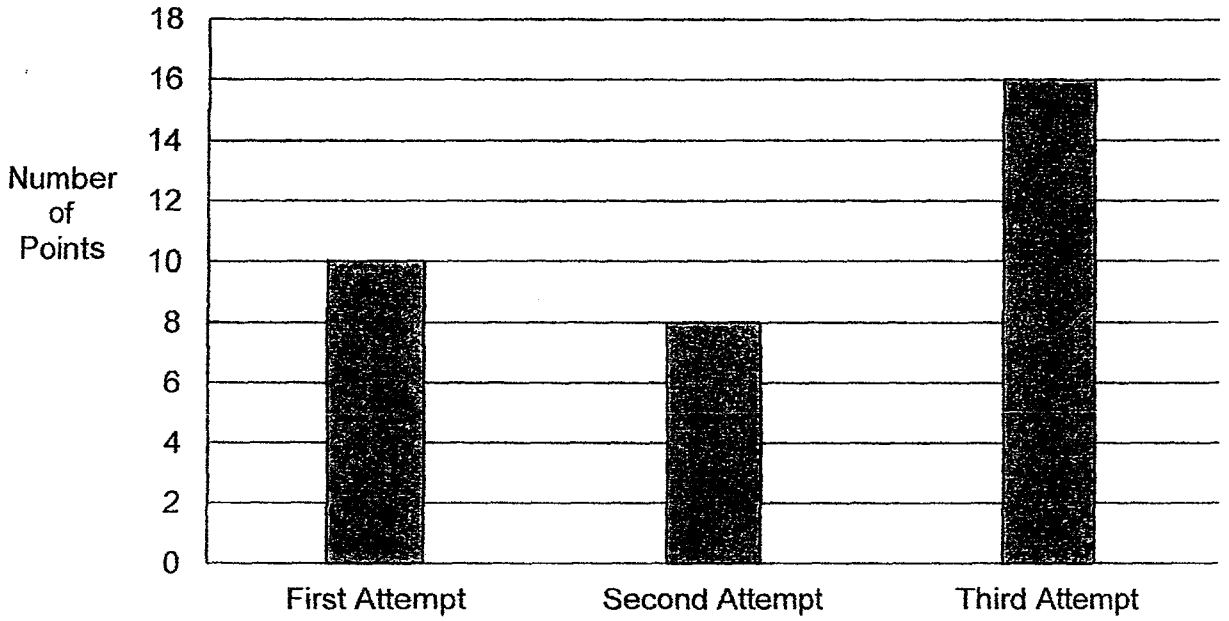

After his fourth attempt, Ken managed to score a total of 44 points for all 4 attempts. How many points did he score in his fourth attempt?

Ans: _____

29. Ming is h years old. Ken is twice as old as him. Four years ago, Raju was half of Ken's age. What is the combined age of Ming, Ken and Raju now?

Ans: _____

(Go on to the next page)

30. Two quarter circles and 2 semi-circles of the same radius are cut out from a square piece of paper of length 15 cm. What is the perimeter of the remaining piece of paper? Express your answer in terms of π.

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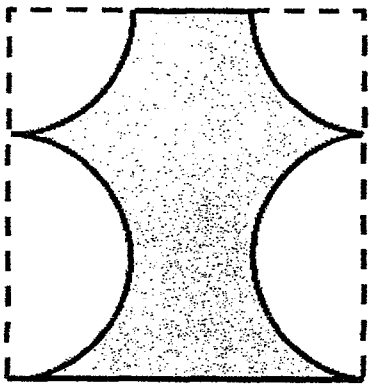


Ans : _____ cm

End of paper. Have you checked your work?

Continual Assessment 2017
Primary 6 Mathematics

Name: _____ Register No. _____

Class: Pr 6 - _____

Date: 2 March 2017 Parent's Signature: _____

Time: 1h 40min

PAPER 2

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. **Show your workings clearly** as marks are awarded for correct working.
4. Write your answers in this booklet.
5. You are allowed to use a calculator.
6. Answer all questions.

Questions	Maximum Mark	Marks Obtained
Q 1 to 5	10	
Q 6 to 18	50	

Section	Maximum Mark	Marks Obtained
Paper 1	40	
Paper 2	60	
Total	100	

*** This booklet consists of 14 printed pages (including this cover page)**

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)

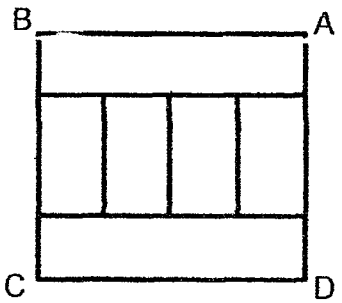
All diagrams in this paper are not drawn to scale unless stated otherwise.

Do not write in this space

1. Ali, Ben and Cindy shared the cost for a present. Ali's share of the cost to Ben's share of the cost was 4 : 5. Ben's share of the cost to Cindy's share of the cost was 2 : 3. Ali and Cindy gave a total of $46 for the present. What was the cost of the present?

Ans: $_____

2. In the figure below, the square ABCD is made up of 2 identical large rectangles of the same area and 4 identical small rectangles of the same area. The breadth of each small rectangle is equal to the breadth of each large rectangle. The area of the smaller rectangle is 21 cm^2. What is the area of ABCD?



Ans: _____ cm^2

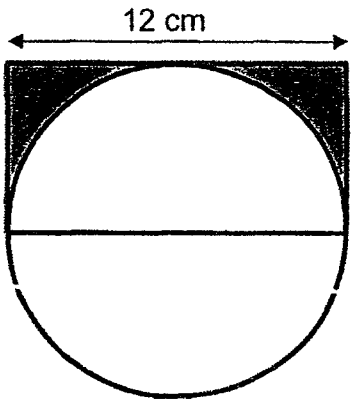
(Go on to the next page)

3. Belinda wanted to pack 84 apples and 90 oranges into as many bags as possible. The number of apples and oranges are the same in each bag. If all the fruits are packed, how many fruits were there in each bag?

Do not write in this space

Ans:

4. The figure is made up of a rectangle and a circle. Find the area of the shaded parts.
Take $\pi = 3.14$



Ans: _____ cm^2

(Go on to the next page)

5. Ling Yan bought a bag with $\frac{2}{5}$ of her money. She then used $\frac{5}{9}$ of the remainder to buy 3 files. What fraction of her money did she spend on one file? Express your answer in the simplest form.

Do not write in this space

Ans: _____

(Go on to the next page)

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. For questions which require units, give your answers in the units stated.

All diagrams in this paper are not drawn to scale unless stated otherwise.

(50 marks)

Do not write in this space

6. Jolene paid \$24 for 20 muffins after a 20% discount. How many muffins could she have bought with the same amount of money without the discount?

Ans: _____ [3]

7. There were 7 participants who took part in a quiz. Their average score was g. Later, 2 more participants joined the quiz. Each of them scored 20 mark.

(a) What was the new total score for all the participants? Express your answer in terms of g in the simplest form.

Ans: _____ [1]

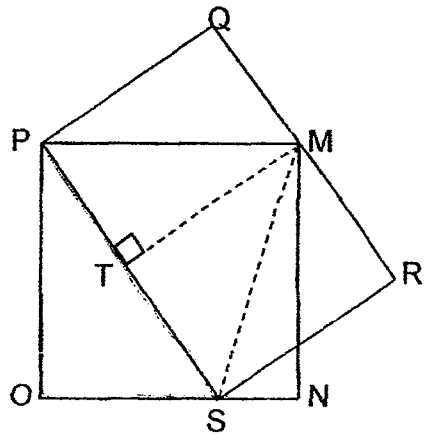
(b) If $g = 29$, find the new average score of all the participants.

Ans: _____ [2]

(Go on to the next page)

8. The figure below, not drawn to scale, is made up of a square MNOP and a rectangle PQRS. The length of the square is 9 cm and MT = 7.2 cm. Find the area of the rectangle PQRS.

Do not write in this space



Ans: _____ [3]

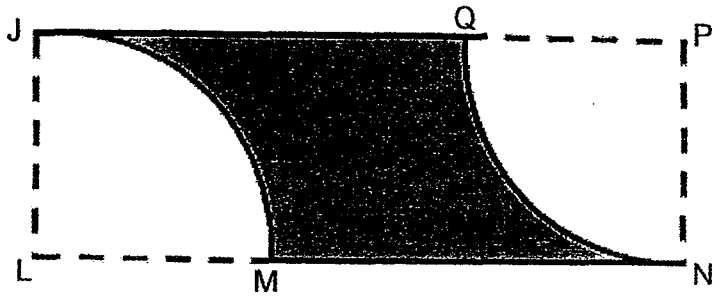
9. Chairs were arranged in rows of 28 in the school hall. During the Chinese New Year concert, the chairs were rearranged to form rows of 24. As a result, there were 7 more rows. The last row was 4 chairs short. How many chairs were there in the hall?

Ans: _____ [3]

(Go on to the next page)

10. Two identical quarter circles of radius 14 cm were cut from the rectangular piece of wood, JLNP, as shown below. The remaining piece of wood (the shaded area) has an area of 266 cm^2. Find the length of MN. Take $\pi = \frac{22}{7}$

Do not write in this space



Ans: _____ [3]

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11. John cut out 4 small identical squares from a square piece of cardboard. The area of the 4 small identical squares to the area of the remaining cardboard was 1 : 3. The perimeter of the remaining cardboard was 320 cm.

(a) What was the area of the cardboard?

(b) What is the maximum number of 12-cm squares that he would be able to cut from the remaining cardboard?

Ans (a) _____ [2]

(b) _____ [2]

(Go on to the next page)

12. There are red, green and blue ribbons in a box. The length of each red ribbon, green ribbon and blue ribbon is 2 m, 3 m and 4 m respectively. The ratio of the number of red ribbons to the number of green ribbons and to the number of blue ribbons is 4 : 7 : 6.

The total length of all the green ribbons is 315 m.

(a) What is the ratio of the length of all the red ribbons to the length of all the blue ribbons? Express your answer in the simplest form.

(b) What is the total length of all the ribbons?

Do not write in this space

Ans (a): _____ [2]

(b): _____ [2]

(Go on to the next page)

13. The figure is made up of 2 squares, ABCD and EFGH, and 2 circles. The length AF = FB. The area of square EFGH is 64 cm^2. Find the area of the shaded parts. Round off your answer to 2 decimal places. (Use the calculator value of π)

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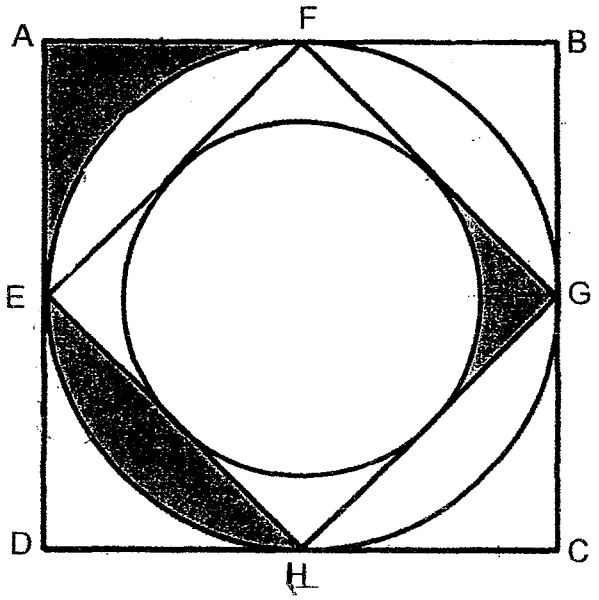

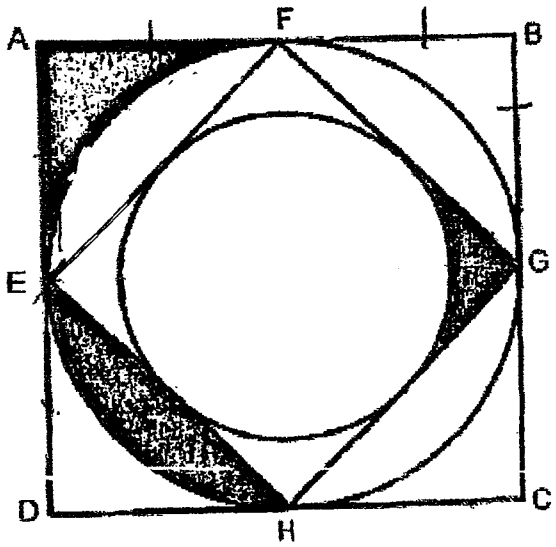

Ans: _____ [4]

(Go on to the next page)

14. $\frac{5}{12}$ of the visitors at a carnival are adults. The rest of the visitors are boys and girls in the ratio of 5 : 4. There are 84 more boys than girls. There are 621 females at the carnival.

(a) How many children are there at the carnival?
(b) How many males are there at the carnival?

Do not write in this space

Ans (a): _____ [1]

(b): _____ [3]

(Go on to the next page)

15. Caitlin wants to lay circular stone tiles of diameter 1 m all round a rectangular pond to create a foot path 3 m wide all around as shown below. What is the minimum number of tiles she will need?
(The tiles must be arranged as shown in the diagram. They cannot overlap each other and there must be no gap between each tile.)

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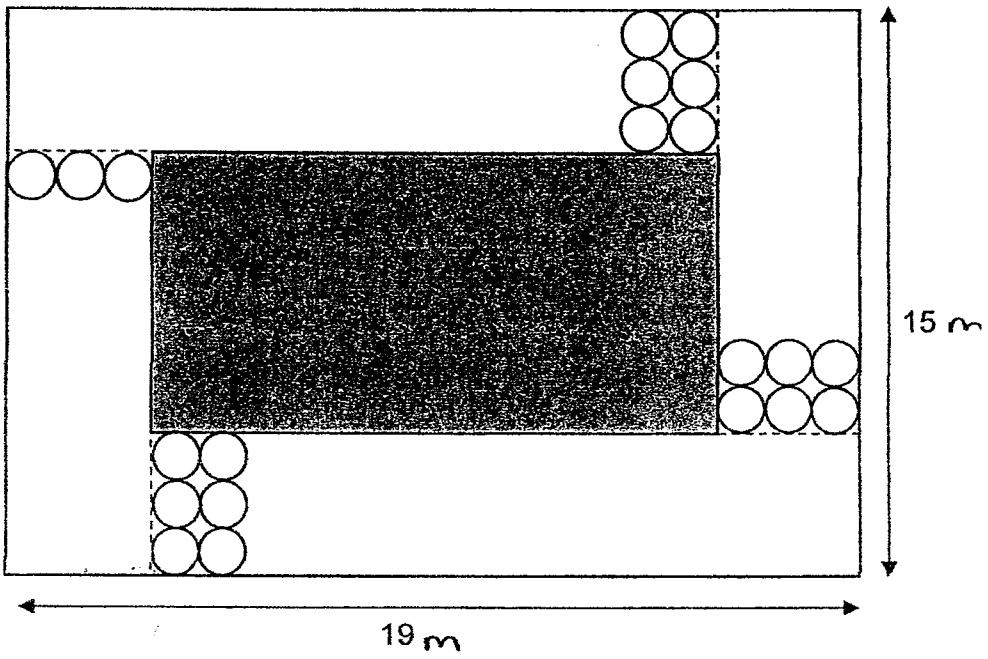


Ans: _____ .[4]

(Go on to the next page)

16. Alicia and Clara had a total of 764 beads. They each used some of their beads to make a necklace each and keep the remaining beads.

Alicia had $\frac{1}{3}$ as many beads remaining as Clara after making their necklaces. The number of beads Clara used to make her necklace was 63 more than what she had left. Clara used 3 times as many beads as Alicia to make her necklace.

(a) How many beads were used to make the 2 necklaces?
(b) How many beads did Alicia have at first?

Do not write in this space

Ans: (a) _____ [3]

(b) _____ [2]

(Go on to the next page)

17. The number of children who enrolled in a swim school in September was 30% fewer than the number of children who had enrolled in June. There were 87 more children who enrolled in December as compared to September. There were 375 children who enrolled in the swim school in June, September and December.

(a) How many children enrolled in the swim school in December?

(b) What was the percentage decrease/increase in the number of children who enrolled in June as compared to December?

Do not write in this space

Ans: (a) _____ .[2]

(b) _____ [3]

(Go on to the next page)

18. The table below shows the number of GaME cards in each different coloured pack and its price.

Do not write in this space

Colour of Pack	Number of cards	Cost per Pack
Red	3	$0.40
Blue	7	$0.70
Black	12	$1.00

Starting on a Monday, Ryan bought an average of 3 packs of red and blue GaME cards each day. On each Sunday, he bought only a black pack of GaME cards.

After 44 days, he had spent $74.70 on the GaME cards and had 722 cards.

(a) How much did Ryan spend on the red and blue GaME cards altogether?

(b) How many packs of Blue GaME cards did Ryan buy?

Ans: (a) _____ [2]

(b) _____ [3]

End of Paper

ANSWER KEY

YEAR : 2017
LEVEL : PRIMARY 6
SCHOOL : ROSYTH
SUBJECT : MATHEMATICS
TERM : CA1

Paper 1

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

Q16 3.04

Q17 $\frac{1}{32}$

Q18 7

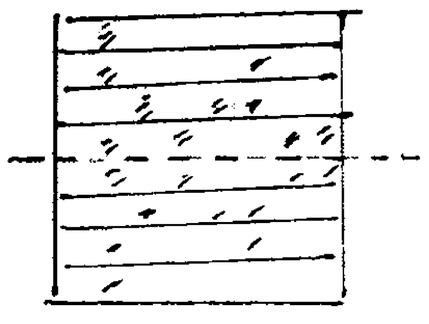
Q19 3941

Q20 $\frac{5}{9}$

Q21 24 %

Q22 5 pupils

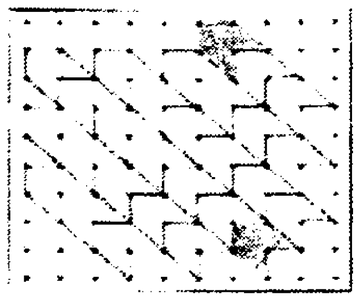
Q23



Q24 (17w + 22) fruits

Q25 40 cm^2

Q26



Q27 28 stickers

Q28 10 points

Q29 (4h + 2) years old

Q30 (15π + 20) cm

Paper 2

Q1 $15u + 8u = 23u$
$\$46 = 23u$
$1u \rightarrow \$46 \div 23 = \$2$
$8u + 10u + 15u = 33u$
$33 \times \$2 \Rightarrow \underline{\$66}$

Q2 $21 \times 8 \Rightarrow \underline{168\ cm^2}$

Q3 $84 \div 6 = 14$
$90 \div 6 = 15$
$14 + 15 \Rightarrow \underline{29\ fruits}$

Q4 Rectangle $\rightarrow 12 \times 6 = 72$
Semicircle $\rightarrow 6 \times 6 \times 3.14 \times \frac{1}{2} = 56.52$
Shaded area $\rightarrow 72 - 56.52 \Rightarrow \underline{15.48\ cm^2}$

Q5 $\frac{1}{9}$

Q6 80% → $24

$100\% \rightarrow \frac{24}{60} \times 100 = \$30$

$24 ÷ 20 = $1.20 per muffin
Original price → $30 ÷ 20 = $1.50 per muffin
$24 ÷ $1.50 ⇒ <u>16 muffins</u>

Q7 (a) $7g + 20 + 20 \Rightarrow (7g + 40)$

(b) $29 \times 7 = 203$
$203 + 40 = 243$
$243 ÷ 9 \Rightarrow$ <u>27</u>

Q8 $9 \times 9 = 81$
$40.5 \times 2 \Rightarrow$ <u>81 cm^2</u>

Q9 $6 \times 24 + 20 = 164$
$164 ÷ 4 = 41$
$41 \times 28 \Rightarrow$ <u>1148 chairs</u>

Q10 $\frac{1}{4} \times \frac{22}{7} \times 14 \times 14 = 154$
$154 \times 2 = 308$
$308 + 266 = 574$
$574 ÷ 14 = 41$
$41 - 14 \Rightarrow$ <u>27 cm</u>

Q11 (a) <u>6400 cm^2</u>

(b) <u>27 squares</u>

Q12 (a) $315 \div 7 = 45$
$45 \div 3 = 15$
$15 \times 6 = 90$ (blue)
$15 \times 4 = 60$ (red)
$90 \times 4 = 360$ (blue)
$60 \times 2 = 120$ (red)
$120 : 360 \Rightarrow \underline{1 : 3}$

(b) $15 \times 7 = 105$ (green)
$105 \times 3 = 315$ (green)
$315 + 360 + 120 \Rightarrow \underline{795 \text{ cm}}$

Q13 $\underline{19.43 \text{ cm}^2}$

Q14 (a) $\frac{7}{108}$ children $= 84$

$84 \div 7 = 12$ ($\frac{1}{108}$ of children)

$\frac{35}{108} + \frac{28}{108} = \frac{63}{108}$

$63 \times 12 \Rightarrow \underline{756 \text{ children}}$

(b) $12 \times 28 = 336$
$621 - 336 = 285$
$45 \times 12 = 540$
$540 - 285 = 255$
$35 \times 12 = 420$
$420 + 255 \Rightarrow \underline{675 \text{ males}}$

Q15 $13 \times 3 \times 2 = 78$ (length)
$9 \times 3 \times 2 = 54$ (breadth)
$3 \times 3 \times 4 = 36$
$78 + 54 + 36 \Rightarrow \underline{168 \text{ tiles}}$

Q16 (a) **<u>424 beads</u>**

(b) **<u>191 beads</u>**

Q17 (a) **375 – 87 = 288**
70 + 70 + 100 = 240
288 ÷ 240 = 1.2
(1.2 x 70) + 87 ⇒ <u>171 children</u>

(b) **100 x 12 = 120**
120 ÷ 100 = 1.2
171 – 120 = 51
51 ÷ 1.2 ⇒ <u>42.5 %</u>

Q18 (a) **3 x 2 = 6**
3 x 0.4 = 1.2
3 x 0.7 = 2.1
1.2 + 2.1 = 3.3
44 ÷ 7 = 6R2
6 x 1 = 6
74.70 – 6 ⇒ <u>$68.70</u>

(b) **0.4 x 114 = 45.60**
68.70 – 45.60 = 23.10
0.7 - 0.4 = 0.3
23.10 ÷ 0.30 ⇒ <u>77 packs</u>

End