# 2018 PRIMARY 6 PRELIMINARY EXAMINATION

Name : _____ (  ) Date: 1 August 2018

Class : Primary 6 ) Time: 8.00 a.m. - 9.00 a.m.

Parent's Signature : _____ 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)

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1. 7 kg 4 g is the same as _____.

   (1) 74 g
   (2) 704 g
   (3) 7 004 g
   (4) 7 040 g

2. Express 40 ÷ 200 as a decimal.

   (1) 0.5
   (2) 0.2
   (3) 0.05
   (4) 0.02

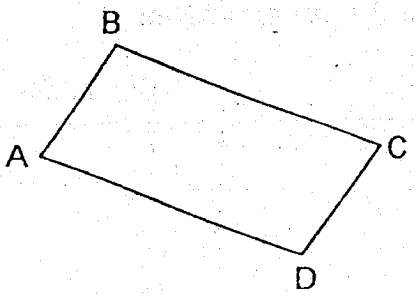
3. What is the value of $50 \div 5 + (22 - 9) \times 2 ? =$

   (1) 14
   (2) 36
   (3) 46
   (4) 81

4. Janah spent 1 h 45 min watching a movie. It ended at 1.15 p.m.
   What time did the movie start?

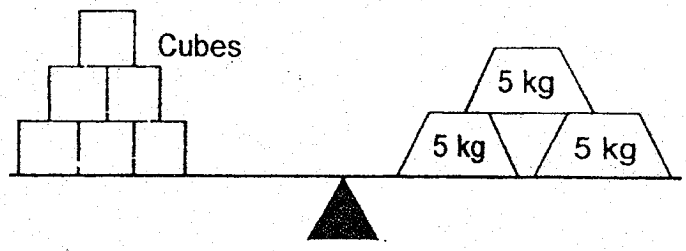
   (1) 11.30 a.m.
   (2) 11.30 p.m.
   (3) 3.00 a.m.
   (4) 3.00 p.m.

5. ABCD is a parallelogram. Which of the following is **false?**




(1) $\angle ABC + \angle BCD = 180°$
(2) $\angle BCD = \angle DAB$
(3) $\angle CDA = \angle DAB$
(4) $\angle DAB + \angle ABC = 180°$

6. What is the average mass of each cube?




(1) 15 kg
(2) 5 kg
(3) 2.5 kg
(4) 0.4 kg

7. A machine is able to fill up 10 bottles of drinks in 1 minute. How much time does the same machine take to fill up 1 bottle of drink?

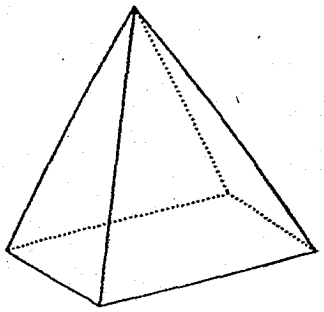
(1) 10 s

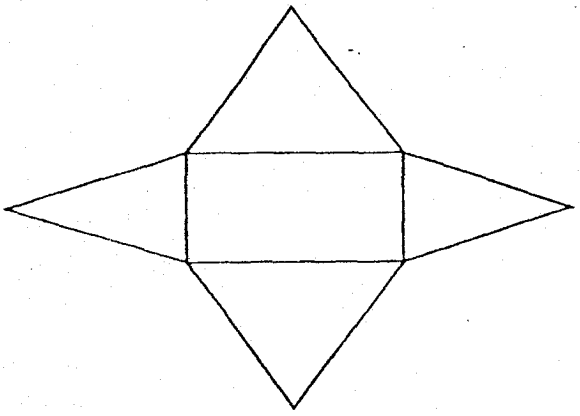
(2) 6 s

(3) $\frac{1}{6}$ s

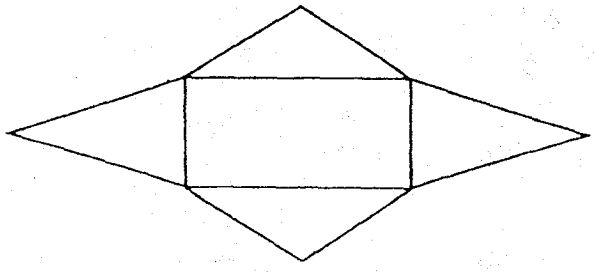
(4) $\frac{1}{10}$ s

8. Which of the following is a net of the solid?

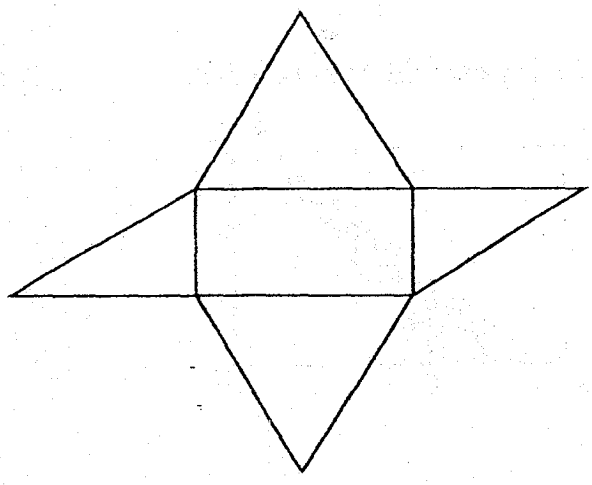




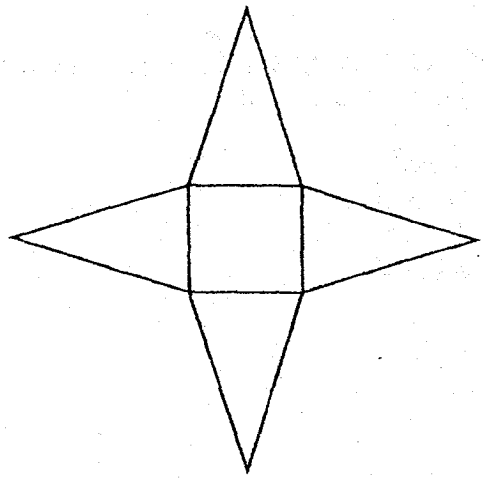
(1)



(2)



(3)



(4)

9. A jar contains 24 red beads, 56 blue beads and 20 green beads. What is the ratio of the number of blue beads to the number of red and green beads?

(1) 4 : 1
(2) 7 : 3
(3) 11 : 14
(4) 14 : 11

10. Arrange the following numbers from the greatest to the smallest.

$$62\% \quad , \quad 0.63 \quad , \quad \frac{3}{5}$$

(1) $\frac{3}{5}$ , 0.63 , 62%

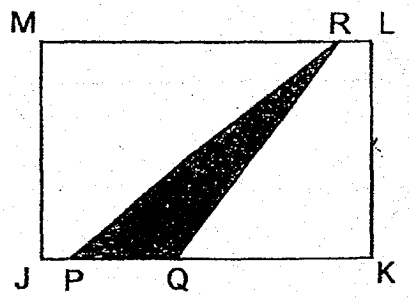
(2) 62% , 0.63 , $\frac{3}{5}$

(3) 0.63 , $\frac{3}{5}$ , 62%

(4) 0.63 , 62% , $\frac{3}{5}$

11. JKLM is a rectangle. JK is thrice the length of PQ. The shaded area is 5 $cm^2$. Find the area of JKLM.

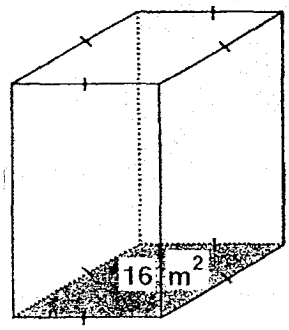
(1) 6 $cm^2$
(2) 10 $cm^2$
(3) 15 $cm^2$
(4) 30 $cm^2$



12. Saleh has \$7. He lends \$3 to his sister and spends \$y. His father gives him twice the amount of money he spends. How much money does Saleh have now?

(1) \$ (4 + y)
(2) \$ (4 + 2y)
(3) \$ (10 + 2y)
(4) \$ (10 + 3y)

13. The base area of the container is 16 $m^2$. The length of one side of its base is half the height of the container. Find the volume of the container.



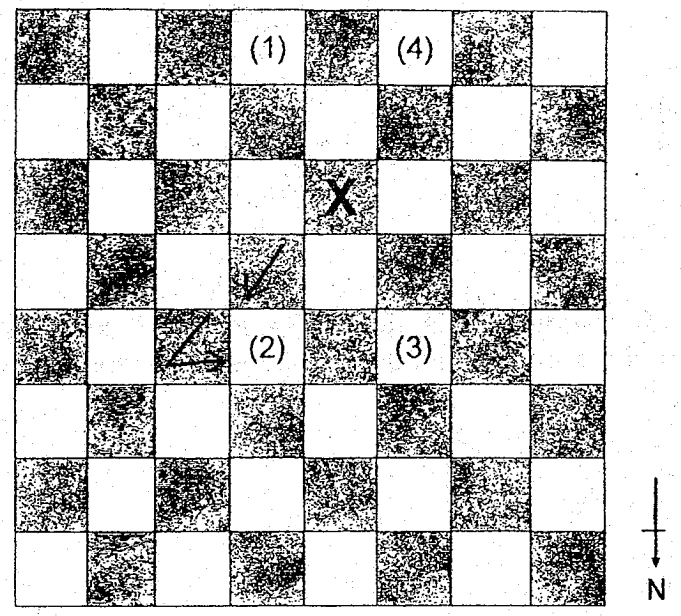

(1) 1024 $m^3$
(2) 128 $m^3$
(3) 64 $m^3$
(4) 32 $m^3$

14. $1 + 2 + 3 + \ldots + 23 + 24 + 25$

When the first 25 whole numbers are added, what is the digit in the ones place of this total?

(1) 7
(2) 6
(3) 3
(4) 5

15. From the square marked 'X', a chess piece is moved 2 squares northeast and 1 square west. Which of the following is the position of the chess piece now?

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- End of Booklet A -

# 2018 PRIMARY 6 PRELIMINARY EXAMINATION

Name : _____ (  ) Date: 1 August 2018

Class : Primary 6 (  ) Time: 8.00 a.m. - 9.00 a.m.

Parent's Signature : _____

**Paper 1 comprises 2 booklets, A and B.**

## MATHEMATICS

### PAPER 1

### (BOOKLET B)

25

**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 **20** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (5 marks)

16. Find the value of $48.3 \div 6$.

Ans: _____

17. Simplify $20n - 3 + 10 - 19n$.

Ans: _____

18. Will is 12 years 4 months old. His sister is 3 years and 7 months younger than him. How old is Will's sister?

Ans: _____ years _____ months

19. An insect crawls at a speed of 14 cm/s. Find the time it takes to crawl 700 cm.

Ans: _____ s

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20. The average height of Plant A, Plant B and Plant C is 80 cm.
Plant A is 60 cm tall and Plant B is 70 cm tall. What is the height of Plant C?

Ans: _____ m

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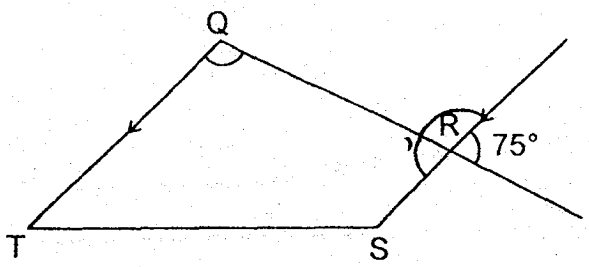
Questions **21** to **30** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided.
For questions which require units, give your answers in the units stated. (20 marks)

21. A mug is $\frac{1}{3}$-filled with water. Samad pours all the water into a bottle which has a volume twice that of the mug. What fraction of the bottle is filled with water?

Ans: _____

22. Find $\angle TQR$.



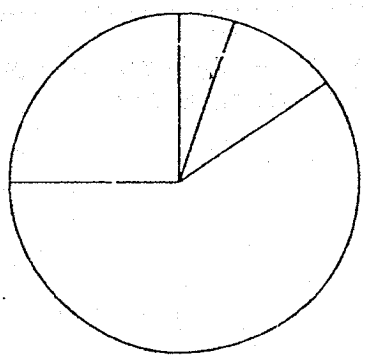

Ans: _____ °

23. The table below shows the results of a survey on 500 pupils.

Survey question: How often do you and your family eat out in a week?

| Group | Size of group | Response |
|---|---|---|
| A | a small number | not at all |
| B | twice that of Group A | once |
| C | more than half | twice |
| D | 125 pupils | thrice or more |

A pie chart is drawn to represent the results of the survey.
**Write letters A, B, C and D** in the correct part of the pie chart.



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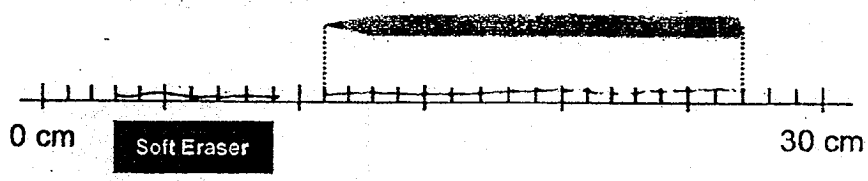
24. What is the difference in length between the pencil and eraser?




Ans: _____ cm

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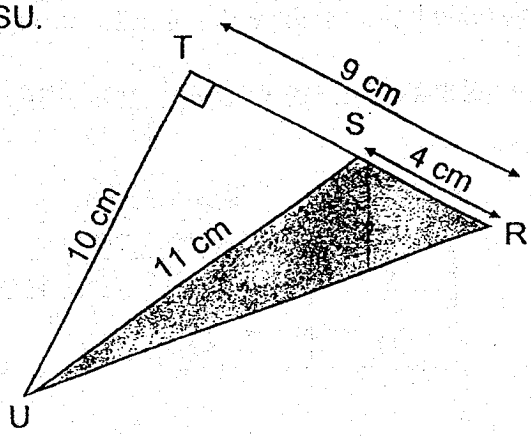
25. Find the shaded area of Triangle RSU.




Ans: _____ $cm^2$

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26. Lakhi has 80 cards. She buys more cards and has 100 cards now. What is the percentage increase in Lakhi's number of cards?

Ans: _____ %

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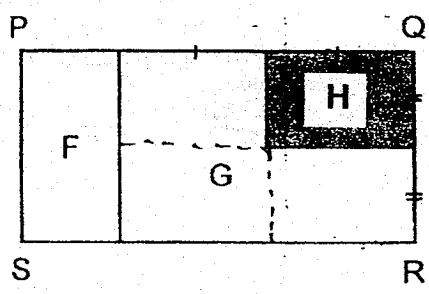
27. Rectangle PQRS is made up of Area F, Area G and Area H.
Area F is $\frac{1}{4}$ of Rectangle PQRS. What fraction of Rectangle PQRS is shaded?




Ans: _____

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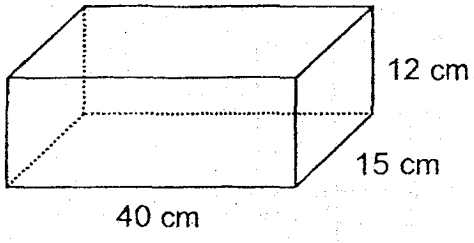
28. A rectangular tank 40 cm long, 15 cm wide and 12 cm high is filled with 6 $\ell$ of water. Find the increase in height of the water level when it is filled to the brim.




Ans: _____ cm

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29. A number has three decimal places. When rounded to the nearest tenth, the value of the number is 1.3. What is the greatest and smallest possible value of the number?

Ans: greatest – _____

smallest - _____

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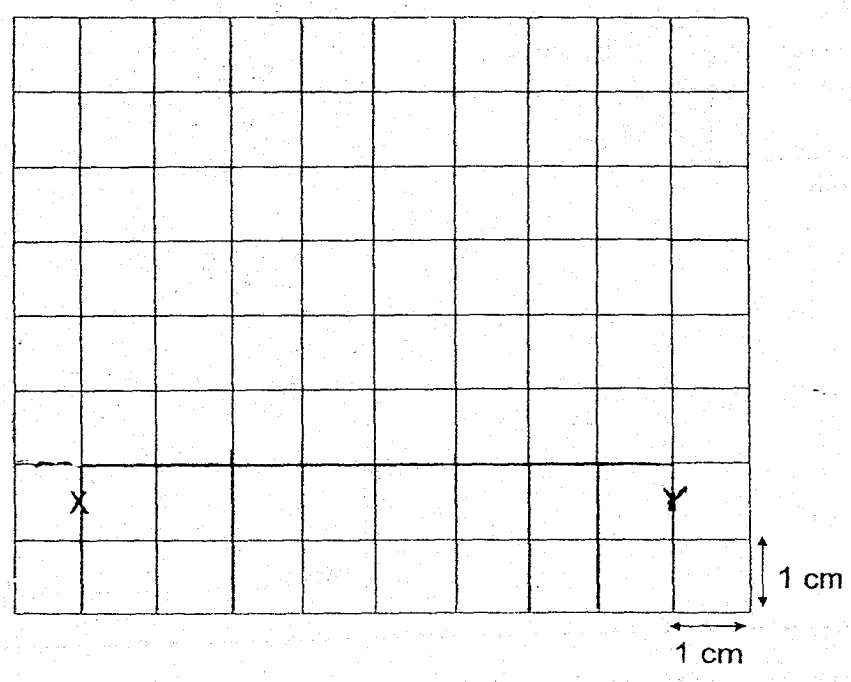
30. Using the grid below, draw trapezium WXYZ such that $\angle XYZ$ is 45° and WX = ZW = 4 cm.




End of Booklet B
End of Paper 1

# 2018 PRIMARY 6 PRELIMINARY EXAMINATION

Name : _____ (  ) Date: 1 August 2018

Class : Primary 6 (  ) Time: 10.30 a.m. - 12 noon

Parent's Signature : _____

## MATHEMATICS

## PAPER 2

55

**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)

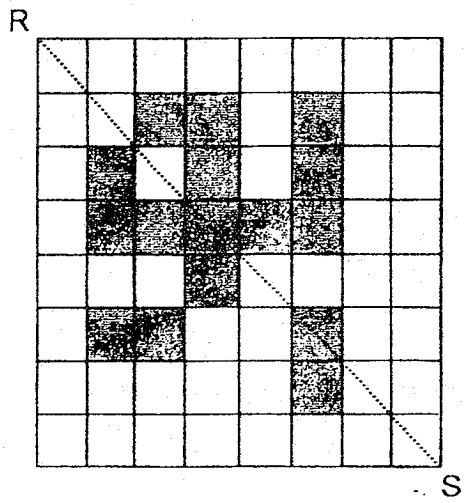
1. There are 105 passengers in a train carriage. The ratio of the number of adults to the number of children is 2 : 1. Then, 15 adults and 10 children alighted from the train. What is the new ratio of the number of adults to the number of children? (Leave your answer in its simplest form)

Ans: _____

2. In a school of 1500 pupils, there are 630 girls. $\frac{1}{5}$ of the boys and $\frac{1}{3}$ of the girls do not wear spectacles. How many pupils wear spectacles?

Ans: _____

3. The figure is made up of identical squares. Shade two more squares so that RS is the line of symmetry for the figure.

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4. Devi bought r packets of flour. Each packet contained 2 kg of flour. She used 1 kg of flour and gave r kg of flour to her mother. How much flour was left?

Ans: _____ kg

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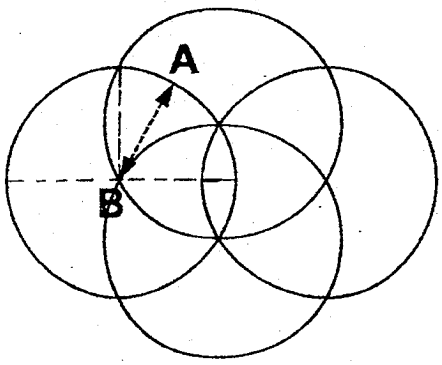
5. The pattern is made up of 4 identical circles. The ink tip of a machine moves a total distance of 44 m to trace out the pattern as shown below. Every part of the pattern is traced only once. Find the distance between A and B.

(Take $\pi = \frac{22}{7}$)




Ans: _____ m

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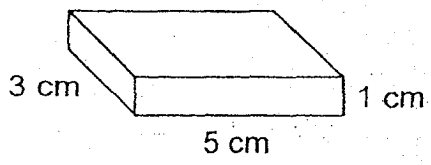
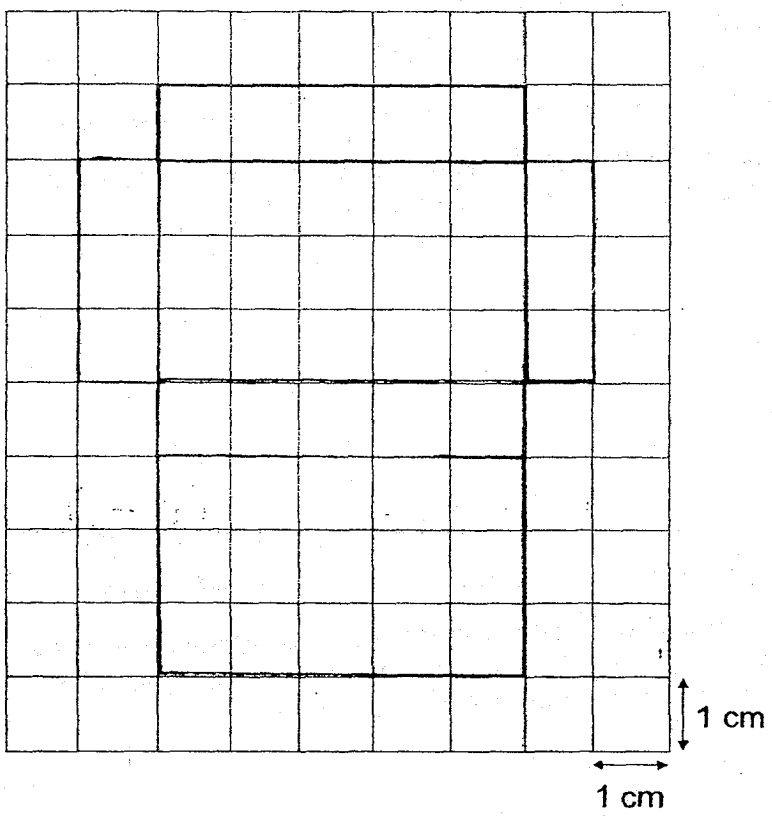
For questions **6** to **17**, show your working clearly in the space provided for each question and write your answers in the spaces provided.
The number of marks available is shown in brackets [ ] at the end of each question or part-question. (45 marks)

6. (a) Name the solid below.

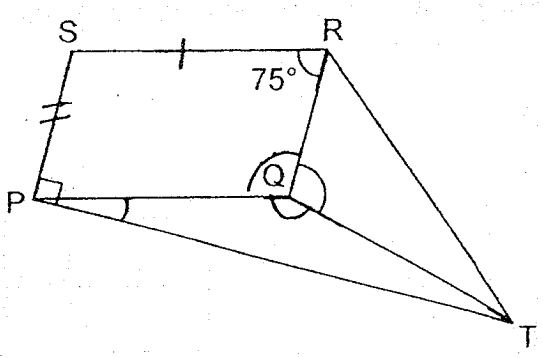



(b) Complete the net of the solid using the grid. [2]




Ans: (a) _____ [1]

7. In the figure, PQRS is a parallelogram. PQ = QT and ∠QRS = 75°. Find ∠TQR.




Ans: _____ [4]

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8. The total value of the numbers printed on some cards is 504. Each card is printed with a different 3-digit odd number. The average value of all the numbers is 126. The difference between the greatest and smallest number is 6. Find the smallest number printed on the cards.

Ans: _____ [3]

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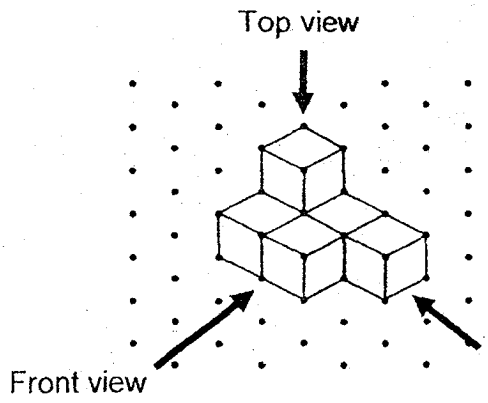
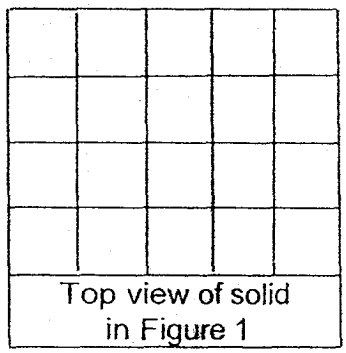
9. The solid as shown in Figure 1 is built using 1-cm cubes.

(a) Looking at the solid from the front view, draw its top view in the given square grid. [1]

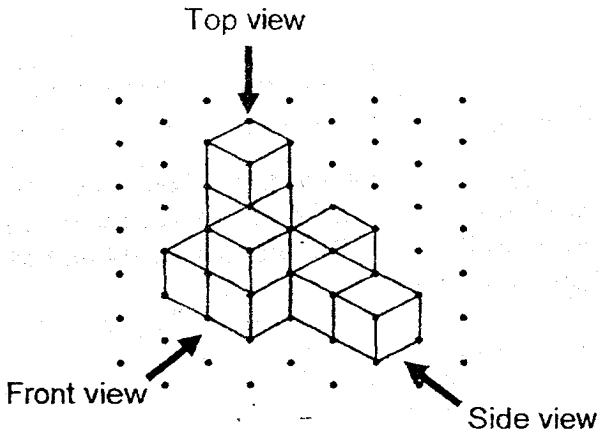
Figure 1




(b) Identical 1-cm cubes are added to form a new solid as shown in Figure 2.

Figure 2




(i) How many 1-cm cubes are added to form the new solid?

(ii) Find the volume of the new solid.

Ans: (b) (i) _____ [1]

(ii) _____ [1]

10. In a 100-metre race, Kane was 2 m behind when Jaah reached the finish line. Jaah's speed was 7 m/s. Find Kane's speed.

Ans: _____ [3]

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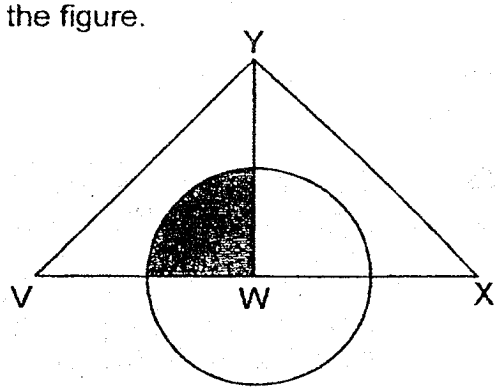
11. The figure is made up of a circle and 2 identical right-angled triangles. W is the centre of the circle. $\frac{11}{28}$ of Triangle VWY is shaded. Find the ratio of the area that is **not** shaded to the total area of the figure.




Ans: _____ [3]

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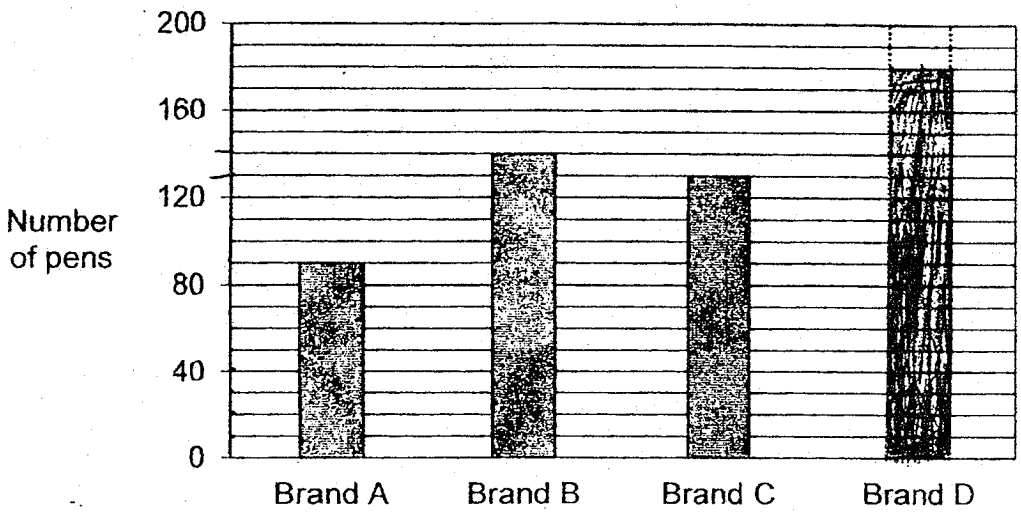
12. The bar graph shows the number of each brand of pen sold in a shop.




The prices of the pens are shown in the table below.

| Brand | Price per pen |
|---|---|
| **A** | $3.50 |
| **B** | $2.40 |
| **C** | $2.50 |
| **D** | $1.80 |

(a) How many Brand B pens were sold? **Ans:**_____ [1]

(b) There were twice as many Brand D pens as Brand A pens sold.
**Draw** the bar to show the number of Brand D pens sold. [1]

(c) Each statement below is either true, false or not possible to tell from the graph. For each statement, **put a tick (✓)** in the correct column. [2]

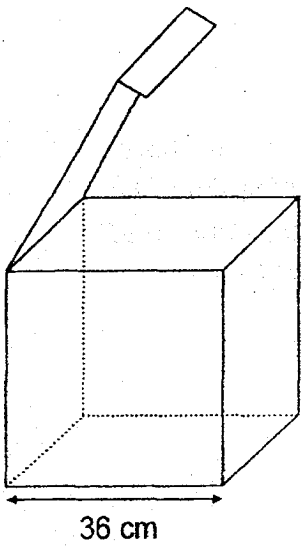
| | Statement | True | False | Not possible to tell |
|---|---|---|---|---|
| (i) | The greatest amount of money is collected from the sale of Brand B pens. | | | |
| (ii) | The shop makes the most amount of money from the sale of Brand D pens. | | | |

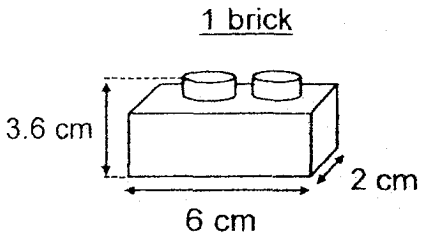
13. Plastic bricks measuring 6 cm by 2 cm by 3.6 cm each are put into a cubical box with a flap cover.

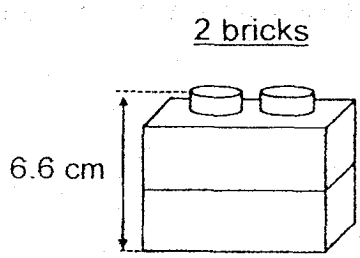
(a) How many bricks touch only the base of the box?

(b) Find the most number of bricks that can be put inside the box such that the cover can be closed completely.

*The diagrams are not drawn to scale.*



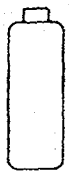
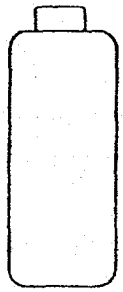




Ans: (a) _____ [1]

(b) _____ [3]

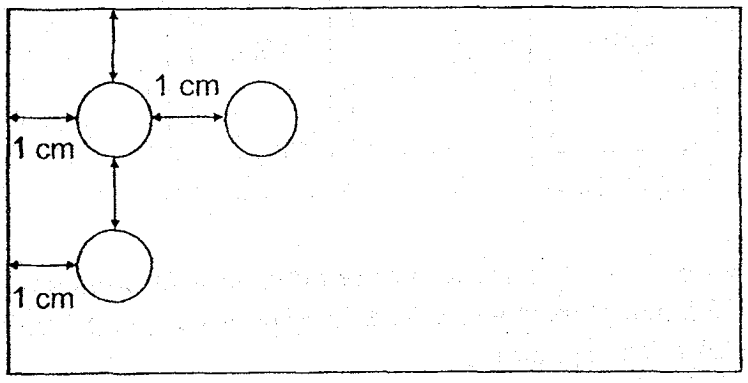
14.

| | Small | Medium | Large |
|---|---|---|---|
| |  | |  |
| ***Capacity*** | *250 mℓ* | *500 mℓ* | *750 mℓ* |

35 ℓ of water is used to fill up bottles of 3 different capacities as shown above. There is an equal number of small-sized bottles and large-sized bottles. The number of medium-sized bottles is three times the number of small-sized bottles. How much water is used to fill up all the medium-sized bottles?

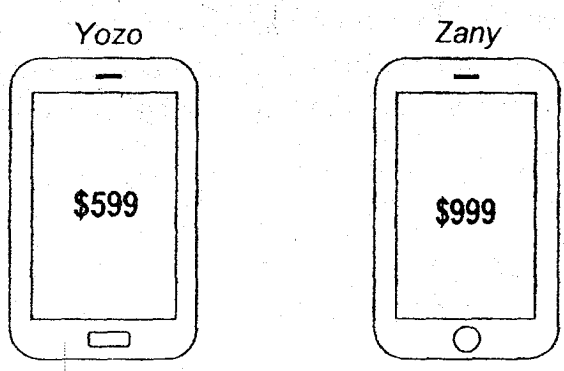
Ans: _____ [4]

15. The cardboard, not drawn to scale, has a perimeter of 64 cm. It has holes punched in such a way that each hole has equal distance from the ones around it and from the sides of the cardboard. There are 10 holes along its length. The diameter of each hole is 1 cm. Find the number of holes along its breadth.




Ans: _____ [5]

16. Shop A and Shop B sold two types of mobile phones at the prices as shown below.




Shop A and Shop B sold the same number of mobile phones last month.
Shop A sold 13 Yozo phones and some Zany phones. Shop B sold 15 Zany phones and some Yozo phones.
The total amount Shop A collected was $2000 less than Shop B.

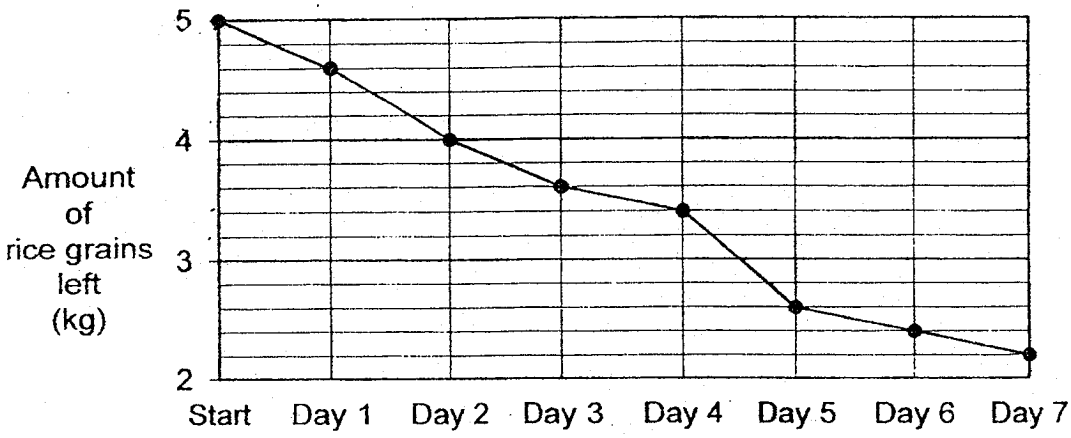
(a) How many Yozo phones did Shop B sell?

(b) How much money did Shop A collect?

Ans: (a) _____ [3]

(b) _____ [2]

17. A housewife buys a 5-kg pack of rice grains. The graph shows the amount of rice grains left at the end of each day for a week.




(a) On which day was the most amount of rice grains consumed?

(b) What percentage of the 5-kg pack of rice grains was consumed by Day 3?

(c) 200 g of rice grains fills 1 measuring cup. How many cups of rice grains were left at the end of Day 7?

Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [1]

End of Paper 2

# ANSWER KEY

YEAR : 2018
LEVEL : PRIMARY 6
SCHOOL : TAO NAN
SUBJECT : MATHEMATICS

Booklet A -Paper 1

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

Booklet B -Paper 1

Q16) 8.05

Q17) $1n - 3 + 10 = n + 7$

Ans: $n + 7$

Q18) 12 years 4 months = 11 years 16 months

11 years 16 months – 3 years 7 months = 8 years 9 months

Ans: 8 years 9 months

Q19) $700 \div 14 = 50$

Ams: 50s

Q20) $80 \times 3 = 240$

$240 - 70 - 60 = 110$

110cm = 1.1m

Ans: 1.1m

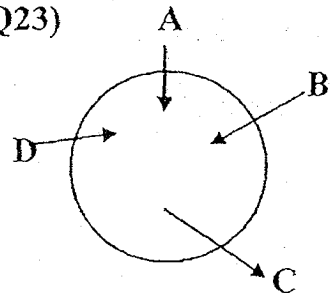
Q21) $3 \times 2 = 6$

Ans: $\frac{1}{6}$

Q22) <TQR = 180° - 75° = 105°

Ans: 105°

Q23)




Q24) Eraser = 6cm

Pencil = 16cm

16 – 6 = 10

Ans: 10cm

Q25) $\frac{1}{2} \times \frac{10}{1} \times \frac{9}{1} = 45$

$9 - 4 = 5$

$\frac{1}{2} \times 5 \times 10 = 25$

$45 - 25 = 20$

Ans: $20cm^2$

Q26) 100 – 80 = 20

100% = 80 cards

$80 \div 100 = 0.8$

$20 \div 0.8 = 20 \div \frac{8}{10} = 20 \times \frac{10}{8} = \frac{200}{8} = 25$

Ans: 25%

Q27) $\frac{1}{4} \times \frac{3}{4} = \frac{3}{16}$

Ans: $\frac{3}{16}$

Q28) $6000 \div 40 \div 15 = 10$

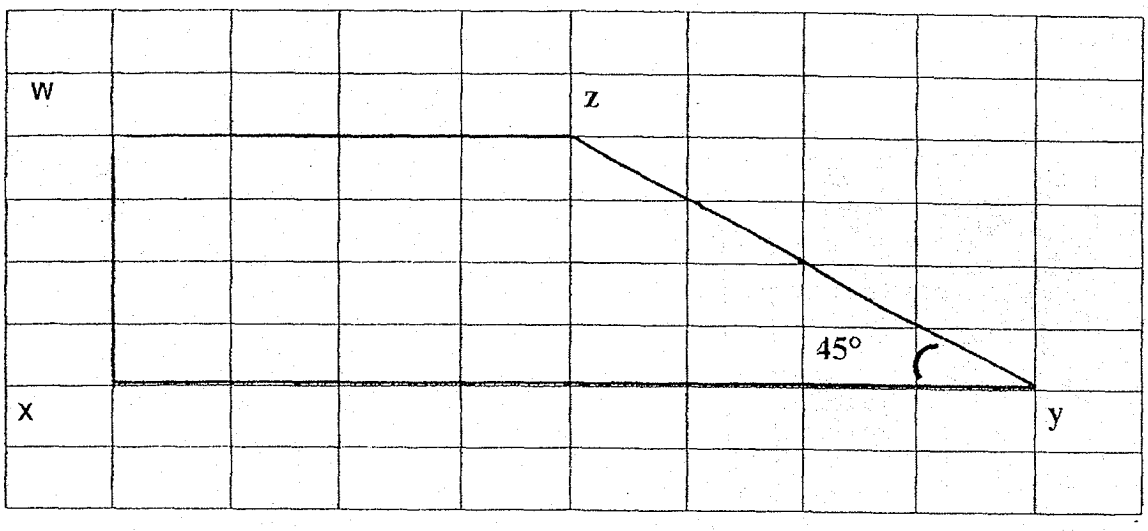
$12 - 10 = 2$

**Ans: 2cm**

**Q29) Greatest = 1.349**

**Smallest = 1.250**

**Q30)**




**Paper 2**

**Q1)** $105 \div 3 = 35$

$35 \times 2 = 70$

| A | C |
|---|---|
| 70 | 35 |
| -15 | -10 |
| 55 | 25 |
| 11 | 5 |

**Ans: 11 : 5**

Q2) $\frac{1}{3}$ x 630 = 210

1500 – 630 = 870

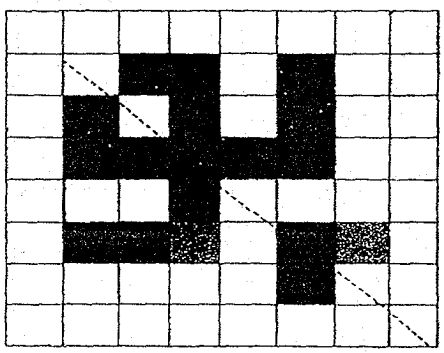
$\frac{1}{5}$ x 870 = 174

1500 – 210 – 174 = 1116

Ans: 1116

Q3)

R



S

Q4) r x 2 = 2r

2r – 1 – r = 1r – 1 = (1r – 1)kg

Ans: (1r – 1 kg

Q5) 2 x $\frac{22}{7}$ x r x 4 = $\frac{176r}{7}$

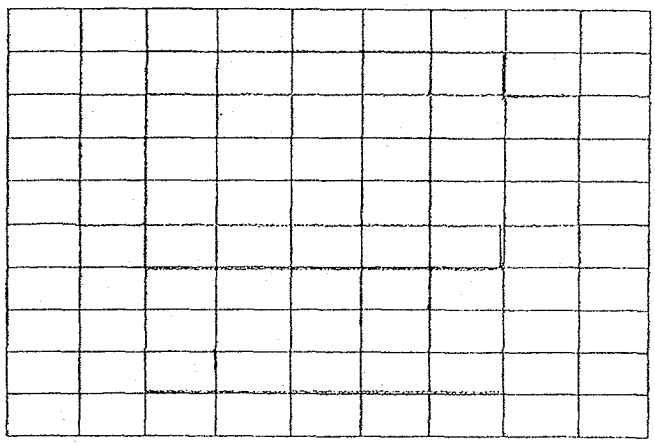
$\frac{176r}{7}$ = 44

R = $\frac{44}{176}$ x 7 = 1.75

Ans: 1.75m

Q6a) cuboid

Q6b)



Q7) <TPQ = 90° - 75° = 15°

<RSP = <RQP = 180° - 75° = 105°

<PQT = 180° - 15° - 15° = 150°

<TQR = 360°- 150°- 105° = 105°

Ans: 105°

Q8) 504 ÷ 126 = 4

6 ÷ 3 = 2

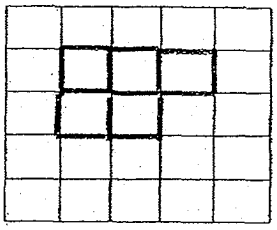
6 x 2 = 12

504 – 12 = 492

492 ÷ 4 = 123

Ans: 123

Q9a)



Q9bi) 4

Q9bii) $6 + 4 = 10$

$1 \times 1 \times 1 = 1$

$10 \times 1 = 10$

Ans: $10cm^3$

Q10) $\frac{100}{7} = 14\frac{2}{7}$

$100 - 2 = 98$

$98 \div 14\frac{2}{7} = 6.86$

Ans: 6.86m/s

Q11) $28 - 11 = 17$

$2 \times 17 = 34$

$22 + 11 + 17 + 17 = 67$

$67 + 11 = 78$

NS : TA

67 : 78

Ans: 67 : 78

Q12a) 140

Q12b) Draw till 180

Q12ci) True

Q12cii) Not possible to tell

Q13a) $36 \div 6 = 6$

$36 \div 2 = 18$

$6 \times 18 = 108$

Ans: 108

Q13b) 6.6 – 3.6 = 3

36 ÷ 3 = 12

12 – 1 = 11

108 x 11 = 1188

Ans: 1188

Q14) 250u + 3u x 500 + 750u = 35000

250u + 1500u + 750u = 35000

2500u = 35000

U = 35000 ÷2500 = 14

3u = 3 x 14 = 42

42 x 500ml = 21000 = 21ℓ

Ans: 21 ℓ

Q15) 64 ÷ 2 = 32

10 holes -> 10 x 1cm = 10cm

11gaps-> 11 x 1 = 11cm

10cm + 11cm = 21cm

13 = 32 – 21 = 11cm

13 minus 1 gap at one end – 11 – 1 = 10

1 gap + 1 hole = 1 + 1 = 2cm

Number of sets = 10 ÷ 2 = 5

10holes, 11 gaps = Length

Ans: 5cm

Q16a) A = 13 x 599 = 7787

B = 15 x 999 = 14985

Shop A and B sold same number of phones.

$999 - $599 = $400

$2000 ÷ 400 = 5 less Zany phone

15 – 5 = 10

13 + 10 = 23

23 – 15 = 8

Ans: 8

Q16b) 999 x 15 = 14985

599 x 13 = 7787

8 x 599 = 4792

14985 + 4792 = 19777

10 x 999 = 9990

9990 + 7787 = 17777

19777 – 17777 = 2000

Ans: $17.777

Q17a) Day 5

Q17b) 5 – 3.6 = 1.4

$\frac{1.4}{5}$ x 100% = 28%

Ans: 28%

Q17c) 2.2kg = 2200g

2200 ÷ 200 = 11

Ans: 11

END