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.

Downloaded from SingaKids.com

Downloaded from SingaKids.com

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. 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 ÷ 5 + (22 – 9) × 2? =

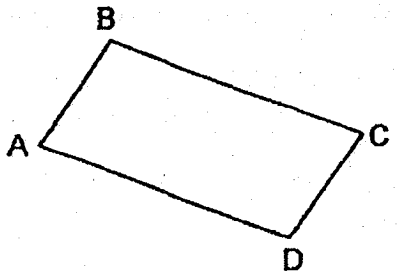
   (1) 14
   (2) 36
   (3) 46
   (4) 81

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.

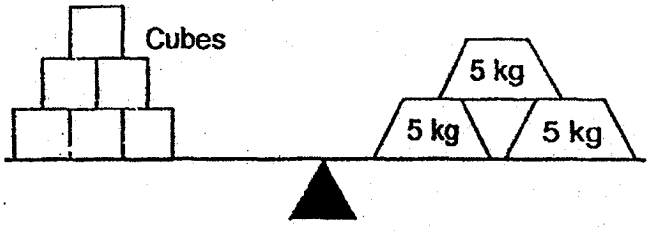
Downloaded from SingaKids.com

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

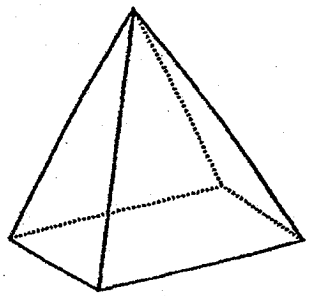
(2) 6 s

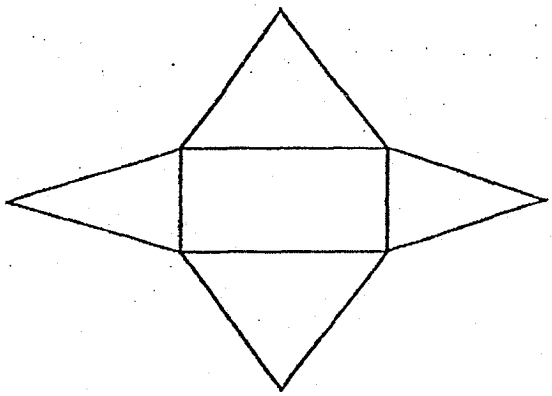
(3) $\frac{1}{6}$ s

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

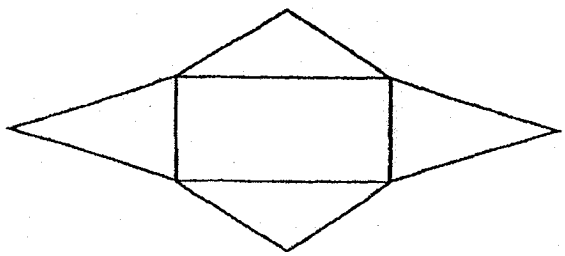
Downloaded from SingaKids.com

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

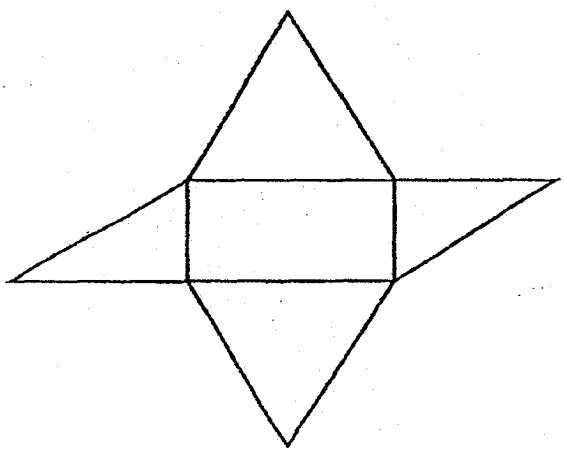




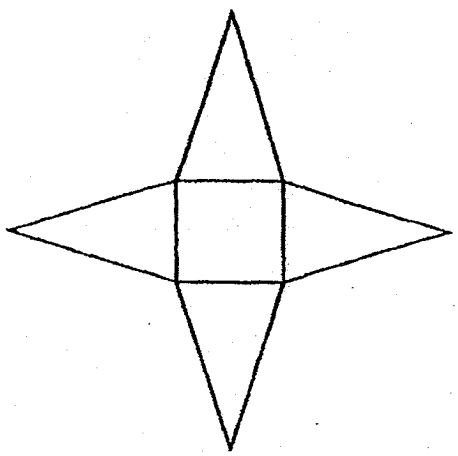
(1)



(2)



(3)



(4)

Downloaded from SingaKids.com

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%

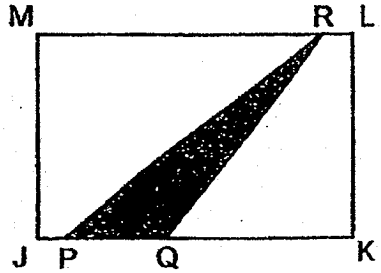
(2) 62% , 0.63 , $\frac{3}{5}$

(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

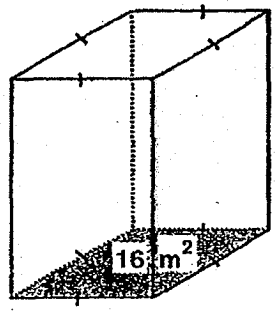


Downloaded from SingaKids.com

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

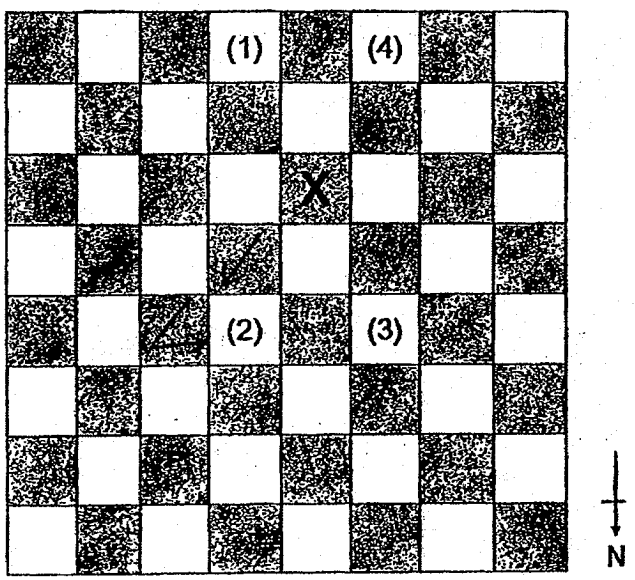
14. $1 + 2 + 3 + \ldots + 23 + 24 + 25$

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

Downloaded from SingaKids.com

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?



- End of Booklet A -

Downloaded from SingaKids.com

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.

Downloaded from SingaKids.com

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

Downloaded from SingaKids.com

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

Ans: _____ s

---

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

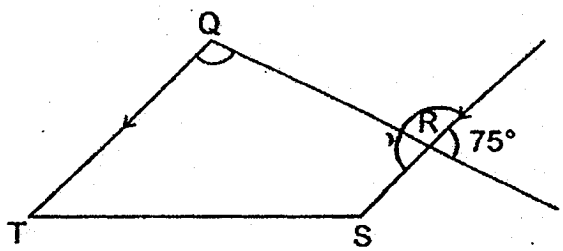
Downloaded from SingaKids.com

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: _____ °

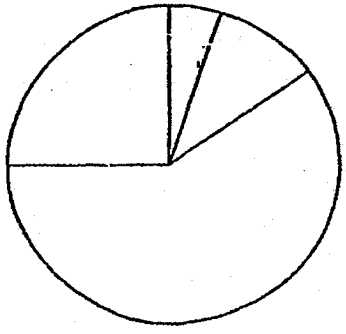
Downloaded from SingaKids.com

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

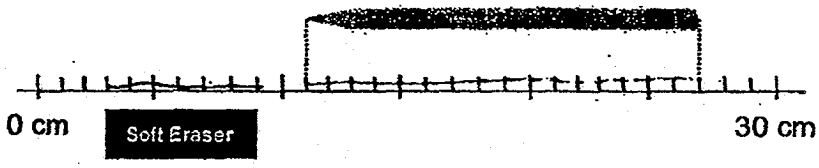
Survey question: How often do you and your family eat out in a week?

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.



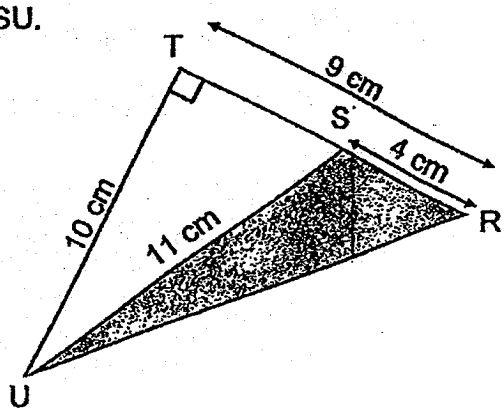
24. What is the difference in length between the pencil and eraser?



Ans: _____ cm

Downloaded from SingaKids.com

25. Find the shaded area of Triangle RSU.



Ans: _____ cm^2

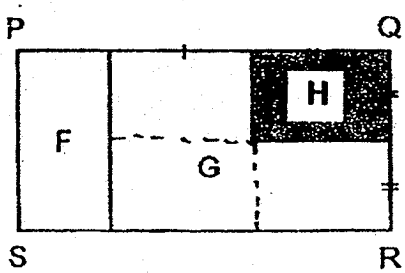
---

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: _____ %

---

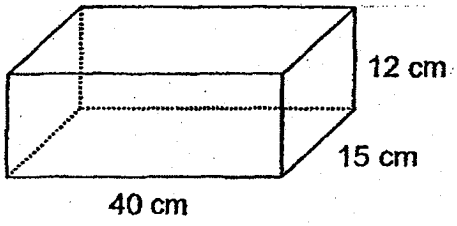
27. Rectangle PQRS is made up of Area F, Area G and Area H.
Area F is $\frac{1}{4}$ of Rectangle PQRS. What fraction of Rectangle PQRS is shaded?



Ans: _____

Downloaded from SingaKids.com

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



Ans: _____ cm

---

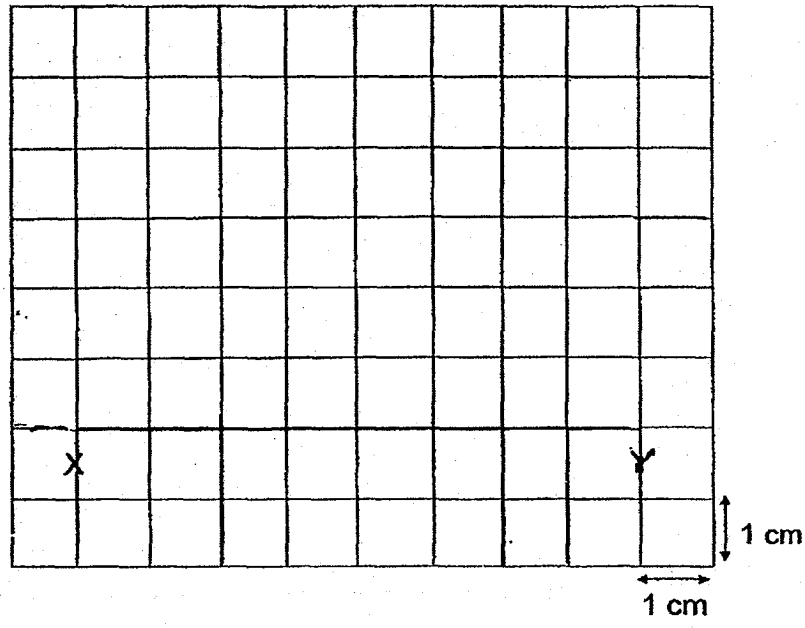
29. A number has three decimal places. When rounded to the nearest tenth, the value of the number is 1.3. What is the greatest and smallest possible value of the number?

Ans: greatest – _____

smallest - _____

Downloaded from SingaKids.com

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

Downloaded from SingaKids.com

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.

Downloaded from SingaKids.com

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)

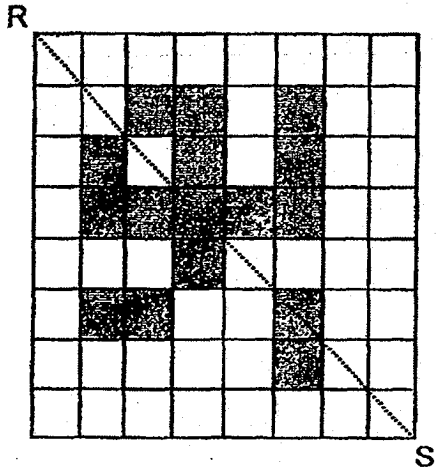
Ans: _____

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: _____

Downloaded from SingaKids.com

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

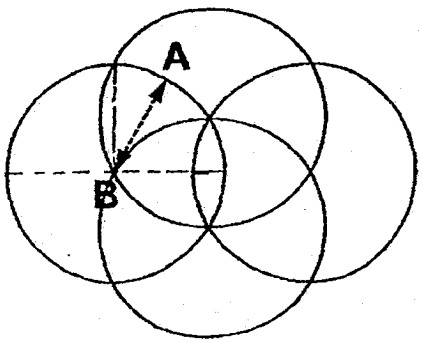


4. Devi bought r packets of flour. Each packet contained 2 kg of flour. She used 1 kg of flour and gave r kg of flour to her mother. How much flour was left?

Ans: _____ kg

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

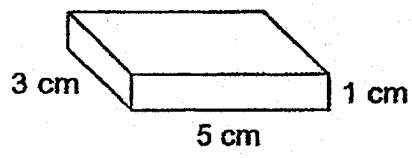


Ans: _____ m

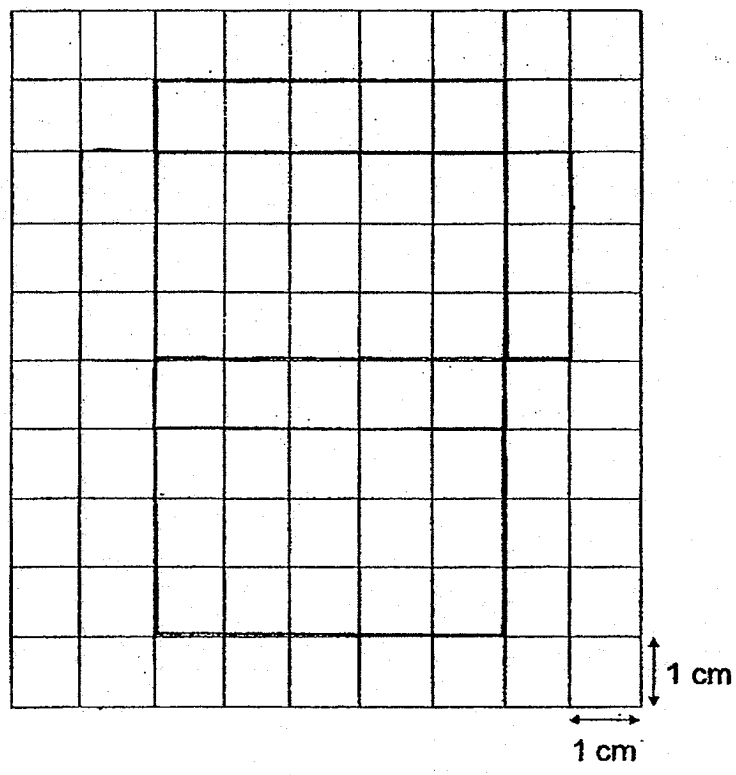
Downloaded from SingaKids.com

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.



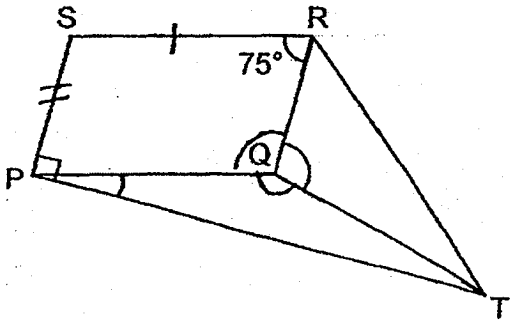
(b) Complete the net of the solid using the grid. [2]



Ans: (a) _____ [1]

Downloaded from SingaKids.com

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



Ans: _____ [4]

---

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.

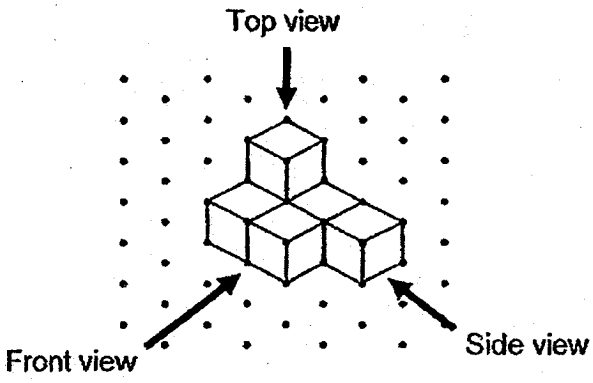
Ans: _____ [3]

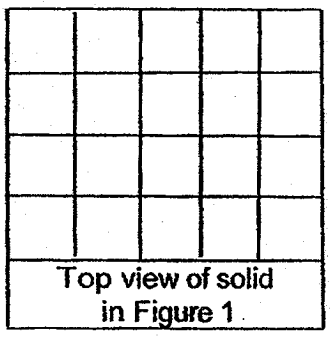
Downloaded from SingaKids.com

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]

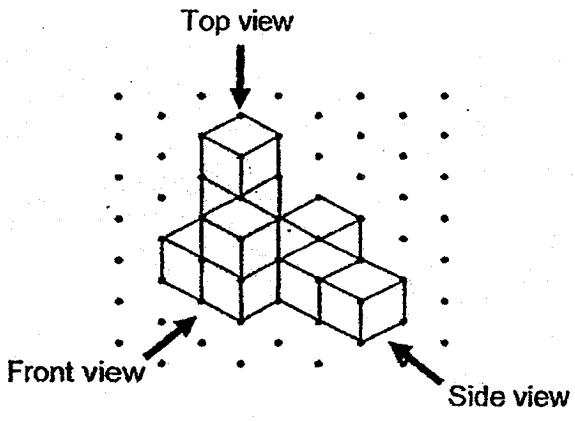
Figure 1





(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]

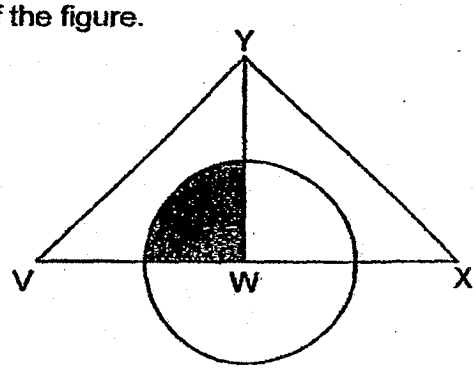
Downloaded from SingaKids.com

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]

---

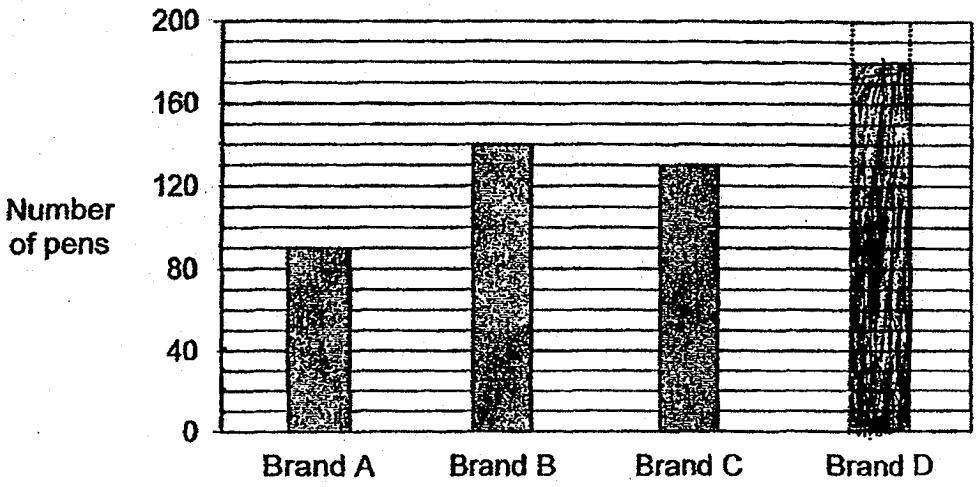
11. The figure is made up of a circle and 2 identical right-angled triangles. W is the centre of the circle. $\frac{11}{28}$ of Triangle VWY is shaded. Find the ratio of the area that is **not** shaded to the total area of the figure.



Ans: _____ [3]

Downloaded from SingaKids.com

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.			

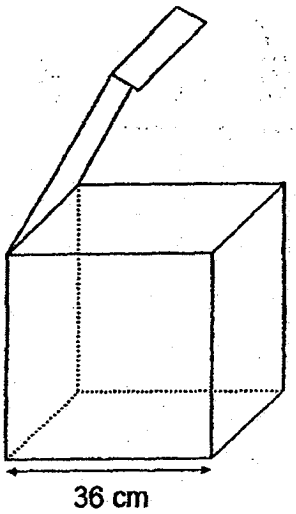
Downloaded from SingaKids.com

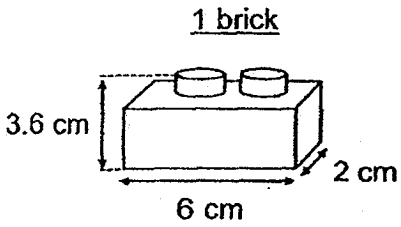
13. Plastic bricks measuring 6 cm by 2 cm by 3.6 cm each are put into a cubical box with a flap cover.

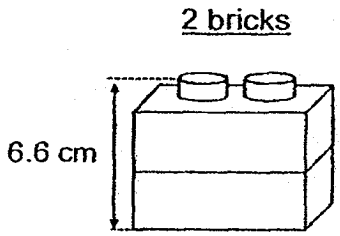
(a) How many bricks touch only the base of the box?

(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]

Downloaded from SingaKids.com

14.

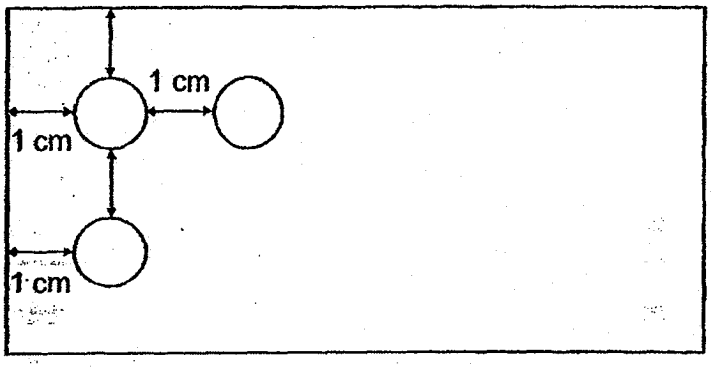
	Small	Medium	Large
			
Capacity	*250 mℓ*	*500 mℓ*	*750 mℓ*

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]

Downloaded from SingaKids.com

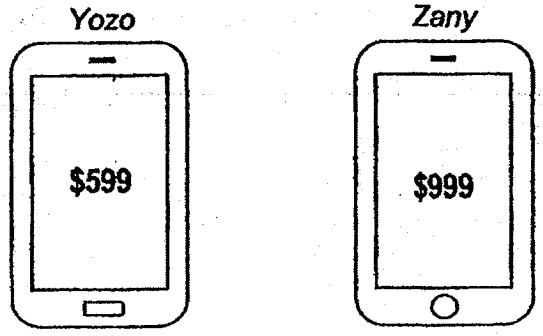
15. The cardboard, not drawn to scale, has a perimeter of 64 cm. It has holes punched in such a way that each hole has equal distance from the ones around it and from the sides of the cardboard. There are 10 holes along its length. The diameter of each hole is 1 cm. Find the number of holes along its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



Ans: _____ [5]

Downloaded from SingaKids.com

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?

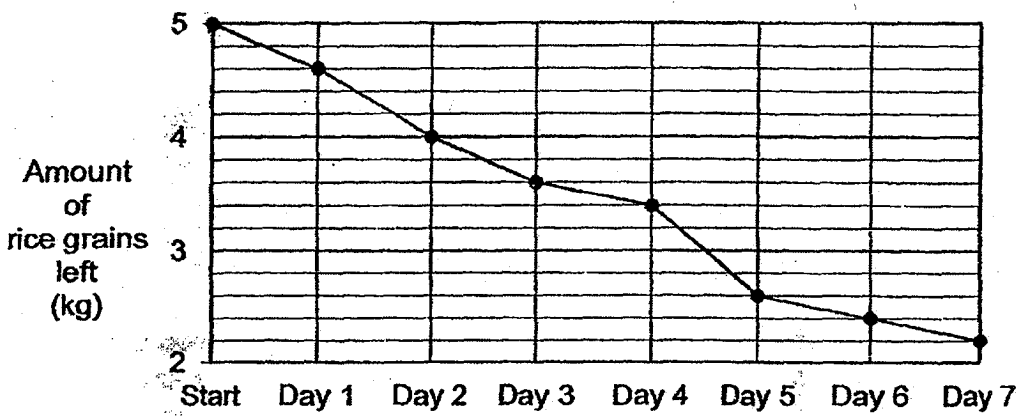
(b) How much money did Shop A collect?

Ans: (a) _____ [3]

(b) _____ [2]

Downloaded from SingaKids.com

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

Downloaded from SingaKids.com

Downloaded from SingaKids.com

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) $3 \times 2 = 6$

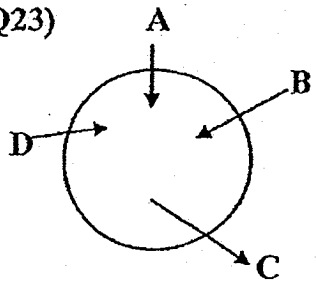
Downloaded from SingaKids.com

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 ÷ 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 ÷ 40 ÷ 15 = 10

Downloaded from SingaKids.com

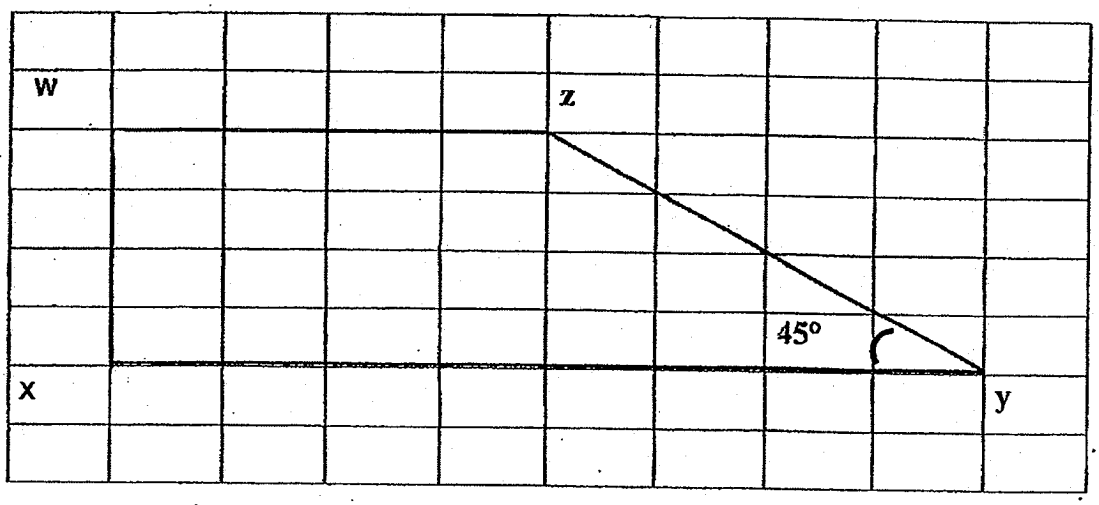
$12 - 10 = 2$

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

Downloaded from SingaKids.com

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

1500 – 630 = 870

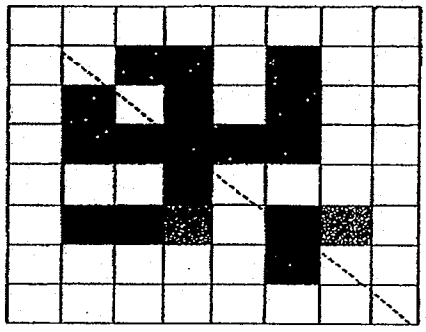
$\frac{1}{5}$ x 870 = 174

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

Downloaded from SingaKids.com

Solutions to Word Problems

Tao Nan Paper 2

P6 Mathematics SA2 2018

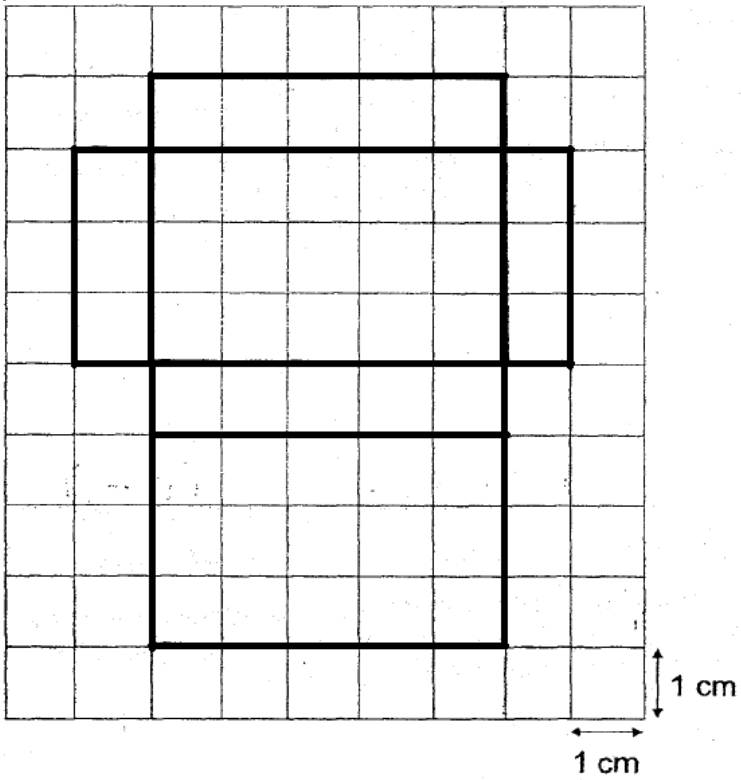
Downloaded from SingaKids.com

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. a)

Cuboid

b)



Ans: a) cuboid
b) as shown in diagram

Downloaded from SingaKids.com

7. ∠PQR = 180 – 75 = 105°

∠QPT = 90 – 75 =15°

∠PQT = 180 – 15 – 15 = 150° As PQT is an isosceles triangle

∠TQR = 360 – 105 – 150 = 105°

Ans: 105°

---

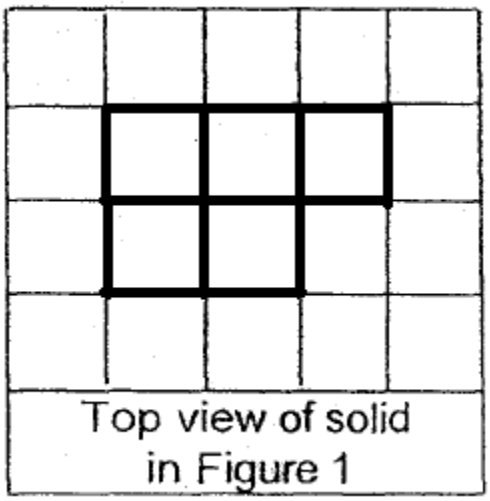
8. Number of cards = 504 ÷ 126 = 4

Difference between average and smallest number = 126 – (6 ÷ 2) = 123

Ans: 123

Downloaded from SingaKids.com

9. a)



b) 4 cubes added
Total cubes = 6 + 4 = 10
Total volume = 10 x 1 = 10 cm^3

Ans: (a) as shown above
(b) 10 cm^3

---

10. Jaah's timing = 100 ÷ 7 = 14.28 sec

Kane's distance = 100 – 2 = 98

Kane's speed = 98 ÷ 14.28 = 6.86 m/s

Ans: 6.86 m/s

Downloaded from SingaKids.com

11. Let shaded area = 11u

Area of unshaded VWY = 28u – 11u = 17u

Area of WXY = 28u

Area of half circle = 11u x 2 = 22u

Total unshaded area = 17u + 28u + 22u = 67u

Total area = 67u + 11u = 78u

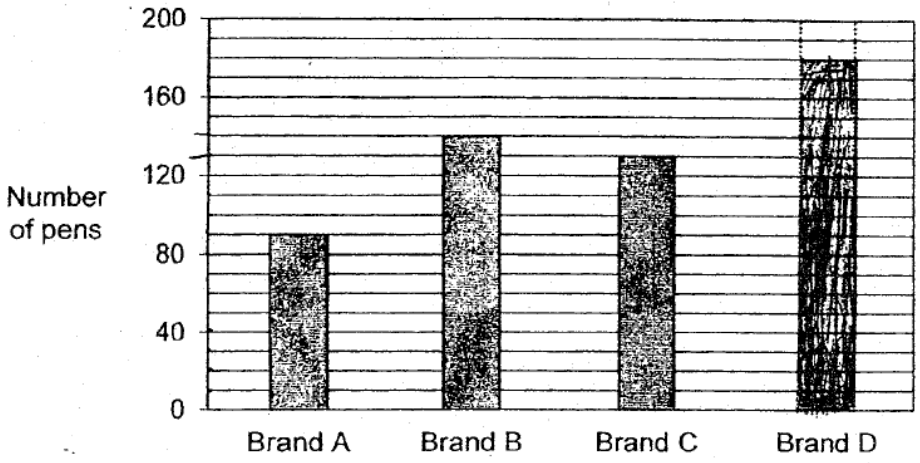
Ratio of unshaded area to total area = 67 : 78

Ans: 67 : 78:

---

12. a) 140 brand B pens sold

b) Brand D pens sold = 90 x 2 = 180 as shown



c) Sales of brand A = 90 x 3.50 = $315
Sales of brand B = 140 x 2.40 = $336
Sales of brand C = 130 x 2.50 = $325
Sales of brand D = 180 x 1.80 = $324

i) true

ii) Not possible to tell

Ans: (a) 140
(b) 180 as shown
(c) i) true
ii) not possible to tell

Downloaded from SingaKids.com

13. Number of bricks on base of box = 6 x 18 = 108

Maximum heights of the bricks = 36 ÷ 3 – 1 = 11

Maximum number of bricks = 11 x 108 = 1188

Ans: (a) 108

(b) 1188

---

14. Let number of small sized bottles = u

Number of large sized bottles = u

Number of medium sized bottles = 3u

Total amount of water = 0.25u + 0.5 x 3u + 0.75u = 35ℓ
2.5u = 35
u = 35 ÷ 2.5 = 14

Capacity of medium sized bottles = 3 x 14 x 0.5 = 21 ℓ

Ans: 21 ℓ

Downloaded from SingaKids.com

15. Length of cardboard = diameter of 10 circles + 11 spaces = 10 + 11 cm = 21cm

Breadth of cardboard = (64 – 42) ÷ 2 = 11cm

Number of holes along the breadth = (11 – 1) ÷ 2 = 5

Ans: 5

---

16. Let number of Zany phones sold in Shop A = u
Number of Zoro phones sold in Shop B = p

13 + u = p + 15

Difference in pricing = 999 – 599 = 400
Difference in number of Zany phones = 2000 ÷ 400 = 5

u = 15 – 5 = 10
p = 13 + 10 – 15 = 8
Number of Zoro phones sold by Shop B = 8

Shop A's collection = 13 x 599 + 10 x 999 = 7787 + 9990 = $17,777

Ans: (a) 8

(b) $17,777

Downloaded from SingaKids.com

17. a) Most amount of rice was consumed on Day 5

b) Percentage of consumption by Day 3 = 1.4 ÷ 5 x 100 = 28%

c) Number of cups on Day 7 = 2.2 ÷ 0.2 = 11 cups

Ans: (a) Day 5

(b) 28%

(c) 11 cups

Downloaded from SingaKids.com