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**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-1**  
**THE FISH TALE**

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**(1) At what price per kg did Fazila sell the king fish?**

**Sol (1)** Price of 8kg king fish=Rs.1200

Price of 1kg king fish=Rs. (1200/8)

= Rs. 150

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**(2) Floramma has sold 10 kg prawns today. How much money did she get for that?**

**Sol. (2)** Price of 1kg prawns= Rs. 150

Price of 10 kg prawns=Rs. (10 × 150)

=Rs. 1500

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**(3) Gracy sold 6 kg sword fish. Mini has earned as much money as Gracy. How many kg of sardines did Mini sell?**

**Sol. (3)** Cost of 1 kg swordfish= Rs. 60

Gracy earned on selling 6 kg swordfish=Rs. (6 × 60) = Rs. 360

Earning of mini = Rs. 360

Cost of Sardines=Rs. 40 per kg

Quantity of sardines sold for Rs. 360= (360/40) kg= 9kg

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**(4) Basher has Rs.100. He spends one-fourth of the money on squid and another three-fourth on prawns.**

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**(a) How many kilograms of squid did he buy?**

**(b) How many kilograms of prawns did he buy?**

**Sol.** We have,

One-fourth of Rs.100 =Rs.  $(100/4)$  =Rs.25

Three-fourth of Rs.100= Rs.  $(100/4) \times 3$  = Rs.  $(25 \times 3)$  = Rs.75

**(a)** Cost of Squid= Rs. 50 per kg.

For Rs. 25, quantity of squid brought= half kg

[Half of Rs. 50 is Rs. 50]

**(b)** Cost of prawns= Rs. 150 per kg

For Rs. 75, quantity of prawns brought= half kg

[Half of Rs. 150 is Rs. 75]

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**Ques. Women's 'Meenkar Bank'**

**The meeting of the Meenkar Bank has just begun. Fazila is the president. Twenty fisherwomen have made their own bank. Each saves Rs. 25 every month and puts it in the bank.**

**1. How much money does the group collect each month?**

**2. How much money will be collected in ten years?**

**Sol. (1)** Money collected by each member is Rs. 25 per month.

Money collected by the group of 20 members per month=Rs.  $(20 \times 25)$  =Rs. 500

**(2)** Money collected by the group in 10 years= Rs.  $(10 \times 12 \times 500)$  =Rs. 60000

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**(a) Gracy took a loan of Rs. 4000 to buy a net. She paid back Rs. 345 every month for one year. How much money did she pay back to the bank?**

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**Sol. (a)** Loan taken by Gracy=Rs. 4000

Amount paid at the rate of Rs. 345 per month for one year= Rs.  $(345 \times 12)$  =Rs. 4140

Gracy paid back to the bank Rs. 4140

**(b) Jhansi and her sister took a loan of Rs. 21000 to buy a long boat. They paid back a total of Rs. 23520 in one year. How much did they pay back every month?**

**Sol. (b)** Amount paid back by Jhansi and her sister to the bank in one year i.e. 12months =Rs. 23250

Amount paid back every month=Rs.  $(23250/12)$  =Rs. 1960

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**Ques. Why Don't We Start a New Fish-drying Factory?**

The women of Meenkar Bank also want to start a factory to dry fish. The Panchayat has given them some land for that. Over the years they have saved Rs 74,000. They find out how much they will need for the factory. Fazila writes the things they need to buy to begin. See the table for the cost of each item and the number of items they want to buy. Find the total cost.

Item	Price of each	No. of items	Cost
Borewell for fresh water	Rs. 3000	1	
Bamboo for fish drying	Rs. 2000	20	
Cement tank	Rs. 1000	4	
Tray and knife	Rs. 300	20	
Bucket	Rs. 75	20	

Total cost to set up the factory = \_\_\_\_\_

When fresh fish is dried it becomes  $\frac{1}{3}$  its weight. In one month they plan to dry 6000 kg of fresh fish. How much dried fish will they get in a month? \_\_\_\_\_

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**Sol.**

Item	Price of each	No. of items	Cost
Borewell for fresh water	Rs. 3000	1	Rs. (3000 × 1) =Rs. 3000
Bamboo for fish drying	Rs. 2000	20	Rs. (2000 × 20) = Rs. 40000
Cement tank	Rs. 1000	4	Rs. (1000 × 4) =Rs. 4000
Tray and knife	Rs. 300	20	Rs. (300 × 20) = Rs. 6000
Bucket	Rs. 75	20	Rs. (75 × 20) =Rs. 1500

Total cost to set up the factory = Rs. 54500

Quantity of dried fish obtained in one month=  $\frac{1}{3}$  of 6000 kg = (6000/3) kg= 2000 kg

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**Ques. Let us first calculate for 6 kg of fresh fish.**

**We buy fresh fish for Rs. 15 per kg**

**We sell dried fish for Rs. 70 per kg**

**We dry 6 kg fresh fish to get ..... Kg dried fish**

**For 6 kg fresh fish we have to pay 6 × ..... = Rs. 90**

**We will sell 2 kg dried fish and get 2 × ..... = Rs.....**

**So if we dry 6 kg fresh fish we will earn .....-90= Rs. ....**

**But if we dry 6000 kg we can earn Rs.....× 1000 in one month!**

**Sol.** We dry 6 kg fresh fish to get 2kg dried fish [6/3=2]

For 6 kg fresh fish we have to pay 6 × Rs. 15 =Rs. 90

We will sell 2kg dried fish and get 2 × Rs. 70 =Rs. 140

So if we dry 6 kg fresh fish we will earn Rs. 140-Rs. 90= Rs. 50

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But if we dry 6000 kg we can earn Rs  $50 \times 1000$  = Rs. 50000 in one month!

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**Ques. Jhansi-** I found that for 6000 kg fish we would need 1500 kg salt every month! Its price is Rs. 2 per kg

**Monthly costs:**

**(a)** Salt  $1500 \times 2$  = Rs.....

**(b)** Packing and bus charges= Rs. 3000

So the total monthly cost of drying and selling the fish =Rs. ....

**Fazila-** That sounds very good! Our calculations tell us that every month our Bank will earn Rs. 44000!

**1. Check to see if you also get the same answer.**

**Sol.** Monthly costs-

**(a)** Salt =  $1500 \times$  Rs. 2 = Rs. 30000

**(b)** Packing and bus charges= Rs. 3000

So, the total monthly cost of drying and selling the fish = Rs. 3000 + Rs. 3000 = Rs. 6000

They earn Rs.  $(50000 - 6000)$  = Rs. 44000 per month

Their answer is correct.

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**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-2**  
**SHAPES AND ANGLES**

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**(1) Look at the shape and the answer.**



**The angle marked in \_\_\_\_\_ colour is the biggest angle.**

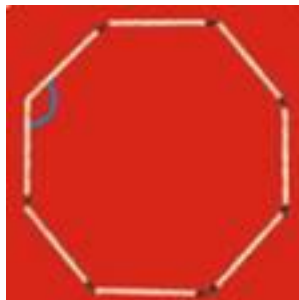
**Ans.** The angle marked in black colour is the biggest angle.

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**2 (a) Are the angles marked with yellow equal? \_\_\_\_\_**

**(b) Are the angles marked with green equal? \_\_\_\_\_**

**(c) Are the angles marked with blue equal? \_\_\_\_\_**



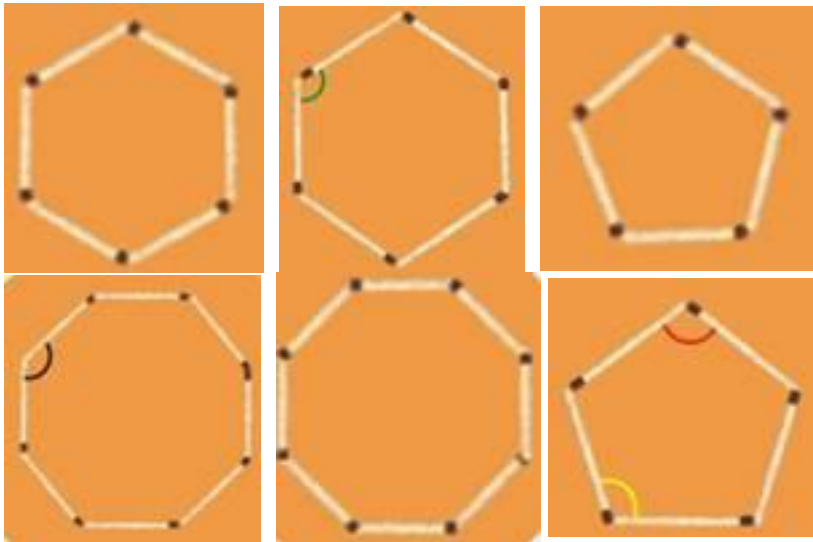
**Ans. (a)** Yes, the angles marked with yellow are equal.

**(b)** Yes, the angles marked with green are equal.

**(c)** Yes, the angles marked with blue are equal.

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**3. Four different angles are marked in four colours. Can you find other angles which are the same as the one marked in red? Mark them in red. Do this for the other colours.**



**Ans.** Yes, the marked in yellow is the same as the red one. Other angles which are the same as the one marked in red are marked red in the figure.

**4. Sukhman made this picture with so many angles.**



**Use colour pencils to mark**

- 1. Right angles with black colour.**
- 2. Angles which are more than a right angle with green.**
- 3. Angles which are less than a right angle with blue.**

**Ans. (1)** In the above figures right angles are marked with letter 'R'.

**(2)** Angles which are more than a right angle are marked with letter 'M'.

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(3) Angles which are less than a right angle marked with letter 'L'.

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5. Draw anything of your choice around the angle shown. Also write what kind of angle it is. The first one is done.



Less than a right angle

Ans.



A right angle



A right angle



More than a right angle



Less than a right angle



Less than a right angle

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6.





These are two slide in a park.

- 1. Which slide has a larger angle?
- 2. Which slide do you think is safer for the little boy? Why?

Ans. (1) The slide on the left side has a larger angle.  
(2) The slide on the right side is safer for the little boy because of its smaller angle.

7. Write what kind of angle is made by the hands at these times. Also write the time.



Ans. Let these watches be marked as (a), (b), (c), (d) and (e) as shown above. The time given in the following table.

Clock	Angles made by the hands	Time
(a)	Less than a right angle	25 minutes past 7
(b)	More than a right angle	Quarter past 8
(c)	More than a right angle	10 minutes past 9
(d)	More than a right angle	25 minutes past 9
(e)	Less than a right angle	10'o clock

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**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-3**  
**HOW MANY SQUARES**

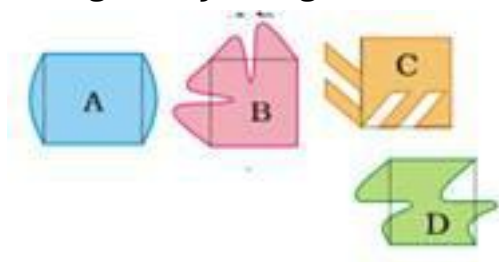
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1. Ziri tried to make some other tiles. She started with a square of 2 cm side and made shapes like these. Look at these carefully and find out:

Q. Which of these shapes will tile a floor (without any gaps)? Discuss. What is the area of these shapes?

Q. Make designs in your copy by tiling those shapes.

Q. Now you create your own new tiles out of a square. Can you do the same with a triangle? Try doing it.

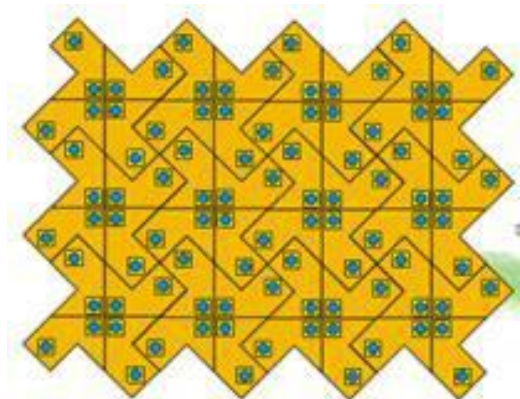


**Ans.** The shapes C and D will tile a floor (without any gaps)

The area of each of these shapes (i.e. tiles) is

$2 \times 2$  square cm = 4 square cm.

2. Make a pattern using your tile. Trace the shape to repeat it on a page, but remember there must be no gaps between them. Ziri made a pattern using her yellow tiles. (You know the area of her tile.)



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**Answer these:**

**Q. How many tiles has she used?**

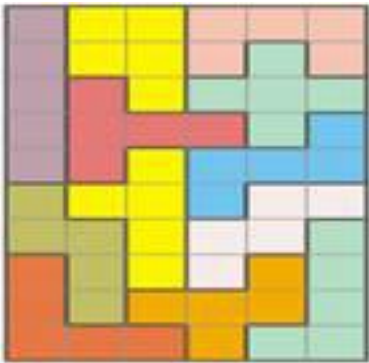
**Q. What is the area of the floor pattern Ziri has made here?**

**Ans.** She has used 12 tiles.

The area of the floor pattern Ziri has made here is  $(12 \times 3)$  square cm = 36 square cm.

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**3. Did you get all the 12 shapes using 5 squares?**



**Draw all the 12 shapes on a sheet of cardboard and cut them.**

**Ans.** Yes, I get all the 12 shapes using 5 squares as shown above.

All the 12 shapes may be drawn on a sheet of cardboard and also cut them as desired.

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**4. Ziri went to a shop and was surprised to see the different designs of tiles on the floor. Aren't these beautiful! Can you find the tile which is repeated to make each of these floor patterns? Circle a tile in each pattern.**

**Ans.** A tile in each pattern is shown as encircle.

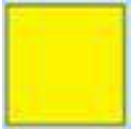


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**5. After looking at the patterns Ziri wanted to make her own yellow tile. You too make a tile this way.**

**Step 1: Take a piece of cardboard or thick paper. Draw a square of side 3 cm on it.**

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**Step 2: Draw a triangle on any one of the sides of this square.**



**Step 3: Draw another triangle of the same size on another side of the square. But this time draw it inside the square.**



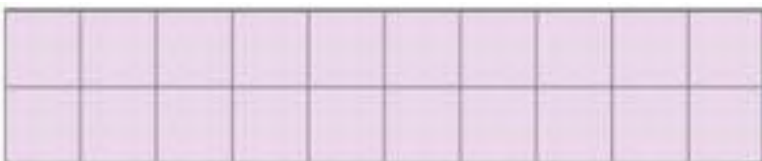
**Step 4: Cut this shape from the cardboard. Your tile is ready! What is its area?**



**Ans.** Its area is  $3 \times 3$  square cm i.e. 9 square cm.

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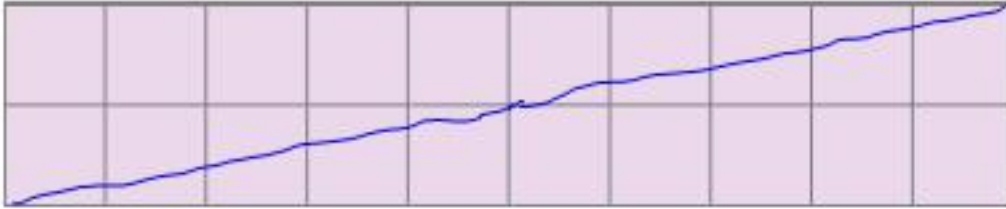
**6. Here is a rectangle of area 20 square cm.**



- a) Draw one straight line in this rectangle to divide it into two equal triangles. What is the area of each of the triangles?
- b) Draw one straight line in this rectangle to divide it into two equal rectangles. What is the area of each of the smaller rectangles?
- c) Draw two straight lines in this rectangle to divide it into one rectangle and two equal triangles.
- d) What is the area of the rectangle?

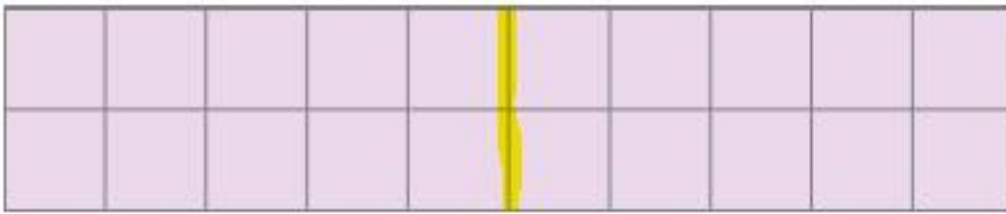
**e) What is the area of each of the triangles?**

**Ans. (a)** One straight line is drawn in the given rectangle to divide it in two equal triangle as: shown below.



Area of each of the triangles is half of the given rectangle. Area of this rectangle is 20 square cm. So, the area of each of the triangles is 10 squares cm.

**(b)** One straight line is drawn in the given rectangle to divide it into two equal rectangles as shown below:



Area of each of the smaller rectangles is half of the given rectangle. Area of the given rectangle is 20 square cm. So, the area of each of two rectangles is 10 square cm.

**(c)** Two straight lines are drawn in the given rectangle to divide it into one rectangle and two equal triangles as shown below:



**(d)** Area of the new rectangle is half of the given rectangle. Area of the given rectangle is 20 square cm. So, the area of the smaller rectangle is 10 square cm.

**(e)** Area of the each of the triangles is half of the rectangle of area 10 square cm. So, the area of each of the triangles is 5 square cm.

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**CBSE Class 5 Mathematics**  
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**CHAPTER-4**  
**PARTS AND WHOLE**

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**1. A) Chocolate bar**

Manju had a chocolate. She gave one-fourth of it to Raji, one-third to Sugatha and one-sixth to Sheela. She ate the remaining part.

How many pieces of chocolate did each get? Write here.



**What part of the chocolate did Manju eat?**

**Ans.** Total number of pieces=12

$$\text{Raji's share} = \frac{1}{4} \text{ of } 12 = \frac{1}{4} \times 12 = 3$$

$$\text{Sugatha's share} = \frac{1}{3} \text{ of } 12 = \frac{1}{3} \times 12 = 4$$

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$$\text{Sheela's share} = \frac{1}{6} \text{ of } 12 = \frac{1}{6} \times 12 = 2$$

$$\text{And, Manju's share} = 12 - 3 - 4 - 2$$

$$= 12 - 9 = 3 = \frac{12}{4}$$

So, Manju ate one-fourth of the chocolate.

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## 2. Colour the hats

colour one third of the hats red. Colour three-fifth hats blue. How many hats did you colour red? How many hats did you colour blue? What part of the hats are not coloured?



**Ans.** Total number of hats=15

$$\frac{1}{3} \text{ of the hats} = \frac{1}{3} \text{ of } 15 = \frac{1}{3} \times 15 = 5$$

$$\frac{3}{5} \text{ of the hats} = \frac{3}{5} \text{ of } 15 = \frac{3}{5} \times 15 = 9$$

Five hats were coloured red.



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Nine hats were coloured blue.

Number of hats left uncoloured =  $15 - 5 - 9 = 1$

Thus,  $\frac{1}{15}$  of the hats are not coloured.

---

### 3. Equal part of a triangle

**(a) The white triangle is divided into three equal parts. Fill each one-third part with a different colour.**



**Can you show that these parts are equal? Think how?**

**Ans. (a)** Since, one triangle is divided into three equal parts, therefore, each part is one-third  $\left(\frac{1}{3}\right)$  of the whole triangle. Let us  $\frac{1}{3}$  in each part and colour them in different colour as shown in the above figure.

In order to show that these parts are equal. Let us name them, as  $T_1, T_2$  and  $T_3$ . Trace any of them, say  $T_1$ . Now place traced part over  $T_2$  and  $T_3$ . We find that  $T_1$  cover  $T_2$  and  $T_3$  are of the same shape and size. Hence, these triangles are equal.



**(b) Now try to make three parts of the triangle in a different way. Colour each one-third**



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with a different colour.



**Ans. (b)** The given triangle is divided into three equal parts of showing the adjoining figure. Its each one-third part is coloured differently.



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**4. How will you check that each part is really one-sixth of that rectangle?**

**Ans.** Trace a rectangle equal to any one of the six parts of one of the figure. Put the trace out rectangle on the remaining parts one by one. It overlaps completely. This shown that each all part is one sixth of the given rectangle. In the same, we can find out in case of the other figure.

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**5. The green rectangle is bigger than the blue one.**

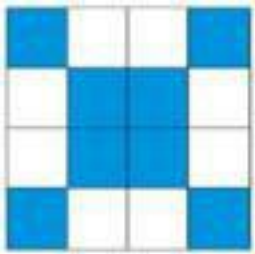
Can we say that  $\frac{1}{6}$  of the green rectangle is bigger than  $\frac{1}{6}$  of the blue rectangle.

**Ans.** Yes, we can say that  $\frac{1}{6}$  of the green rectangle is bigger than  $\frac{1}{6}$  of the blue rectangle.

## 6. Patterns in Parts

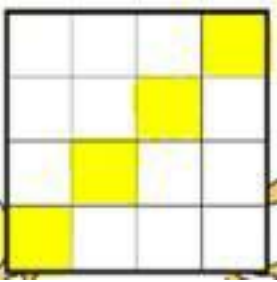
Make different patterns by colouring some squares in the grids A, B, C, D. What part of the grid did you colour? What part of the grid remained white? Write.

(A)



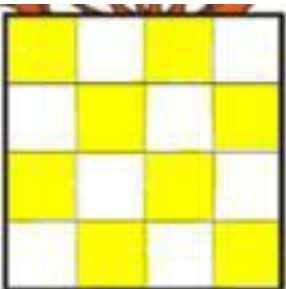
Ans.(a)  $\frac{8}{16}$  blue,  $\frac{8}{16}$  white.

(B)



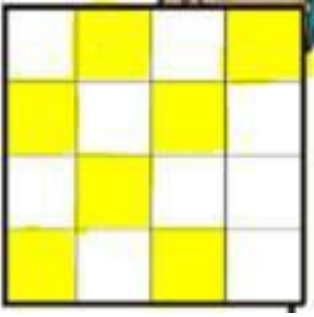
Ans. (b)  $\frac{4}{16}$  is black,  $\frac{12}{16}$  white.

(C)



Ans.(c)  $\frac{8}{16}$  black,  $\frac{8}{16}$  white

(D)



**Ans. (d)**  $\frac{7}{16}$  black,  $\frac{9}{16}$  white.

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**7. Look at grid A again. Is the grid coloured:**

(a)  $\frac{1}{2}$  blue,  $\frac{1}{2}$  white?

(b)  $\frac{2}{4}$  blue,  $\frac{2}{4}$  white?

(c)  $\frac{3}{8}$  blue,  $\frac{5}{8}$  white?

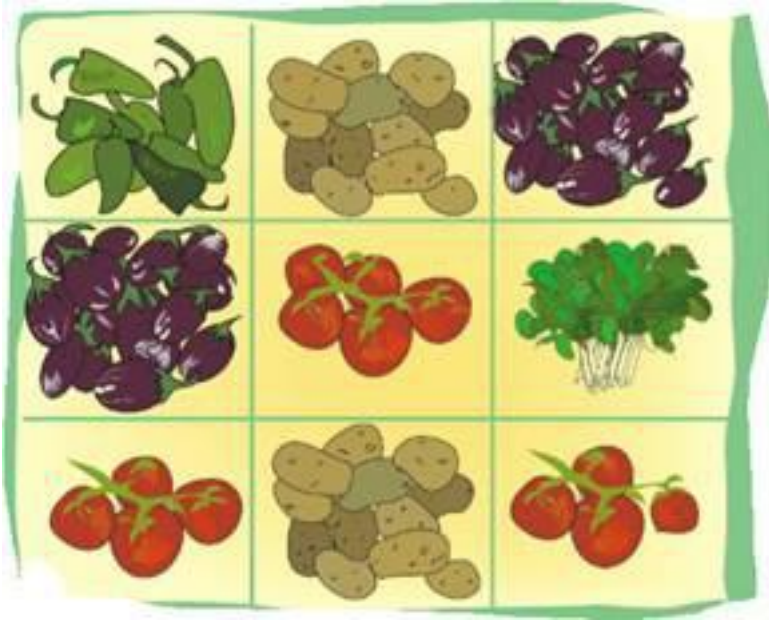
(d)  $\frac{4}{8}$  blue,  $\frac{4}{8}$  white?

**Mark (X) on the wrong answer.**

**Ans.** (c) is the wrong answer.

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**8. Ramu's Vegetable Field** Ramu's vegetable field has 9 equal parts. What vegetables does he grow?



(1) Which vegetable grows in the biggest part of the field? What part?

(2) On what part of the field does he grow potatoes?

(3) What parts of the field is used to grow spinach? What part is used for brinjals?

**Ans.** Ramu grows chillies, potatoes, brinjals, tomatoes and spinach.

(1) Tomatoes grows in the biggest part of his field. It grows in one-third part of the field.

(2) He grows potatoes on  $\frac{2}{9}$  part of the field.

(3)  $\frac{1}{9}$  part of field is used to grow spinach.  $\frac{2}{9}$  part of the field is used for brinjals.

9. Ramu wanted to give these vegetables to his friends. He gave Aboobacker one-fifth of these tomatoes and  $\frac{1}{3}$  of the potatoes. Srija got  $\frac{2}{5}$  of the tomatoes and  $\frac{3}{6}$  of the potatoes. Nancy got the rest of these vegetables. Circle Aboobacker's share in blue. Circle Srija's share in yellow.

**Q.** How many potatoes and tomatoes did Nanacy get?

**Ans.** A boobacker's share is encircled in blue colour (double line) and that the Srija in yellow

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(single line) as

Nancy got 3 potatoes and 8 tomatoes.

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### 10. Game: Who colours the Circle Fast?

This game is to be played in groups of 4. Each player has to make a circle as shown. Each one has to make 15 tokens on slips on paper.

Write  $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{6}, \frac{1}{12}, \frac{2}{12}, \frac{3}{12}, \frac{4}{12}, \dots, \frac{11}{12}$  to make your tokens.

Shuffle, the tokens and make a pile in the middle of the group. Now you are ready to start the game.

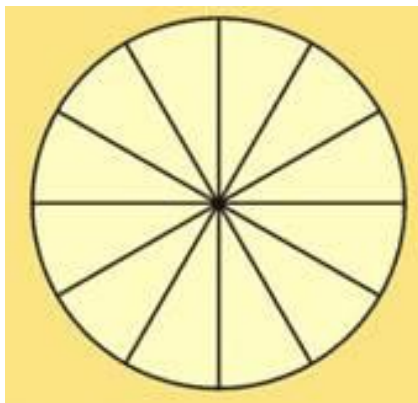
The first player takes a token from the pile, colours that part of the picture, and puts the token under the pile. The next player does the same, and so on. The winner is the one who first colours the circle completely.

Who won the game?

What are the winner's tokens?

Write the tokens you got.

What part of the circle did you colour?



**Ans.** Each of the 4 players should make a circle as shown. Each one of them should make 15 tokens on slips of paper and write  $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{6}, \frac{1}{12}, \frac{2}{12}, \frac{3}{12}, \frac{4}{12}, \dots, \frac{11}{12}$  to make the above and tokens. Let us play the game as directed.

I won the game.

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The winner's tokens are  $\frac{1}{2}$  and  $\frac{6}{12}$  .

I got tokens bearing numbers  $\frac{1}{2}$  and  $\frac{6}{12}$  .

I coloured the circle completely.

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### 11. Cutting the halwa

**Ramesh bought a piece of halwa for his children Ammu and Anu. He divided it equally for them.**

**(a) Each will get  $\frac{1}{2}$  part of halwa.**

**Ans.** This piece is too big. We can't eat it. They said. So, he divided the piece into half again. Now, many pieces will Ammu get? 2 pieces.

**(b) What part of the halwa is it?  $\frac{2}{4}$**

**Ans.** Make it even smaller Dad.... they asked. So, he again cut the halwa into smaller pieces. Ok, thank you, Dad.

**(c) Now how many pieces will each get?**

**Ans.** Now each of them will get 4 pieces.

**(d) What part of the halwa is each piece now?**

**Ans.** Each piece now is  $\frac{1}{8}$  of the halwa.

**(e) If Ramesh had cut the halwa into 6 equal parts how many pieces would each have got? Look at your answers for questions 1 to 4 and write:**

$\frac{1}{2} = \dots = \dots = \dots = \dots = \dots$

---

**Ans.** If Ramesh had cut the halwa into 6 equal parts, then each would get 3 pieces.

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$$

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## 12. Rupees and Paise

**(a)** How many  will make one rupee?

**Ans.** Two 50-paise will make one rupee.

**(b)** Is 50 paise half of one rupee?

**Ans.** Yes, 50 paise is half of one rupee.

**(c)** How many  will make one rupee?

**Ans.** Four 25-paise will make one rupee.

25 paise is  $\frac{1}{4}$  part of one rupee.

20 paise is  $\frac{1}{5}$  part of one rupee.

**(d)** How many 10-paise will make one rupee?

**Ans.** Ten 10-paise will make one rupee.

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## 13. School Magazine

A School has decided to bring out a magazine every quarter of the year. How many magazines will they have in a year? If they want to print it at the end of each quarter of a year, which are the months for printing? Mark the number for those months.



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**Ans.** Every quarter of the year means every  $\frac{1}{4}$  of the year. It is exhibited on the strip as under:



They will have four magazines in a year.

In order to print the magazine at the end of each quarter of the year, they should print it in the months of March, June, September and December. These months are encircled on the strip.

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#### 14. Sleeping Beauty!

**Have you heard of Kumbhakarna, the brother of Ravana? He is famous for sleeping for half a year.**

**Most people sleep about 8 hours a day. Then what part of a day is it?**

**So what part of a year do they sleep? A person 60 years old must have slept ....years.**

**Ans.** Yes, I have heard of Kumbhakarna, the brother of Ravana.

Most of the people sleeps for one-third of a day.

Because one-third of 60 years

$$= \left( \frac{1}{3} \times 60 \right) \text{ years} = 20 \text{ years.}$$

Therefore, a person of 60 years old must have slept 20 years.

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#### 15. Keerti's Shopping List

**Look at the yellow price list.**

**(a) How much does 2kg of tomato cost?**

**(b) How much does  $\frac{1}{2}$  kg of tomato cost?**



(c) Kiran wants  $2\frac{1}{2}$  kg of tomato. How much will it cost?

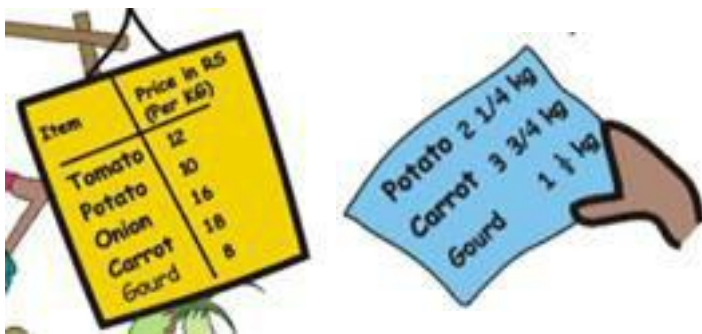
(d) How much does  $3\frac{1}{2}$  kg of potato cost?

(e) What is the price of  $1\frac{1}{4}$  kg of carrot?

(f) He bought a gourd of weight  $4\frac{3}{4}$  kg and it costs.....

(g) Look at the shopping list in Keerti's hand. How much will she have to pay to buy all the these?

(h) Make a bill of your own for vegetables you want to buy. Find the total money you will have to pay.



Ans.(a) 2kg of tomato costs = Rs.  $12 \times 2$  = Rs. 24

(b)  $\frac{1}{2}$  kg of tomato costs = Rs.  $12 \times \frac{1}{2}$  =Rs. 6

(c) Cost of  $2\frac{1}{2}$  kg of tomato

= Cost of 2kg of tomatoes +Cost of  $\frac{1}{2}$  kg of tomato

= Rs.  $12 \times 2$  +Rs.  $12 \times \frac{1}{2}$  =Rs. 24 +Rs.6 = Rs. 30

(d) Cost of  $3\frac{1}{2}$  kg of potato

$$= \text{Cost of 3 kg of potato} + \text{Cost of } \frac{1}{2} \text{ kg of potato}$$

$$= 10 \times 3 + \text{Rs. } 10 \times \frac{1}{2} = \text{Rs. } 30 + \text{Rs. } 5 = \text{Rs. } 35$$

**(e)** Cost of  $1\frac{1}{4}$  kg of carrot

$$= \text{Cost of 1kg of carrot} + \text{Cost of } \frac{1}{4} \text{ kg of carrot}$$

$$= \text{Rs. } 18 + \text{Rs. } 18 \times \frac{1}{4} = \text{Rs. } 18 + \text{Rs. } 4.50 = \text{Rs. } 22.50$$

**(f)** Cost of  $4\frac{3}{4}$  kg of gourd

$$= \text{Cost of 4 kg of gourd} + \text{Cost of } \frac{3}{4} \text{ of gourd kg}$$

$$= \text{Rs. } 8 \times 4 + \text{Rs. } 8 \times \frac{3}{4}$$

$$= \text{Rs. } 32 + \text{Rs. } 6 = \text{Rs. } 38$$

**(g) Keerti's shopping**

Item	Price in Rs. (per kg)	Amount (Rs.)
Potato $\left(2\frac{1}{4}\right)$ kg	10	$10 \times 2 + 10 \times \frac{1}{4}$ $= 20 + 2.50$ $= 22.50$
Carrot $\left(3\frac{3}{4}\right)$ kg	18	$18 \times 3 + 18 \times \frac{3}{4}$ $= 54 + 13.5$

		=67.5
Gourd $\left(1\frac{1}{2}\right)$ kg	8	$8 \times 1 + 8 \times \frac{1}{2}$ $= 8 + 4$ $= 12$
	<b>Total</b>	<b>Rs. 102</b>

### (h) Own Shopping

Item	Price in Rs. (per kg)	Amount (Rs.)
Tomato (2 kg)	12	$12 \times 2 = 24$
Potato $\left(1\frac{1}{2}\right)$ kg	10	$10 \times 1 + 10 \times \frac{1}{2} = 15$
Onion (1 kg)	16	$16 \times 1 = 16$
Carrot $\left(\frac{1}{2} \text{ kg}\right)$	18	$18 \times \frac{1}{2} = 9$
	<b>Total</b>	<b>Rs. 64</b>

### 16. Raheem's Journey

(a) Raheem has to travel  $1\frac{1}{4}$  km to reach school. What distance does he travel to go to school and come back home?

**Ans.** The distance travelled by Raheem to go to school and come back

$$= 1\frac{1}{4} \text{ km} \times 2 = \frac{5}{4} \text{ km} \times 2 = \frac{5}{2} \text{ km} = 2\frac{1}{2} \text{ km}$$

(b) Lata bought a pencil and a pen for seven and a half rupees. She gave Rs. 10. The

---

**shopkeeper gave back the money in half and quarter rupees. What are the coin she get?**

**Ans.** She might have got either of

- (1) One 50-paise coin and eight 25-paise coins.
  - (2) Two 50-paise coins and six 25-paise coins.
  - (3) Three 50-paise coins and four 25-paise coins.
  - (4) Four 50-paise coins and two 25-paise coins.
- 

### **17. At the railway station**

**Your attention please. Mangalore Express coming from Mangalore and going to Thiruvananthapuram is now running late by half an hour.**

**Oh the train is late today. The right time is a quarter to 7.**

**(a) What time is the train expected to come today?**

**Ans.** The expected time of the train to come today is quarter past 7.

**(b) Nazia gets off at a station after  $2\frac{1}{2}$  hours from this station. What time will she get off?**

**Ans.** Nazia will get off at quarter to 10.

**(c) Shaji will take 5 hours to reach Ernakulam by this train. At what time will he reach there?**

**Ans.** Shaji will reach Ernakulam by this train at a quarter past 12.

---

**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-5**  
**DOES IT LOOK THE SAME**

---

**1. Find out which letters in the English alphabet looks the same after a turn.**

**Ans.** The letters in English alphabet which look the same after a turn are H, I, N, O, S, X and Z.

---

**2. Which of these English words reads the same on half a turn?**

**ZOOM, MOW, SWIMS, SIS, NOON**

**Ans.** The English words MOW, SWIMS, SIS AND NOON read the same on half a turn.

---

**3. Give half a turn to the numbers from 0 to 9. Find which of them stills look the same.**

**Ans.** The numbers 0, 1 and 8 look the same after giving a turn to them.

---

**4. Think of all 2, 3 and 4 digit numbers which look the same on half a turn.**

**Ans.** All 2, 3 and 4 digit numbers which look the same on half a turn are:

2-digit numbers: 11, 88

3-digit numbers: 101, 111, 181, 808, 818, 888

4-digit numbers: 1001, 1111, 1881, 8008, 8118, 8888

---

**5. Which among the following pictures will look the same on half a turn?**

**Ans.** The following pictures will look the same on half a turn.



**6. Have you ever seen a windmill? What is it used for?**

**Ans.** Yes, I have seen a windmill. It is a mill turned by the wind. In it the wind turns a set of vanes mounted on a horizontal shaft, the rotation of which transmitted by gearing to working machinery. It is used for grinding corn, pumping water, street light and powering light industry.

---

**7. Does you windmill look the same on  $\frac{1}{4}$  of a turn?**

**Ans.** Yes, the windmill look the same on  $\frac{1}{4}$  of a turn.

---

**8. Does it look the same on half a turn? Discuss.**

**Ans.** Since  $\frac{1}{4}$  of a turn +  $\frac{1}{4}$  of a turn means half of a turn. So it looks the same on half a turn also.

---

**9. Does the fan look the same on  $\frac{1}{4}$  turn?**

**Ans.** Yes, the fan looks the same on  $\frac{1}{4}$  turn.






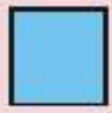
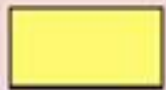

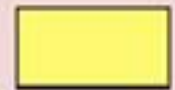



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**10. Draw what the following shapes would look like on  $\frac{1}{4}$  turn and half a turn.**



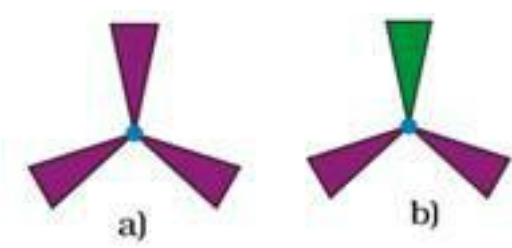
Which of the above shapes do not look the same on  $\frac{1}{4}$  turn? Which shapes do not look the same on  $\frac{1}{2}$  a turn?

Ans.

		On $\frac{1}{4}$ <sup>th</sup> turn	On half turn
(a)			
(b)			
(c)			
(d)			

Shapes (a), (c) and (d) do not look the same on  $\frac{1}{4}$  turn. Shape (a) does not look the same on  $\frac{1}{2}$  a turn.

11. Which fan will look the same on a  $\frac{1}{3}$  turn?



Ans. Fan (a) will look the same on a  $\frac{1}{3}$  turn.

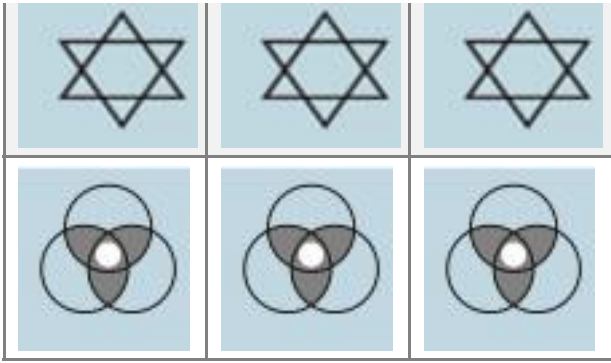
12. Look at the following shapes. Draw how they will look on  $\frac{1}{3}$  and  $\frac{1}{6}$  turn.

	$\frac{1}{3}$ turn	$\frac{1}{6}$ turn

Ans. The required shapes are drawn as under:

	1/3 turn	1/6 turn





13. Look at the following shapes —

- a) Find out which of these figures look the same on  $\frac{1}{3}$  turn. Mark them with (✓).
- b) Which are the ones that will not look the same after  $\frac{1}{3}$  turn? Mark them with (✗).
- c) Try and change the shapes below in such a way that they look the same on  $\frac{1}{3}$  turn.

Ans. (a) Row 2<sup>nd</sup>: 1st → (✓), 2nd → (✓), 3rd → (✓)

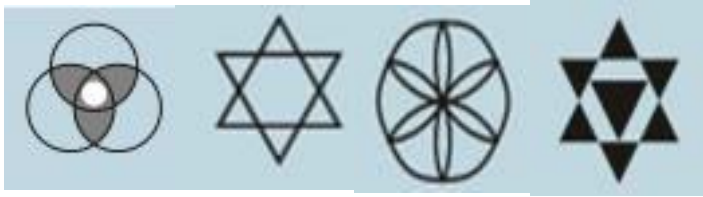
(b) Row 1<sup>st</sup>: 1st → (✗), 2nd → (✗), 3rd → (✗).

(c) Given shapes are changed as under so that they may look the same on  $\frac{1}{3}$  turn.



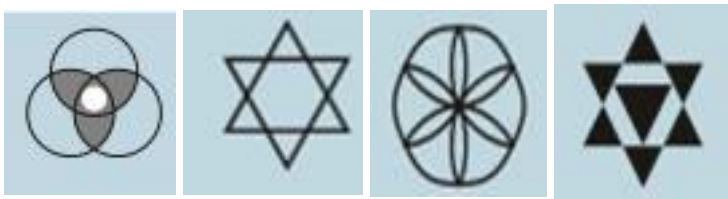
14. Draw some shapes which will look the same after  $\frac{1}{3}$  turn.

Ans. The following shapes will look the same after  $\frac{1}{3}$  turn.



15. Draw some shapes which will look the same after  $\frac{1}{6}$  turn.

**Ans.** The following shapes will look the same after  $\frac{1}{6}$  turn.



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**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-6**  
**BE MY MULTIPLE, I'LL BE YOUR FACTOR**

---

**1. The hungry cat is trying to catch Kunjan the mouse. Kunjan is now on the 14th step and it can jump 2 steps at a time. The cat is on the third step. She can jump 3 steps at a time. If the mouse reaches 28 it can hide in the hole. Find out whether the mouse can get away safely!**

- (a) The steps on which the mouse jumps.**
- (b) The steps on which the cat jumps.**
- (c) The steps on which both the cat and the mouse jump.**
- (d) Can the mouse get away?**

**Ans. (a)** The steps on which the mouse jumps are 16, 18, 20, 22, 24, 26 and 28.

**(b)** The steps on which the cat jumps are 3, 6, 9, 12, 15, 18, 21, 24, 27.

**(c)** The steps on which both the cat and the mouse jump are 18 and 24.

**(d)** The mouse can get away safely as they do not come together at the steps 18 and 24.

---

**2. If the cat starts from the 5th step and jumps five steps at a time and the mouse starts from the 8th step and jumps four steps at a time, can the mouse get away?**

**Ans.** In this case:

**(a)** The steps on which the mouse jumps are 8, 12, 16, 20, 24 and 28

**(b)** The steps on which the cat jumps are 5, 10, 15, 20 and 25.

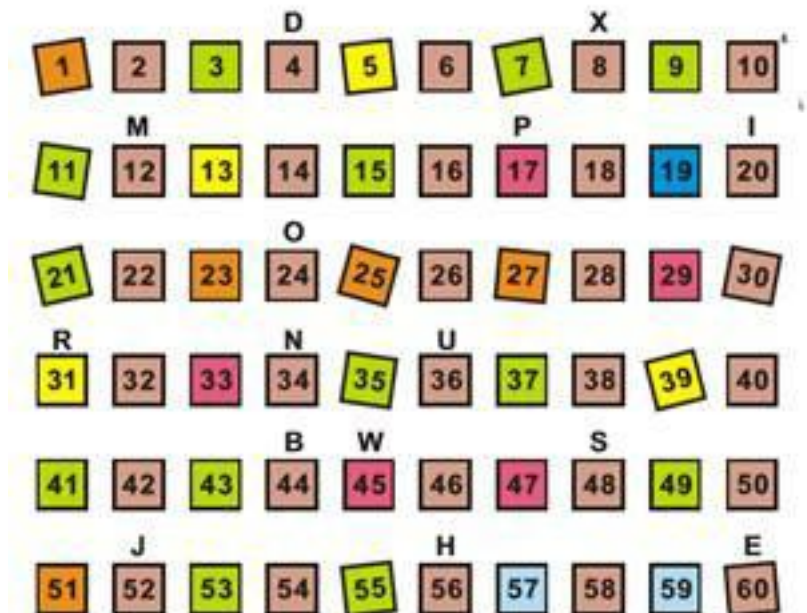
**(c)** The step on which both of the cat and mouse jump is 20.

**(d)** Since their 4th jump is on step 20 together so the mouse will not get away safely.

---

### 3. Who is Monto waiting for?

Monto cat is waiting for somebody. Do you know for whom he is waiting? There is a trick to find out.



Mark with a red dot all the numbers which can be divided by 2. Mark a yellow dot on the numbers which can be divided by 3 and a blue dot on the numbers which can be divided by 4. Which are the boxes which have dots of all three colours? What are the letters on top of those boxes? Write those letters below in order.

**Ans.** Let us mark the coloured dots are desired on the above number:

Red dot will appear on the numbers: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58 and 60.

Yellow dot will appear on the numbers: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57 and 60.

Blue dot will appear on the numbers: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56 and 60.

All the three coloured dots will appear on the boxes: 12, 24, 36, 48 and 60.

The respective letters on the top of these boxes are: M, O, U, S and E.

---

Writing these letters in order: **MOUSE**.

---

**4. To play this game, everyone stands in a circle. One player calls out 'one'. The next player says 'two' and so on. A player who has to call out 3 or a number which can be divided by 3 has to say 'Meow' instead of the number. One who forgets to say 'Meow' is out of the game. The last player left is the winner.**

**(a) Which numbers did you replace with 'Meow'?**

**Ans.** The number which will be replaced with 'Meow' are:

3, 6, 9, 12, 15, 18, 21, 24, 27, 30...

**(b) Now, which numbers did you replace with 'Meow'?**

**Ans.** The numbers which will be replaced with 'Meow' are:

4, 8, 12, 16, 20, 24, 28, 32...

**(c) Write any ten multiple of 5.**

**Ans.** Ten multiple of 5 are: 5, 10, 15, 20, 25, 30, 35, 40, 45 and 50.

---

## **5. Tamarind seeds**

**Sunita took some tamarind (imli) seeds. She made groups of five with them, and found that one seed was left over. She tried making groups of six and groups of four. Each time one seed was left over. What is the smallest number of seeds that Sunita had?**

**Ans.** We know that the smallest number divisible by 5, 6 and 4 is their smallest common multiple. Therefore, the required number be 1 more than this smaller common multiple.

The smallest common multiple of 5, 6 and 4 = 60

Therefore, the required number =  $60 + 1 = 61$

Hence, the smallest number of seeds Sunita had 61.

---

---

6. There are 18 bangles on the rod. Meena trying to group them. She can put them in groups of 2, 3,6, 9 and 18 – without any bangle being left.

(a) How many bangles will she have if she makes groups of 1 bangle each?

Now, complete the table, for different numbers of bangles. For each number see what different groups can be made.

Ans. Meena will have 18 groups of 1 bangle each. The complete table is on the given here:

Number of bangles	Different groups we can make
18	1,2,3, 6, 9, 18
24	1, 2, 3, 4, 6, 8, 12, 24
5	1,5
9	1,3,6, 9
7	1,7
2	1,2
10	1,2,5,10
1	1,1
20	1,2,4,5,10,20
13	1,13
21	1,3,7,21

---

7. Complete the multiplication chart given here:

	1	2	3	4	5	6	7	8	9	10	11	12
1												12
2						12						
3				12			21					
4			12							40		
5				20								
6		12										
7												
8								72				
9												
10												
11						66						
12	12											

Ans.

	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

---

**8. Look at the green boxes in the chart. These show how we can get 12 by multiplying different numbers.  $12 = 4 \times 3$ , so 12 is a multiple of both 4 and 3. 12 is also a multiple of 6 and 2, as well as 12 and 1. We say 1, 2, 3, 4, 6, 12 are factors of 12.**

**(a) What are the factors of 10?**

**Can you do this from the chart?**

**(b) What are the factors of 36?**

**(c) Find out all the factors of 36 from the multiplication chart.**

**(d) What is the biggest number for which you can find the factors from this chart?**

**(e) What can you do for number bigger than chart?**

**Ans.(a)** The factors of 10 are 1, 2, 5, 10.

Yes, we can find these factors from the above chart.

**(b)** The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, 36.

**(c)** From the multiplication chart, we find that

$36 = 3 \times 12$ ,  $36 = 4 \times 9$ ,  $36 = 6 \times 6$ ,  $36 = 9 \times 4$

$\therefore$  3, 4, 6, 9, 12 are factors of 36 as found from the above chart.

**(d)** The biggest number for which we can find the factors from this chart is 144.

**(e)** We can find the factors of bigger number just by reducing to smaller numbers by division and then using and then using the above chart.

---

**9. There is a garden in Anu's house. In the middle of the garden there is a path. They decided to tile the path using tiles of length 2 feet, 3 feet and 5 feet. The mason tiled the first row with 2 feet tiles, the second row with 3 feet tiles and the third row with 5 feet tiles. The mason has not cut any of the tiles. Then what is the shortest length of the path?**



---

**Ans.** The shortest length of the path is the smallest common multiple of 2,3 and 5.

The shortest length of the path=30 feet.

---

**10. Manoj has made a new house. He wants to lay tiles on the floor. The size of the room is 9 feet  $\times$  12 feet. In the market, there are three kinds of square tiles: 1 foot  $\times$  1 foot, 2 feet  $\times$  2 feet and 3 feet  $\times$  3 feet. Which size of tile should he buy for his room, so that he can lay it without cutting?**

**Ans.** Since, the tile of size 2 feet $\times$  2 feet cannot be laid down on the width side of the room's without cutting so this type of the tile should not be purchased. He can buy tiles of size 1 foot  $\times$  1 foot or 3 feet  $\times$  3 feet as these can be laid down without cutting on the floor.

---

**11. Rani, Geetha and Naseema live near each other. The distance from their houses to the road is 90 feet. They decided to tile the path to the road. They all bought tiles of different designs and length. Rani bought the shortest tile, Geeta bought the middle sized one and Naseema bought the longest one. If they could tile the path without cutting any of the tiles, what is the size of the tiles each has bought? Suggest 3 different solutions. Explain how you get this answer.**

**Ans.** Let us write down the factors of 90

$$90=1 \times 90, 90=2 \times 45, 90=3 \times 30$$

$$90=5 \times 18, 90=6 \times 15, 90=9 \times 10$$

Since, we have to lay down the tiles on the path of 90 feet without cutting so any of the size indicated by the factors will do.

Therefore, the possible solution to tile the path using tiles of length.

1 foot, 2 feet, 3 feet; 2 feet, 3 feet, 5 feet; 3 feet, 5 feet, 6 feet etc.

**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-7**  
**CAN YOU SEE THE PATTERN**

**1. What should come next?**

**(a)**



**(b)**



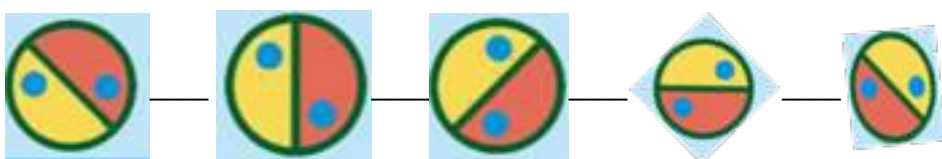
**(c)**



**(d)**



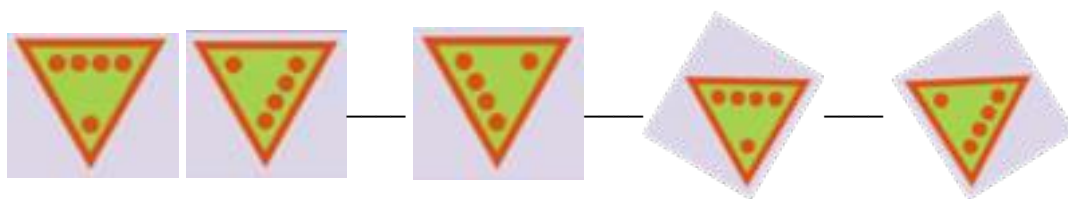
**Ans. (a)**



(b)



(c)



(d)



2. See this pattern

(a)



The rule of the pattern is — turning by  $45^\circ$  each time. Which will be the next? Tick the (✓) right one.



Ans.



### 3. Magic Squares

**Do you remember magic triangles? Come now, let's make some magic squares.**

**Q. Fill this square using all the numbers from 46 to 54.**

**Ans.** In this magic square, the sum of each of the row of numbers (across down and diagonally) is always the same. We have to complete the magic squares, remembering that the numbers in each line are equal to 150.

Clearly:

In 3 rd row: The required number=  $150 - 52 - 47 = 150 - 99 = 51$

In 3 rd column: The required number =  $150 - 49 - 47 = 150 - 96 = 54$

In 2 nd row: The required number =  $150 - 46 - 54 = 150 - 100 = 50$

In 2 nd column: The required number=  $150 - 50 - 52 = 150 - 102 = 48$

In 1 st row: The required number=  $150 - 18 - 49 = 150 - 97 = 53$

Therefore, the complete magic square is

53	48	49
46	50	54
51	52	47

**Q. Fill this square suing all the numbers from 21 to 29.**

**Rule: The total of each side is 75.**

---

**Ans.** Let us fix 26 on the top most left hand side box.

Taking the diagonal of the square, we have

$$26+25=51 \text{ and } 75-51=24$$

Therefore, put 24 at the end of this diagonal.

Fix 22 on the top most-right side box.

Taking the diagonal in which 22 lies, we have

$$22+25=47 \text{ and } 75-47=28$$

Therefore, put 28 at the end of this diagonal.

Clearly,

$$\text{In 1 st row: The required number} = 75 - (26 + 22) = 75 - 48 = 27$$

$$\text{In 1 st column: The required number} = 75 - (26 + 28) = 75 - 54 = 21$$

$$\text{In 2 nd row: The required number} = 75 - (21 + 25) = 75 - 46 = 29$$

$$\text{In 2 nd column: The required number} = 75 - (28 + 24) = 75 - 52 = 27$$

Therefore, the complete magic square is as shown below:

26	27	22
21	25	29
28	23	24

---

**3. Fill in the blank spaces in the same way.**

**(a)**  $14 + \dots + \dots = 34 + 24 + 20$

**(b)**  $\dots + 42 + \dots = 65 + \dots + 80$

---

(c)  $200 + 300 + \dots = \dots + 400 + \dots$

(d)  $\dots + \dots + \dots = \dots + \dots + \dots$

**Ans. (a)**  $14 + 20 + 34 = 34 + 14 + 20$

(b)  $80 + 42 + 65 = 65 + 42 + 80$

(c)  $200 + 300 + 400 = 300 + 400 + 200$

(d)  $34 + 29 + 47 = 47 + 34 + 29$

---

**4. Now you try and change these numbers into special numbers:**

(a) 28

(b) 132

(c) 273

**Ans. (a)**

Given number	28
Then turn it back to front	82
Then add them two together It is not a special number	
Now carry on with the number	110
Again turn it back two together	011
Then add them two together	121
121 is the required special number	

(b)

Given number	132
Then turn it back to front	231

Then add them two together	363
363 is the required special number	

**(c)**

Given number	273
Then turn it back to front	372
Then add them two together	645
It is not a special number	
Now carry on with the number	645
Again turn it back two together	546
Then add them two together	1191
It is not a special number	
Now carry on with the number	1191
Again turn it back two together	1911
Then add them two together	3102
It is not a special number	
Now carry on with the number	3102
Again turn it back two together	2013
Then add them two together	5115
5115 is the required special number	

**5. Choose any 3 × 3 box from a calendar and find the total in the same way. Play this game with your family.**

---

**Ans.** Let us mark a  $3 \times 3$  box (9 dates) on the calendar and see some magic.

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Take the smallest number: 2

Add 8 to it: +8

10

Multiply it by  $9 \times 9$

Total 90

---

**6. Take any number. Now multiply it by 2, 3, ..... at every step. Also add 3 to it at each step. Look at the difference in the answer. Is it the same at every step?**

$$12 \times 2 + 3 = 27$$

$$12 \times 3 + 3 = 39$$

$$12 \times 4 + 3 = 51$$

$$12 \times 5 + 3 = 63$$

$$12 \times \square + 3 = \square$$



---

$$\square \times 7 + 3 = \square$$

$$\square \times \square + 3 = \square$$

$$\square \times \square + \square = \square$$

**Ans.** Filling in the blank boxes, we have

$$12 \times 6 + 3 = 75$$

$$12 \times 7 + 3 = 87$$

$$12 \times 8 + 3 = 99$$

$$12 \times 9 + 3 = 111$$

---

**7. Look at the numbers below. Look for the pattern. Can you take it forward?**

$$(9 - 1) \div 8 = 1$$

$$(98 - 2) \div 8 = 12$$

$$(987 - 3) \div 8 = 123$$

$$(9876 - 4) \div 8 = \underline{\hspace{2cm}}$$

$$(98765 - 5) \div 8 = \underline{\hspace{2cm}}$$

$$(\underline{\hspace{2cm}} - \underline{\hspace{2cm}}) \div 8 = \underline{\hspace{2cm}}$$

$$(\underline{\hspace{2cm}} - \underline{\hspace{2cm}}) \div 8 = \underline{\hspace{2cm}}$$

**Ans.** Yes, the given pattern can be taken forward as under:

$$(9 - 1) \div 8 = 1$$

$$(98 - 2) \div 8 = 12$$

$$(987 - 3) \div 8 = 123$$

---

---

$$(9876 - 4) \div 8 = 1234$$

$$(98765 - 5) \div 8 = 12345$$

$$(987654 - 6) \div 8 = 123456$$

$$(9876543 - 7) \div 8 = 1234567$$

---

## 8. Smart Adding

$$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55$$

$$11 + 12 + \dots + \dots + \dots + \dots + \dots + \dots + \dots + 20 = 155$$

$$21 + \dots + \dots + \dots + \dots + \dots + \dots + \dots + 30 = \dots$$

$$31 + \dots + \dots + \dots + \dots + \dots + \dots + \dots + 40 = \dots$$

$$41 + \dots + \dots + \dots + \dots + \dots + \dots + \dots + 50 = \dots$$

$$51 + \dots + \dots + \dots + \dots + \dots + \dots + \dots + 60 = 555$$

$$61 + \dots + \dots + \dots + \dots + \dots + \dots + \dots + 70 = \dots$$

$$\text{Ans. } 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55$$

$$11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 + 19 + 20 = 155$$

$$21 + 22 + 23 + 24 + 25 + 26 + 27 + 28 + 29 + 30 = 255$$

$$31 + 32 + 33 + 34 + 35 + 36 + 37 + 38 + 39 + 40 = 355$$

$$41 + 42 + 43 + 44 + 45 + 46 + 47 + 48 + 49 + 50 = 455$$

$$51 + 52 + 53 + 54 + 55 + 56 + 57 + 58 + 59 + 60 = 555$$

$$61 + 62 + 63 + 64 + 65 + 66 + 67 + 68 + 69 + 70 = 655$$

---

**9. Take the first two odd numbers, now add the, see what you get.**

**Now, at every step, add the next odd number.**

---

---

$$1 + 3 = 4 = 2 \times 2$$

$$1 + 3 + 5 = 9 = 3 \times 3$$

$$1 + 3 + 5 + 7 = 16 = 4 \times 4$$

$$1 + 3 + 5 + 7 + 9 = \square$$

$$1 + 3 + 5 + 7 + 9 + 11 = \square = \square \times \square$$

$$1 + 3 + 5 + 7 + 9 + 11 + 13 = \square \times \square$$

**How far can you go on?**

**Ans.** Let us complete it.

$$1 + 3 + 5 + 7 + 9 = 25 = 5 \times 5$$

$$1 + 3 + 5 + 7 + 9 + 11 = 36 = 6 \times 6$$

$$1 + 3 + 5 + 7 + 9 + 11 + 13 = 49 = 7 \times 7$$

---

## 10. Secret Numbers

**Banno and Vinod were playing a guessing game by writing clues about a secret number. Each tried by writing clues about a secret number. Each tried to guess the other's secret number from the clues.**

**Can you guess their secret numbers?**

**(a) It is larger than half of 100.**

**Ans. (a)** It is larger than half of 100 means  $> 50$ .

**(b) It is more than 6 tens and less than 7 tens.**

**Ans. (b)** It is more than 6 tens and less than 7 tens it lies between 60 and 70.

**(c) The tens digit is one more than the one's digit.**

**Ans. (c)** The tens digit is one more than one's digit is  $6 - 5 = 5$ .

---

**(d) Together the digits have a sum of 11.**

**Ans. (d)** Together the digits have the sum of 11, so the number is 65.

---

**11. Write a set of clues for a secret number of your own. Then give it to a friend to guess your secret answer.**

**Ans.** A set of clues to find secret numbers are:

\_\_\_ It is larger than half of 100.

It is more than 7 tens and less than 8 tens.

The tens digit is one less than the one's digit.

Together the digits have a sum of 15.

---

**12. (a) Ask your friend-Write down his age. Add 5 to it. Multiply the sum by 2. Subtract 10 from it. Next divide it by 2. What do you get?**

**Ans.(a)** Age: 7

Add 5 to it:  $7 + 5 = 12$

Multiply the sum by 2 =  $12 \times 2 = 24$

Subtract 10 from it =  $24 - 10 = 14$

Divide it by 2 =  $14/2 = 7$

My friend got the answer as his age. So, he is surprised.

**(b) Take a number**

**Double it  $\times 2 =$**

**Multiply it by 5   $\times 5 =$**

**Divide your answer by 10 =   $\div 10 =$**

---

**Ans. (b)** Take a number as 5(say)

Double it  $5 \times 2 = 10$

Multiply by 5 =  $10 \times 5 = 50$

Divide your answer by 10 =  $50 \div 10 = 5$

Thus, we got the supposed answer.

**(c) Look at this pattern of number and take it forward.**

$$1 = 1 \times 1$$

$$121 = 11 \times 11$$

$$12321 = 111 \times 111$$

$$1234321 = ?$$

**Ans. (c)** Taking the pattern forward, we have

$$1234321 = 1111 \times 1111.$$

---

**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-8**  
**MAPPING YOUR WAY**

---

**Read the following passage and answer the questions that follow:**

**1. Match the map and the photo**

**(1) Have you seen a map of a city? Look at Map 1. Match it with the photo and find out where India Gate is. Draw it on the map.**

**(2) Some roads are shown in this part of the map. Look for them in the photo.**

**(3) Name roads that you will cross on your way from Rashtrapati Bhawan to India Gate.**

**(4) Look for the National Stadium in Map 1. Can you see it in the photo?**

**Ans. (1)** Yes, I have seen the map of the city. On matching the Map 1 with the photo we find the position of India Gate is drawn on the map as shown.



**(2)** The road shown in this part of the map are clearly visible in the photo.



**(3)** The names of the roads crossed on our way from Rashtrapati Bhawan to India Gate are Rafi Marg, Janpath and Man Singh Road.

**(4)** The National Stadium is seen in Map 1. I cannot see it in the photo.

2. The Central Hexagon If we 'zoom in' to look more closely at one part of the map, it looks like this.



Look at the shape of the yellow area. Have you seen this shape before? How many sides does it have? This place is called the Central Hexagon.

Find out from the map

(a) If you are walking on Rajpath then after India Gate on which side would Children Park be?

**Ans. (a)** While walking on Rajpath then after India Gate the Children Park falls on the right side.

(b) Which of these roads make the biggest angle between them?

(i) Man Singh Road and Shahjahan Road

(ii) Ashoka Road and Man Singh Road (the angle away from India Gate).

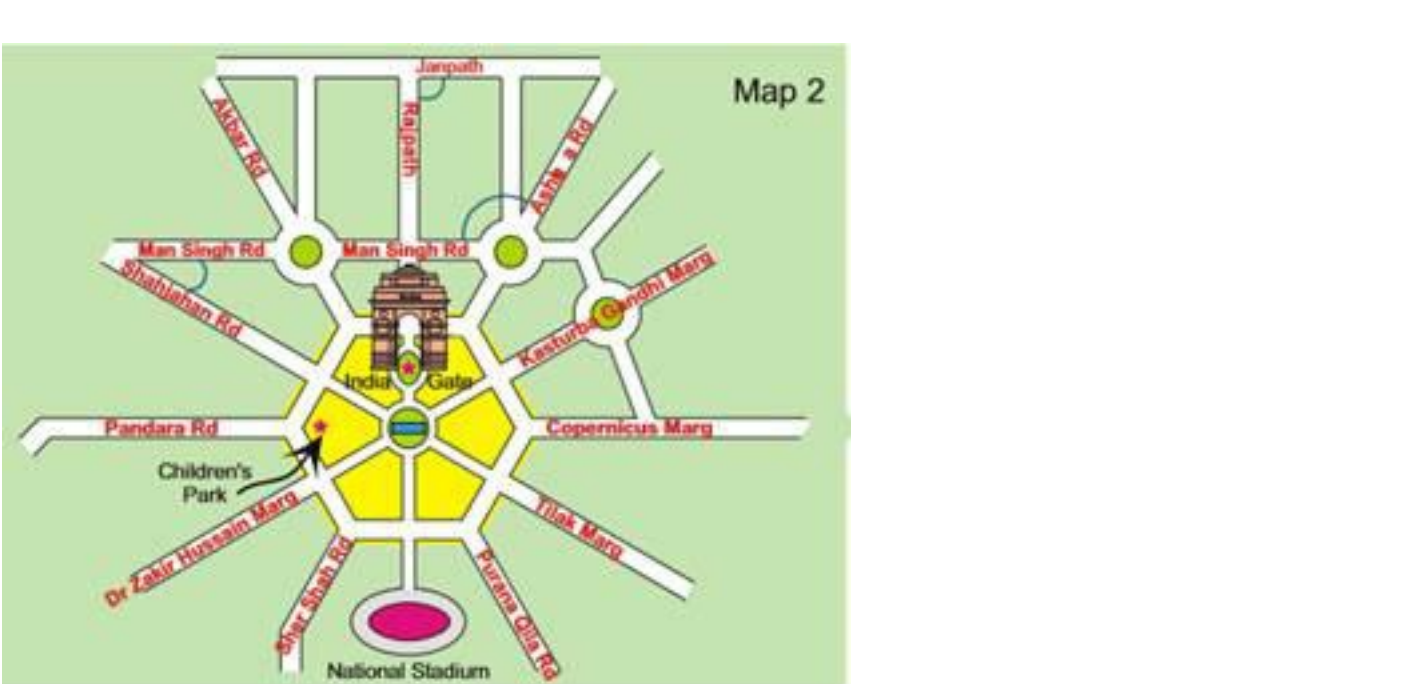
(iii) Janpath and Rajpath.

**Ans. (b)** Ashoka Road and Man Singh Road make the biggest angle between them.

(c) Which of the above pairs of roads cut at right angles?

**Ans. (c)** Janpath and Rajpath roads cut at right angle.

### 3. Mark the Route:



**(1) Trace the route of the parade in Map 3 and Un mark India Gate and Rajpath.**

**Ans. (1)** The route of the parade has been marked in Map 3. The India Gate and Rajpath has also been marked as desired in the above Map.

**(2) Look at the map carefully and find out:**

(a) Which of these is the longest road?

•B.S. Zafar Marg

•Subhash Marg

•Tilak Marg

**Ans. (a)** Tilak Marg is the longest road.

**(b) If Rubia is coming from Jama Masjid to join the parade, guess about how far she will have to walk.**

**Ans. (b)** Rubia is to walk about 1 km to join the parade.



(c) The total route of the parade is about how long?

- 3 km
- 16 km
- 25 km
- 8 km

Ans. (c) The total route of the parade is about 16 km.

4. Find out from Map 4



(a) Which of these is nearer to river Yamuna? - the Diwan-e-Azam or the Diwan-e-Khas?

Ans. (a) The Diwan-e-Khaas is nearer to river Yamuna than the Diwan-e-Azam.

(b) Between which two buildings is Aaram Gah?

Ans. (b) Between the Diwan-e-Khaas and Rang Mahal lies the Aaram Gah.

(c) Which buildings do you pass while going from Rang Mahal to the Hammam?

Ans. (c) While going from Rang Mahal to Hammam we pass Aaram Gah, the Diwan-e-Khaas and Moti Masjid.

---

**(d) Which building on this map is farthest from Meena Bazaar?**

**Ans. (d)** Hammam is farthest from Meena Bazaar.

**(e) About how far is Lahori Gate from Diwan-e-Khaas?**

**Ans. (e)** Lahori Gate is about 600 m from Diwan-e-Khaas.

---

**5. Look at the map of India below and find the states these children are talking about.**

**Answer the questions:**



**(1) The Karnataka team starts from Banglore and moves in the north direction. Which states does it cross to reach delhi?**

**Ans. (1)** To reach Delhi from Banglore (Karnataka) the team has to cross the state of Maharashtra, Madhya Pardesh and Uttar Pardesh (or Rajasthan and Haryana).

---

**(2) Jammu and Kashmir is to the north of Delhi so the team from there travels towards south to reach Delhi. Which states does it cross?**

**Ans. (2)** To reach Delhi from Jammu and Kashmir the team has to cross the states of Himachal Pardesh, Punjab and Haryana.

---

**(3) Nonu lives in Gujarat. Nonu's friend Javed lives in West Bengal. Nonu wants to visit**

---

---

**his friend. In which direction will he travel.**

**(a) Towards west**

**(b) Towards east**

**(c) Towards south**

**(d) Towards north**

**Ans. (3)** West Bengal is the east of Gujarat, so Nonu has to travel towards east to reach West Bengal to meet his friend Javed.

---

**(4) Is there any state which is to the north to Jammu and Kashmir?**

**Ans. (4)** There is no state to the north of Jammu and Kashmir.

---

**(5) Is there any state which is to the west of Gujarat?**

**Ans. (5)** There is no state to the West of Gujarat.

---

**(6) If 1cm on the map shows 200 km on the ground, use this scale to find out:**

**A. About how far is Delhi from Jaipur?**

**(a) 50 km (b) 500 km (c) 250 km**

**Ans.** Delhi is about 250 km from Jaipur.

**B. Estimate, how far is Jaipur from Bhopal?**

**On the Map= ..... cm**

**On the Ground = ..... km**

**Ans.** Estimate of Jaipur from Bhopal:

On the map = 2 cm

On the ground = 400 km

---

**(7) Look at the map and tell:**

**(a) Which state is surrounded by four other states?**

**Ans. (a)** Madhya Pradesh is surrounded by four other states.

**(b) Which state has the largest area? If its name is not in the map, find it from your teachers or parents.**

**Ans. (b)** Tamil Nadu has the largest area. Just looking at the map one can find the state having largest ground occupied on the map.

**(c) Which state is about 8 times bigger in area than Sikkim?**

•Uttar Pradesh

•Tripura

•Maharashtra

•Himachal Pradesh

**Ans. (c)** Uttarakhand is about 8 times bigger than Sikkim.

**(d) About how many times to Punjab is the area of Sikkim?**

**Ans. (d)** Rajasthan is about 7 times of Punjab.

---

## **8. The Sea**

**Bala is standing on the sea-coast and looking at the vast sea. The sea looks endless.**

**Have you seen the sea? In the picture where is the sea? Now look for the sea in the map of India. What colour is used to show the sea?**

**(a) Mark those states which have the sea on one side?**

**Ans. (a)** The states of Gujarat, Maharashtra, Karnataka, Kerala, Tamil Nadu and West Bengal have the sea on their one side.

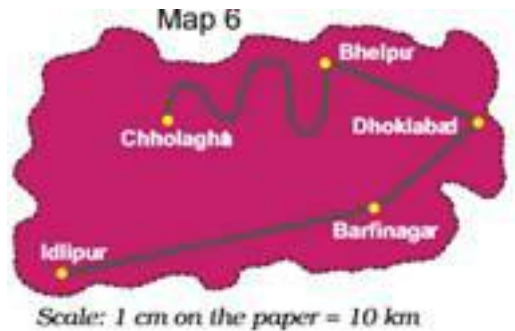
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**(b) Name one state which does not have the sea on any side.**

**Ans. (b)** Madhya Pradesh does not have the sea on any of side.

---

### 9. Distance Between Towns



**These are five town. Find out:**

**(a) How many cm away is Idlipur from Barfinagar on the map?**

**Ans. (a)** Distance between Idlipur and Barfinagar on the map = 4.7 cm.

**(b) How many kilometres will have to travel if you go from Idlipur to Barfinagar?**

**Ans. (b)** We have to travel  $(4.7 \times 10)$  km i.e. 47 km while going from Idlipur to Barfinagar.

**(c) There is a place called Thukapagram midway between Idlipur and Barfinagar. Mark it with a 'T'.**

**Ans. (c)** Thukpagram is marked midway between Idlipur and Barfinagar by 'T' on the map.

**(d) Measure the length of the route between Bhelupur and Chholaghat.**

**Ans. (d)** The length of the route between Bhelupur and Chholaghat is  $(5.5 \times 10)$  km i.e. 55 km.

---

### 10. Ashi's School

**Use the squares to find out:**

**(A) How many times bigger is the area of the assembly ground than that of the office?**

**Ans. (A)** The area of the Assembly ground is 5 times that of the office.

---

---

**(B) How much is the length and width of each classroom?**

**Ans. (B)** Each classroom is of length 5m, width 4m.

**(C) All the classrooms in Ashi's school look like this.**

**Look carefully and answer.**

**(a) Which of these is exactly opposite to the blackboard?**

**Ans.(a)** Display board is exactly opposite to the blackboard.

**(b) Now look at the school map again. Guess and mark where would these be:**

- **Blackboard**
- **Almirah in IV and X**
- **Notice board in V and VI B**
- **Last seat in middle row in II**
- **Display Board in I.**

**Ans.(b)** The required items are marked as desired.

**(c) Can a child sitting in III A see the playground?**

**Ans. (c)** A child sitting in III A cannot see the playground.

---

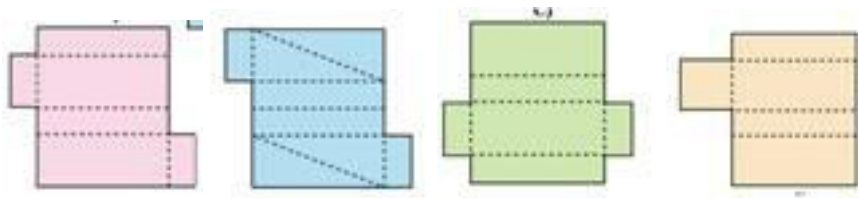
**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-9**  
**BOXES AND SKETCHES**

---

**Read the following passage and answer the questions that follow:**

**1. She made four more shapes. Each is to be folded along the dotted lines. You have to find out which of these can be made into a box.**

**(a) (b) (c) (d)**

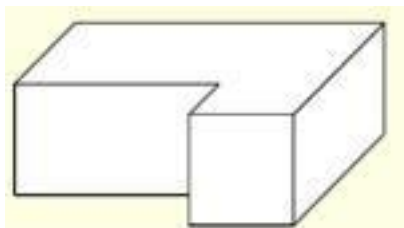


**Ans.** Cut outs (a) and (c) can be folded along the dotted lines to make a box.

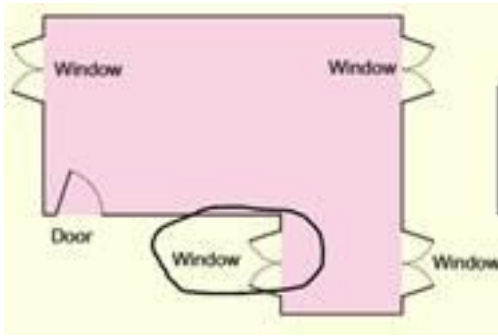
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**2. Look at this floor map of a house. Make doors and windows on the deep drawing of this house.**

**Ans.** Doors and windows are shown on the deep drawing as under:

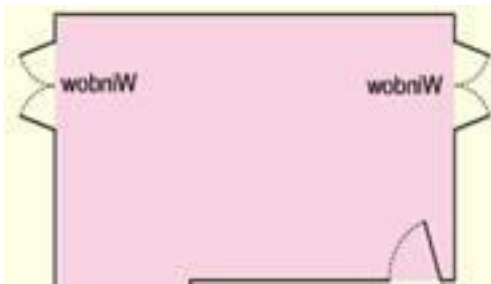


Yes, there are two windows which couldn't be shown on the drawing. These are shown as encircle on the floor map.

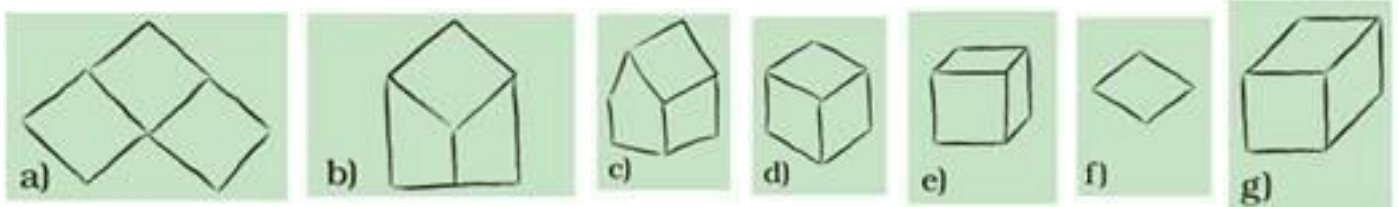


**3. Try to make a floor map of your own house.**

**Ans.** A floor map of my house is as under:



**4. Soumitro and his friends made deep drawings of a cube. These are their drawings.**



**(a) Which of these drawings look correct to you?**

**Ans. (a)** The drawing numbered (d) and (e) look correct.

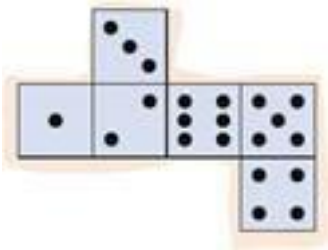
**(b) Can you add some lines to make drawing (f) into a deep drawing of the cube?**

**Ans. (b)** Yes, I can add some lines to make drawing (f) into a deep drawing of the cube as shown.

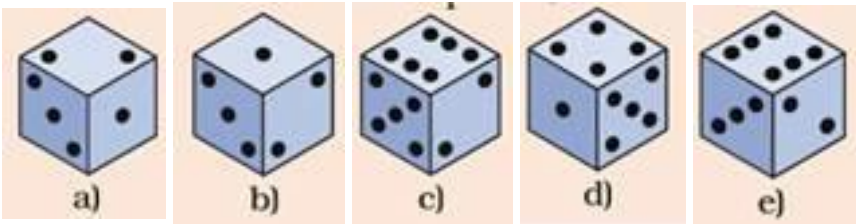




5. This cut-out is folded to make a cube.



Which of these are the correct deep drawings of that cube?

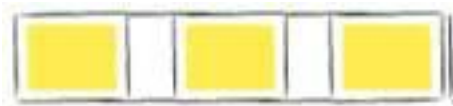


Ans. (a), and (e) are the correct deep drawings of the cube made out of the given cut-out.

6. Make drawings to show how this bridge will look

(a) From the top

Ans. (a)



(b) From the front

Ans. (b)

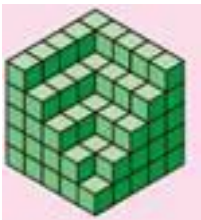


(c) From the side

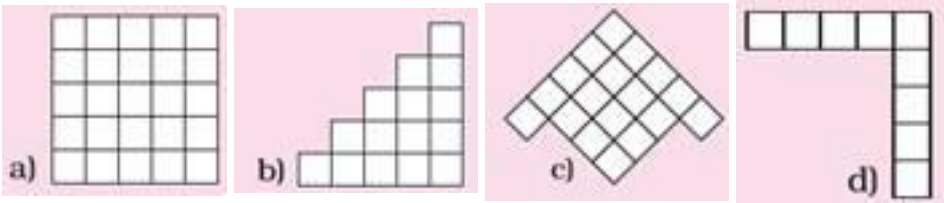
Ans. (c)



7. How many cubes are needed to make this interesting model?



(a) Here are some drawings for the model. Mark the correct top view drawing with ‘T’ and the correct side view drawing with ‘S’.



**Ans.** Number of cubes needed to make the given model.

$$= (5 \times 5 \times 5) - 7 \times 1 - 5 \times 2 - 3 \times 3 - 1 \times 4$$

$$= 125 - 7 - 10 - 9 - 4$$

$$= 125 - 30 = 95$$

(d) -T (b) -S.

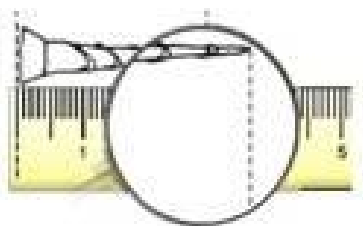
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**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-10**  
**TENTHS AND HUNDREDTHS**

---

**Read the following passage and answer the questions that follow:**

**1. Length of the nail .... Cm and .... Mm or .... Cm.**



**Ans.** Length of the nail 2 cm and 9 mm or 2.9 cm.

**2. The length of this lady's finger (bhindi) is .... cm and .... Mm. We can also write it as .. mm.**



**Ans.** The length of this lady's finger is 8 cm and 3 mm. We can also write it as 8.3 cm.

**3. Using the scale on this page find the difference in length between candle 1 and candle 3?**

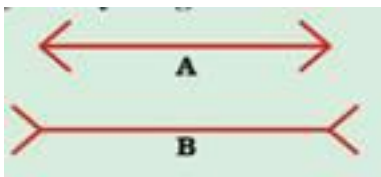


**Ans.**

Length of	Length in cm and mm	Length in cm.
Candle 1	2 cm and 9 mm	2.9 cm
Flame 1	1 cm and 3 mm	1.3 cm
Candle 2	4 cm and 9 mm	4.9 cm
Flame 2	1 cm and 6 mm	1.6 cm
Candle 3	6 cm and 0 mm	6 cm
Flame 3	1 cm and 5 mm	1.5 cm

#### 4. Our Eyes Get Confused?

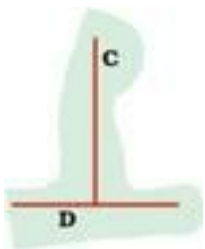
**Which line is longer? A or B? Measure each line and write how long it is in centimetres. How good is your guess?**



**Ans.** I think line B is longer than A. On Measuring: line (A) = 4.6 cm and Line (B) = 4.6 cm.

My guess is incorrect.

#### 5. Which line is longer? C or D? Measure each line. How good is your guess?



**Ans.** Line (C) appears to be longer than the line (D). On measuring: Line (C) = 3.2 cm and Line (D) = 3.2 cm. My guess is incorrect.

#### 6. At the market

---

**(a) How many paisa does a matchbox cost?**

**Ans.** A matchbox costs 50 paisa.

**(b) How many match-box can be got for Rs. 2.50?**

**Ans.** Five matchboxes can be bought for Rs. 2.50.

**(c) How many rupees does the soap cost?**

**Ans.** A soap costs Rs. 8.75.

**(d) Arun wanted to buy a soap. He has a five-rupees coin. 2 one-rupee coins and 4 half-rupee coin. Write in rupees what money he will get back?**

**Ans.** Total money with Arun =  $1 \times \text{Rs. } 5 + 2 \times \text{Re } 1 + 4 \times \text{Re. } 0.5$

= Rs. 5 + Rs. 2 + Rs. 2 = Rs. 9

Cost of a soap = Rs. 8.75

Arun will get back = Rs. 9 – Rs. 8.75

= 900 paise – 875 paise

= 25 paise = Re 0.25

**(5)(a) An egg costs two and a half rupees. How much will one and a half dozen cost?**

**Ans. (1)** One dozen = 12 pieces

One and a half dozen =  $(12+6) = 18$  pieces

Cost of one egg = Rs. 2.50

Cost of 18 eggs = Rs.  $(18 \times 2.50)$

= Rs.  $18 \times 2$  + Rs.  $18 \times 0.50$

= Rs. 36 + Rs. 9 = Rs. 45

**(2) How many pens can Kannan buy? How much money is left?**

---

**Ans. (2)** Money left after purchase of one and a half dozen eggs

= Total money – Money spent

= Rs. 60 – Rs. 45

= Rs. 15

Cost of a pen = Rs. 6.50

Since  $1 \times \text{Rs. } 6.50 = \text{Rs. } 6.50$ ,  $2 \times \text{Rs. } 6.50 = \text{Rs. } 13$

$3 \times \text{Rs. } 6.50 = \text{Rs. } 19.50$

Kannan can buy 2 pens

Money left with Kanna = Rs. 15- Rs. 13 = Rs. 2

**(f) The price of two pens is Rs ..... Can she buy two pens?**

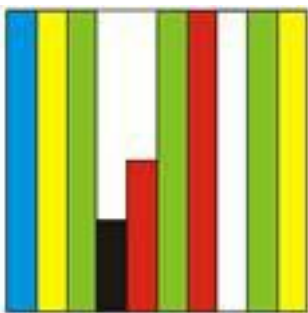
**Ans.** Price of 1 pen = Rs. 6.50

Price of 2 pens = Rs.  $(2 \times 6.50) = \text{Rs. } 13$

So, she can buy 2 pens with rupees 13.

---

## 7. Colourful Design:



**(a) What part of this sheet is coloured blue?**

**Ans. (a)**  $\frac{1}{10}$  part of the given sheet is coloured blue.

---

**(b) Which part of the sheet is green?**

**Ans.(b)**  $\frac{3}{10}$  part of the given sheet is green.

**(c) Which colour covers 0.2 of the sheet?**

**Ans. (c)** Black colour covers 0.2 of the given sheet.

---

**8. Now look at the second sheet. Each strip is divided into 10 equal boxes. How many boxes are there in all?**

**(a) Is each box  $\frac{1}{100}$  part of the sheet?**

**Ans. (a)** Yes, each box is  $\frac{1}{100}$  part of the sheet.

**(b) How many blue boxes are there?**

**Ans. (b)** There are 10 blue boxes.

**(c) Is blue equal to  $\frac{10}{100}$  of the sheet? We saw that blue is also equal to  $\frac{1}{10}$  of the sheet.**

**We wrote it as 0.1 of the sheet.**

**Ans. (c)** Yes, blue boxes are equal to  $\frac{10}{100}$  of the sheet.

**(d) Can we say  $\frac{10}{100} = \frac{1}{10} = 0.10 = 0.1$  ?**

**Think: Can we write ten paisa is 0.1 of a rupee?**

**Ans. (d)** Yes, we can say  $\frac{10}{100} = \frac{1}{10} = 0.10 = 0.1$ .

---

(e) How many boxes are red? What part of the sheet is this?  $\frac{15}{100}$

Can we also write it as 0.15 of the sheet?

Ans. There are 15 red boxes. They are  $\frac{15}{100}$  part of the sheet.

It can also be written as 0.15 of the sheet.

(f) Now  $\frac{3}{100}$  of the sheet is black. We can say 0.03 sheet is black.

Ans. Now  $\frac{3}{100}$  of the sheet is black. We can say 0.03 sheet is black.

(g) How many white boxes are there in the sheet?

Ans. There are 22 white boxes in the sheet.

(h) What part of the second sheet is white?

Ans.  $\frac{22}{100}$  part of the second sheet is white.

---

**9. Sports Day** The school at Malappuram has its sports day. The first five children in the Long Jump are:



Teena	3.50 m
Meena	4.05 m
Rehana	4.50 m
Anu	3.05 m
Amita	3.35 m

(a) Who is the winner in the long jump?

Ans. (a) Rehana was the winner.



---

**(b) Write the names of the I , II and III winners on this stand.**

**Ans.** I is Rehana, II is Meena and III is Teena.

**(c) Do you remember that 1 metre = 100 centimeter? So one centimeter is  $\frac{1}{100}$  of a meter. We also writes 1 cm as ..... m.**

**Ans. (c)** 1 cm as 0.10 m.

---

#### **10. Money from different countries.**

**Have you seen any notes or coins used in any other country? Shivam Bank has a chart to show us how many Indian rupees we can get when we change the money of different countries.**

Country	Money	Changed into Indian rupees
Korea	Won	0.04
Sri Lanka	Rupee (SL)	0.37
Nepal	Rupee	0.63
Hong Kong	Dollar (HK)	5.10
South Africa	Rand	5.188
Saudi	Riyal	10.52
China	Yuan	5.50
U.A.E	Dirham	10.80
U.S.A	Dollar	39.70
Germany	Euro	58.30
England	Pound	777.76

**(This is the rate on 15-2-2008)**

**(A) The money of which country will cost the most in Indian Rupees?**

---

**Ans.** England's money will cost the most in Indian Rupees.

**(B) Mithun's uncle in America had sent him 10 USA dollars as a gift. Mithun used 350 rupees for a school trip. How much money was left with him.**

**Ans.** Money received by Mithun = 10 USA Dollars

$$= 10 \times \text{Rs. } 65$$

$$= \text{Rs. } 650$$

Money spend on school trip = Rs. 350

$$\text{Money left with Mithun} = \text{Rs. } 650 - \text{Rs. } 350 = \text{Rs. } 300$$

**(C) Majeed's father is working in Saudi Arabia. He gets 1000, Saudi Riyal as salary. Arun's father who is working in Sri Lanka gets 2000 Sri Lankan Rupees. Who gets more Indian Rupees.**

**Ans.** Majeed's father salary = 1000 Saudi Riyal

$$= 1000 \times \text{Rs. } 10.52$$

$$= 1000 \times \text{Rs. } 10 + 1000 \times 52 \text{ paise}$$

$$= \text{Rs. } 10000 + 52000 \text{ paise}$$

$$= \text{Rs. } 10000 + \text{Rs. } 520 = \text{Rs. } 10520$$

Arun's father salary = 2000 Sri Lankan Rupees

$$= 2000 \times \text{Rs. } 0.37$$

$$= 2000 \times 37 \text{ paise}$$

$$= 74000 \text{ paise} = \text{Rs. } 740$$

**(D) Leena's aunty brought a present for her from China. It cost 30 Yuan. Find what it costs in Indian rupees.**

---

**Ans.** Cost of the present = 30 Yuan

$$= 30 \times \text{Rs. } 5.50$$

$$= 30 \times \text{Rs. } 5 + 30 \times 50 \text{ paise}$$

$$= \text{Rs. } 150 + \text{Rs. } 15 = \text{Rs. } 165$$

**(E) Astha wants some Hong Kong Dollars and Won.**

**(1) How many won can Hong Kong Dollars and Won.**

**Ans.** Since 1 won = Re. 0.04

Multiply both sides by 100, we get

$$100 \times 1 \text{ Won} = 100 \times \text{Re. } 0.04$$

$$= 100 \times 4 \text{ paise}$$

$$= 400 \text{ paise} = \text{Rs. } 4$$

∴ For Rs.4 Astha can have 100 Won

And, for Rs.400, she can have  $100 \times 100 = 10000$  won

**(2) How many Hong Kong Dollars can she changes for Rs. 508?**

**Ans.** Since 1 Dollar (HK) = Rs. 5.10

∴ For Rs. 508, Astha can have 99 Dollar and have left with Rs. 508- Rs. 504.90 i.e. Rs. 3.10 in hand.

---

**11. Kiran went shopping with Rs. 200. Look at the bill. The shopkeeper forgot to put the point correctly in the prices. Put the point in the correct place and find out the total amount of the bill.**

Item	Quantity	Price (Rupees)

<b>Soap</b>	<b>1</b>	<b>12.50</b>
<b>Green gram</b>	<b>1 kg</b>	<b>50.25</b>
<b>Tea</b>	<b>250 gm</b>	<b>27.25</b>
<b>Coconut Oil</b>	<b>1 Litre</b>	<b>60.00</b>
	<b>Total</b>	

**Ans.** The correct bill as under:

<b>Item</b>	<b>Quantity</b>	<b>Price (Rupees)</b>
Soap	1	12.50
Green gram	1 kg	50.25
Tea	250 gm	27.25
Coconut Oil	1 Litre	60.00
	Total	150.00

## 12. Which city is cool?

The temperature in each city was noted at 3pm on 16 January, 2008 as tabulated below:

**(a) Which place had the highest temperature at 3 pm? Which place is the coolest at that time?**

**Ans. (a)** Mumbai had the highest temperature at 3 pm. Srinagar had the coolest temperature at 3 pm.

**(b) How much higher is the temperature in Mumbai from that in Srinagar?**

**Ans. (b)** The temperature in Mumbai is higher from that in Srinagar by  $35.1^{\circ}\text{C}$ .  $8.1^{\circ}\text{C} = 27^{\circ}\text{C}$

**(c) How many degrees will the temperature need to rise for it to reach  $40^{\circ}\text{C}$  in Thiruvananthapuram?**

---

**Ans. (c)** There should be a rise of  $40^{\circ}\text{C} - 33.5^{\circ}\text{C} = 6.5^{\circ}\text{C}$  on temperature for it to reach  $40^{\circ}\text{C}$  in Thiruvananthapuram.

**(d) How much lower is the temperature of Kolkata from that in Chennai?**

**Ans. (d)** The temperature in Kolkata is lower than in Chennai by  $29.9^{\circ}\text{C} - 26.6^{\circ}\text{C} = 3.3^{\circ}\text{C}$ .

**(e) The temperature in these cities was also noted at 3 am on the same day, Look at the table and answer the questions.**

**Q. Which place had the lowest temperature at 3 am? Imagine yourself to be there and describe how it would feel?**

**Ans.** Srinagar had the lowest temperature at 3 am. It was very much cold and the water n pipes froze into ice. We had worn heavy woolen clothes and had also taken the help of fire.

**Q. What is the difference between the temperatures at 3 pm and 3 am in Chennai?**

**Ans.** The difference between the temperatures at 3 pm and 3 am in Chennai is  $29.9^{\circ}\text{C} - 21.1^{\circ}\text{C} = 8.8^{\circ}\text{C}$ .

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**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-11**  
**AREA AND ITS BOUNDARY**

---

**Read the following passage and answer the questions that follow:**

**1. (a) Arbaz plans to tile his kitchen floor with green square tiles. Each side of the tile is 10 cm. His kitchen is 220 cm in length and 180 cm wide. How many tiles will he need?**

**Ans. (a)** We know that,

Area of a rectangle = Length  $\times$  Breadth

Area of the floor of kitchen = (Length  $\times$  Breadth)

= (220  $\times$  180) square cm.

Also, we know that

Area of a square = Side  $\times$  Side

Area of one tile = (10  $\times$  10) square cm

Number of tiles required

$$= \frac{\text{Area of the Floor}}{\text{Area of one tile}}$$

$$= \frac{220 \times 180}{10 \times 10}$$

$$= 22 \times 18 = 396$$

**(b) The fencing of a square garden is 20 m in length. How long is one side of the garden?**

**Ans. (b)** We have, Perimeter = 20 m

---

$$\text{Side} = \frac{1}{4} \times \text{Perimeter}$$

$$\Rightarrow \text{Side} = \left( \frac{1}{4} \times 20 \right) m = 5m$$

**(c) A thin wire 20 centimetres long is formed into a rectangle. If the width of this rectangle is 4 centimetres, what is its length?**

**Ans. (c)** We have, Perimeter = 20 cm and Breadth = 4cm

$$\text{Length} = \frac{1}{2} \times \text{Perimeter} - \text{Breadth}$$

$$\text{Length} = \frac{1}{2} \times 20 \text{ cm} - 4 \text{ cm} = 6 \text{ cm}$$

$$= 10 \text{ cm} - 4 \text{ cm} = 6 \text{ cm}$$

**(d) A square carom board has a perimeter of 320 cm. How much is its area?**

**Ans. (d)** We have, Perimeter = 320 cm

$$\text{Side} = \frac{1}{4} \times \text{Perimeter}$$

$$\text{Side} = \frac{1}{4} \times 320 \text{ cm} = 80 \text{ cm}$$

$$\text{Area} = \text{Side} \times \text{Side}$$

$$= (80 \times 80) \text{ square cm} = 6400 \text{ square cm}$$

**(e) How many tiles like the triangle given here will fit in the white design?**

**Area of design = ..... Square cm**

**Ans. (e)** Area of the design = 1 full square + 4 half square

$$= (1 + 2) \text{ full square}$$

---

= 3 full squares

=  $3 \times 1$  square cm = 3 square cm

Area of one tile = half of the cm square

=  $\frac{1}{2}$  square cm

Number of tiles =  $\frac{\text{Area of the design}}{\text{Area of one tile}}$

=  $\frac{3}{1/2} = 3 \times \frac{2}{1} = 6$

**(f) Sanya, Aarushi, Manav and Kabir made greeting cards. Complete the table for their cards:**

Whose card	Length	Width	Perimeter	Area
Sanya	10 cm	8 cm		
Manav	11 cm		44 cm	
Aarushi		8 cm		80 square cm
Kabir			40 cm	100 square cm

**Ans. In case of Sanya:**

We have Length = 10 cm, Width = 8 cm

Perimeter = 2 (Length + Width)

= 2 (10+8) cm

=  $2 \times 18$  cm = 36 cm

Area = Length  $\times$  Width

=  $10 \times 8$  square cm

**In Case of Manav:**



---

We have, Length = 11 cm, Perimeter = 44 cm

$$\Rightarrow 2 (\text{Length} + \text{Width}) = 44 \text{ cm}$$

$$\Rightarrow \text{Length} + \text{Width} = 22 \text{ cm}$$

$$\Rightarrow 11 \text{ cm} + \text{Width} = 22 \text{ cm}$$

$$\text{Width} = 22 \text{ cm} - 11 \text{ cm} = 11 \text{ cm}$$

And, Area = Length  $\times$  Width

$$= 11 \times 11 \text{ square cm}$$

$$= 121 \text{ square cm}$$

**In Case of Aarushi:**

We have, Width = 8 cm

Area = 80 square cm

$$\Rightarrow \text{Length} \times \text{Width} = 80 \text{ square cm}$$

$$\Rightarrow \text{Length} \times 8 \text{ cm} = 80 \text{ square cm}$$

$$\text{Length} = \frac{80}{8} \text{ cm} = 10 \text{ cm}$$

And, Perimeter = 2(Length + Width)

$$= 2(10 + 8) \text{ cm}$$

$$= 2 \times 18 \text{ cm} = 36 \text{ cm}$$

**In Case of Kabir:**

We have, Perimeter = 40 cm

Area = 100 square cm

$$\Rightarrow 2 (\text{Length} + \text{Width}) = 40 \text{ cm}$$

---

And, Length + Width = Length and Width

i.e. Length + Width = 20

$$\Rightarrow \text{Width} = 20 - \text{Length} \dots\dots(1)$$

$$\therefore \text{Length} \times \text{Width} = 100$$

$$\therefore \text{Length} (20 - \text{length})$$

$$\therefore 20 (\text{length}) - (\text{length})^2 = 100$$

$$\Rightarrow \text{Length}^2 - 20 \text{ Length} + 100 = 0$$

$$\Rightarrow (\text{Length} - 10)^2 = 0 \Rightarrow \text{Length} - 10 = 0$$

$$\Rightarrow \text{Length} = 10$$

$$\therefore \text{Width} = 20 - \text{Length} = 20 - 10 = 10$$

i.e. Length = 10 cm and Width = 10 cm

Therefore, the complete table is as under:

Whose card	Length	Width	Perimeter	Area
Sanya	10 cm	8 cm	36 cm	80 square cm
Manav	11 cm	11 cm	44 cm	121 square cm
Aarushi	10 cm	8 cm	36 cm	80 square cm
Kabir	10 cm	10 cm	40 cm	100 square cm

---

**2. Take a thick paper sheet of length 14 cm and width 9 cm. You can also use an old postcard.**

**(a) What is its area? What is its perimeter?**

**Ans. (a)** We know that,

Area of a rectangle = Length  $\times$  Breadth

Area of a thick paper sheet = (Length  $\times$  Breadth)

---

$$= (14 \times 9) \text{ square cm} = 126 \text{ square cm}$$

Perimeter of a rectangular sheet

$$= 2(\text{Length} + \text{Breadth})$$

$$= 2(14 + 9) \text{ cm}$$

$$= 2 \times 23 \text{ cm} = 46 \text{ cm}$$

**(b) Now cut strips of equal sizes out of it.**

**Ans. (b)** Let us cut strips of equal sizes out of the given paper sheet of length 14 cm and width 9 cm.

**(c) How long is your belt?**

**Ans. (c)** Strips having width 1 cm:

There will be 9 strips of width 1 cm and length 14 cm. Let us join these strips end to end using tape to make a belt.

Its length

$$= (14 + 14 + 14 + 14 + 14 + 14 + 14 + 14 + 14)$$

$$= 9 \times 14 \text{ cm} = 126 \text{ cm}$$

$$\text{It's perimeter} = 2(126 + 1) \text{ cm} = 2 \times 127 \text{ cm} = 254 \text{ cm}$$

**(d) What is its Perimeter?**

**Ans. (d)** Strips having length  $1\frac{1}{2}$  cm:

There will be 6 strips of width  $1\frac{1}{2}$  cm and length 14 cm. Let us join these strips end to end using tape to make a belt.

$$\text{It's length} = (14 + 14 + 14 + 14 + 14 + 14) \text{ cm}$$

$$= 6 \times 14 \text{ cm} = 84 \text{ cm}$$

---

It's perimeter =  $2(84 + 1.5)$  cm =  $2 \times 85 - 5$  cm = 171 cm

**(e) Whose belt is the longest in the class?**

**Ans. (e)** Strips having width 3 cm:

There will be 3 strips of width 3 cm and length 14 cm.

Let us join these strips end to end using tape to make a belt.

It's length =  $(14+14+14)$  cm =  $3 \times 14$  cm = 42 cm

It's perimeter =  $2(42+3)$  cm =  $2 \times 45$  cm = 90 cm

Clearly, the belt with shortest width is the longest one. Thus, the belt having width 1 cm is the longest in the class. So, my belt is the longest.

---

### **3. Let's Discuss:**

**(a) Why did some of your friends get longer belt than others?**

**Ans. (a)** Some of my friends gets longer belts than others as the width of their belts are shorter than that of the other's belt.

**(b) Is the area of your belt as the same as the area of the postcard? Why or why not?**

**Ans. (b)** The area of the belt is the same as the area of the postcard because it is made of the postcard without wastage.

**(c) What will you do to get the longer belt next time?**

**Ans. (c)** I will get the longer belt next time by ensuring that the width of my belt should be shorter than other's belt.

---

### **4. People People Everywhere:**

**(A) You can play this game in a ground.**

**Make two squares of one square metre each.**

---

**Divide your class in two teams. Ready to play!**

**Try these in your teams:**

**(a) How many of you can sit in one square metre?**

**Ans. (a)** Three of us can sit in one square metre.

**(b) How many of you can stand in it?**

**Ans. (b)** Four of us can stand in it.

**(c) Which team could make children stand in their square? How many?**

**Ans. (c)** Team A could make more children to stand in their square. They are five in number.

**(d) Which team could make more children sit in their square? How many?**

**Ans. (d)** Team A could make more children to sit in their square. They are four in number.

**(B) Measure the length of the floor of your children in metres. Also measure the width.**

**(a) What is the area of the floor of your children in square metres?**

**Ans. (a)** Let's measure the floor of the classroom in metres.

We find that its length = 10 metres and width = 6 metres

Its area = (Length  $\times$  Breadth)

= (10  $\times$  6) square metres

= 60 square metres.

**(b) How many children are there in your class?**

**Ans. (b)** There are 60 children in my class.

**(c) So how many children can sit in one square metre?**

**Ans. (c)** Number of children who can sit in one square metre =  $\frac{\text{Total no. of Children}}{\text{Total area of floor}}$

---

$$= \frac{60}{60} = 1$$

Thus, one child can sit in one square metre.

**(d) If you want to move around easily then how many children do you think should be there in one square metre?**

**Ans. (d)** To move around easily, I think 2 children may sit in 3 square metres space.

---

### 5. Share the Land:

Nasreena is a farmer who want to divide her land equally among her three children, Chumki, Jhumri and Imran. She wants to divide the land so that each piece of land has one tree. Her land looks like this.

**(a) Can you divide the land equally? Show how you will divide it. Remember each person has to get a tree. Colour each person's piece of land differently.**

**Ans. (a)** Yes, I can divide the land equally among Nasreena's three children. Chumki, Jhumri and Imran such that each gets one tree. Each person's piece of land is coloured differently as shown in the figure.

**(b) If each square on this page is equal to 1 square metre of land, how much land will each of her children get? ... sq. m**

**Ans. (b)** Let Chumki's land be ABCDEF, Jhumri's land be BGHIJC and that of Imran be DJIHKE.

Total land in area =  $10 \times 9 \text{ m} = 90 \text{ square metres}$

Since each person gets equal land.

Each share =  $\frac{90}{3}$  square metres = 30 square metres

Thus, each chold gets 30 square metres of land.

**(c) Chumki Jumhri and Imran need wire to make a fence.**

---

**Ans. (c)** For Fencing:

Perimeter of Chumki's land ABCDEF = AB + BC + CD + DE + EF + FA

$$= (4 + 6 + 2 + 3 + 2 + 9) \text{ m} = 26 \text{ m}$$

Perimeter of Jhumri's land BGHIJC = BG + GH + HI + IJ + JC + CB

$$= (6 + 4 + 3 + 2 + 3 + 6) \text{ m} = 24 \text{ m}$$

Perimeter of Imran's land DJIHKE = DJ + JI + IH + HK + KE + ED

$$= (5 + 2 + 3 + 5 + 8 + 3) \text{ m} = 26 \text{ m}$$

**(d) Who will need the longest wire for fencing?**

**Ans. (d)** Clearly, Chumki and Imran needs longest but equal wires to make a fence.

**(e) How much wire in all will the three need?**

**Ans. (e)** Total wire needed =  $(26 + 24 + 26) \text{ m} = 76 \text{ m}$

---

**6. Answer these:**

**(a) The perimeter of square A is .. cm.**

**Ans. (a)** The perimeter of square A is  $4 \times 3 \text{ cm} = 12 \text{ cm}$ .

**(b) The side of square B is .. cm.**

**Ans. (b)** The side of square B is  $2 \times 3 \text{ cm} = 6 \text{ cm}$ .

**(c) The area of square B is .. square cm.**

**Ans. (c)** The area of square B is  $6 \text{ cm} \times 6 \text{ cm} = 36 \text{ sq. cm}$ .

**(d) The area of square B is .. the times the area of square A.**

**Ans. (d)** The area of sq. B is four times of the area of square A.

**(e) The perimeter of square B is .. cm.**

---

**Ans. (e)** The perimeter of square B is  $4 \times 6 \text{ cm} = 24 \text{ cm}$ .

**(f) The perimeter of square B is .. times the perimeter of square A.**

**Ans. (f)** The perimeter of square B is two times the perimeter of square A.

---

## 7. Thread and Play

**(A) Which shape has the biggest area? How much?**

**Ans. (A)** To find the area of shape A

Figure A contains 9 complete squares, 2 half squares, 7 more than half squares and 8 less than half squares. Neglecting less than half squares and consider more than half square as complete squares. Therefore, the approximate area of figure A.

$$= \left( 9 + 2 \times \frac{1}{2} + 7 \right) \text{ square cm} = (9 + 1 + 7) \text{ square cm} = 17 \text{ square cm}$$

Similarly, the area of shape B will be approximately equal to

$$\left( 2 + 2 \times \frac{1}{2} + 7 \right) \text{ square cm} = 10 \text{ square cm.}$$

$$\text{And, the area of shape C} = \left( 9 + 2 \times \frac{1}{2} + 7 \right) \text{ square cm}$$

$$= 16\frac{1}{2} \text{ sq.cm}$$

Clearly, the shape A has the biggest area.

It is  $(17 - 10)$  i.e. 7 sq.cm more than that of shape B and  $\left( 17 - 16\frac{1}{2} \right)$  i.e.  $\frac{1}{2}$  sq.cm more than that of the slope.

**(B) Which shape has the smallest area? How much? What is the perimeter of the shape?**



---

**Also make a triangle, a square, a rectangle and a circle. Find which shape has the biggest area and which has the smallest?**

**Ans. (B)** The shape B has the smallest area.

It is  $(17-10)$  i.e. sq. cm less than of shape A and  $\left(16\frac{1}{2}-10\right)$  i.e.  $6\frac{1}{2}$  sq.cm less than that of shape C.

The perimeter of this shape is 15 cm.

Let us also make a triangle, a square, a rectangle and circle using the same 15 cm thread.

Area of the triangle =  $\left(6+0\times\frac{1}{2}+6\right)$  sq.cm = 12 sq.cm (approx.)

Area of square =  $\left(9+0\times\frac{1}{2}+7\right)$  sq.cm = 16 sq.cm (approx.)

Area of the triangle =  $\left(10+5\times\frac{1}{2}+0\right)$  sq.cm =  $12\frac{1}{2}$  sq.cm (approx.)

Area of the circle =  $\left(9+2\times\frac{1}{2}+6\right)$  sq.cm = 16 sq.cm (approx.)

The circle and the square have the biggest area and the triangle has the smallest area.

---

## **8. Save the Birds:**

**There are two beautiful lakes near a village. People come for boating and picnics in both the lakes. The village Panchayat is worried that with the noise of the boats the birds will stop coming. The Panchayat wants motor boats in only one lake. The other lake will be saved for the birds to make their nests.**

**(a) How many cm in the length of the boundary of lake A in the drawing?**

**Ans. (a)** The length of the boundary of lake A in the drawing is 33 cm.

---

**(b) What is the length of the boundary of lake B in the drawing?**

**Ans. (b)** The length of the boundary of lake B in the drawing is 26 cm.

**(c) A longer boundary around the lake will help more birds to lay their eggs. So which lake should be kept for birds? Which lake should be used for boats?**

**Ans. (c)** Since 1 cm on drawing = 1 km on the ground

∴ 33 cm represents  $33 \times 1$  km i.e. 33 km.

**(d) Find the area of lake B on the drawing in square cm. What is the actual area in square km?**

**Ans. (d)** Lake B contains 15 complete squares, 3 half squares, 8 more than half squares and 2 less than half squares. Neglecting less than half squares and considering more than half squares the approximate area of lake B on drawing.

$$= \left( 15 + 3 \times \frac{1}{2} + 8 \right) \text{ square cm} = \left( 15 + 1\frac{1}{2} + 8 \right) \text{ square cm}$$

$$\text{Actual area of lake B} = 24\frac{1}{2} \text{ square km}$$

---

## 9. King's Story:

The king was very happy with carpenters Chaggu and Anar. They had made a very big and beautiful bed for him. So as gifts the king wanted to give some land to Chaggu, and some gold to Anar.

Chaggu was happy. He took 100 metres of wire and tried to make different rectangles. He made a  $10\text{m} \times 40\text{m}$  rectangle. Its area was 400 square metres. So he next made a  $30\text{m} \times 20\text{m}$  rectangle.

**(a) What is its area? Is it more than the first rectangle?**

**Ans. (a)** The area of this rectangle =  $30\text{ m} \times 20\text{ m} = 600$  square m.

---

Yes, its area is more than that of the first rectangle.

**(b)What other rectangle can he make with 100 metres of wire? Discuss which of these rectangles will have the biggest area.**

**Ans. (b)** Many other rectangle can be made with 100 metres of wire. For Example,

5m  $\times$  45m having area 225 square metres.

15m  $\times$  35m having area 525 square metres.

20 m  $\times$  30m having area 600 square metres.

25m  $\times$  25 m having area 625 square metres.

The rectangle having length = breadth i.e. a square will have the biggest area.

---

**10. So Anar also tried many different ways to make a boundary for 800 square metres of land.**

**(a) He made rectangles A, B, C of different sizes. Find out the length of the boundary of each. How much gold wire will he get for these rectangles?**

**Ans. (a)** Boundary of a rectangle = 2(Length + Breadth)

Boundary for A =  $2(40+20)$  m =  $2 \times 60$  m = 120 m

Gold Wire for A = 120 metres

Boundary for B =  $2(80+10)$  m =  $2 \times 90$  m = 180 m

Gold Wire for B = 180 metres

Boundary for C =  $2(800+1)$  m =  $2 \times 801$  m = 1602 m

Gold Wire for C = 1602 metres

Boundary for D =  $2(8000+0.1)$  m =  $2 \times 8000.1$  m = 16000.2 m

So he will get 16000.2 metres of gold wire.

---



**(b) Can you make a rectangle with a still longer boundary? I made a rectangle 1 cm wide and 80000 m long. Imagine how long that boundary will be!! With that much gold wire I can become the king!**







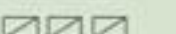


**Ans. (b)** Yes, a rectangle with a still longer boundary can be made.

Boundary of a rectangle 1 cm  $\left( i.e. \frac{1}{100} m = 0.01 m \right)$  wide and 80000 m long.

$$= 2(0.01 + 80000) m = 2 \times 80000.01 m = 160000.02 m$$

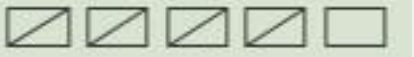

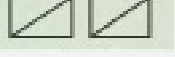

**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-12**  
**SMART CHARTS**

1. Yamini did a project 'Animals and Birds'. She asked each child of her class about one favourite pet animal. She used tally marks to record each answer. For example if someone said cat she put one line in front of cats. When someone said cat again, she added a line. So  means two cats and  means 5 cats. In all 24 children said cat was their favourite animal. Help Yamini complete the table.

Animal	Tally Marks	Number
 Cats		24
Dogs		
Rabbits		
Cows		
Parrots		
Goats		
 Squirrel		

(a) Look at the tally marks and write the number for each animal in the table. How many children in all did Yamini talk to?

Ans. (a) First of all complete the table:

Animal	Tally Marks	Numbers
Cats		24
Dogs		32
Rabbits		10
Cows		22

Parrots	☑ ☐	8
Goats	☑ ☑ ☑ ☑	20
Squirrel	☑ ☑ ☑	15
	Total	131

Yamini talked to 131 children in all.


**(b) Which is the most favourite pet animal in this table?**

**Ans. (b)** In this table the most favourite pet animal is dog.

**(c) Which pet will you like to have? What will you name it? Which other animals can be kept at home? Discuss.**

**Ans. (c)** The pet which I will take to have is dog. It will be named as BROWNY. The other animals which can be kept at home are horse, camel, buffalo, pigeon, sparrow, duck, cock, hen, fish, turtle etc.



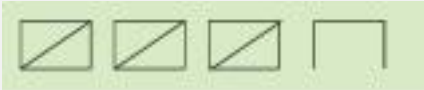

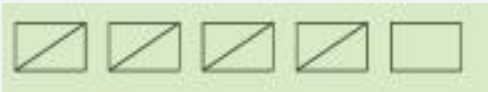
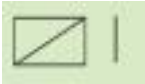
**2. Making Tally Marks on the Road** Sumita stood on the road for half an hour and counted the number of vehicles passing by. She made a tally mark for each vehicle. This helped her in counting quickly the total number of vehicles in each group.



	Tally Marks	Number
Cycle	☑ ☑ ☑ ☑ ☑ ☐	
Car	☑ ☑ ☐	
Auto rickshaw	☑ ☑ ☑ ☐	
Bus	☑ ☑ ☑	
Cycle rickshaw	☑ ☑ ☑ ☑ ☐	
Truck	☑	

**(a) Write the number of each vehicle in the table.**

**Ans. (a)** Writing the number of each vehicle in the table.

	Tally Marks	Number
Cycle		28
Car		12
Auto Rickshaw		188
Bus		15
Cycle Rickshaw		24
Truck		6
	Total	103


**(b) How many vehicles in all did Sumita see on the road in half an hour.**


**Ans. (b)** Number of vehicles seen by Sumiota in half an hour is 103.

**(c) Auto Rickshaws are thrice the number of trucks – true/false?**

**Ans. (c)** True.

**(d) Make tally marks for 7 more buses, and 2 more trucks.**

**Ans. (d)** Tally marks for 7 more buses: 

Tally marks for 2 more buses: 

**3. Helping Hands** In the EVS period, the teacher asked children whether they help their parents at home. There were different answers. Children named the work in which they help their parents the most. The teacher collected their answers and made a table.

--	--

Help most in house work	Number of children
Going to the market	47
Washing utensils	15
Washing Clothes	3
Making, serving food	25
Cleaning the house	10
Total children who said they help their parents	

**Ans.**

Help most in house work	Number of children
Going to the market	47
Washing utensils	15
Washing Clothes	3
Making, serving food	25
Cleaning the house	10
Total children who said they help their parents	100

**4. Ask 10 of your friends about what they like to do most after school.**

**Ans.** On Collecting the answers given by my friends I tabulated information as under:

What they like to do after school	Number of children
Watching TV	3
Playing Football	2
Reading Story Books	1



Sleeping	2
Cycling	1
Doing Home work	1

**5. Ragini loves to watch cartoons on televisions. One day she thought for counting the number of ads during the breaks. She found that in each break there were 14 advertisements. In 10 of those ads there were children as actors.**

**(a) Why do you think that children are used in so many ads?**

**Ans. (a)** Children are used in so many advertisement as the cartoons are mostly watched by the children.

**(b) Use tally marks to count the number of ads during a short break in a program. Were there ads during the news program?**

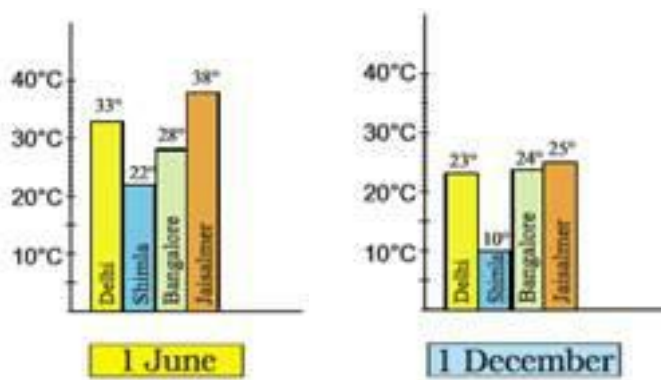
**Ans. (b)** Tally mark used to count the number of ads during a short break in a program:



Yes, there were ads during the news program.

## 6. Hot and Cold :

**Have you seen the weather report on TV or in a newspaper? These are two bar charts. These show the highest temperature (in degrees Celsius) in four cities, on two different days. The cities are Delhi, Shimla, Bangalore and Jaisalmer.**



---

**Find out from the bar charts-**

**(a) Which city is the hottest on 1 June?**

**Ans.** Jaisalmer is the hottest on 1 June.

**(b) Which city is the coldest on 1 December?**

**Ans.** Shimla is the coldest on 1 December.

**(c) Which city shows little change in temperature on the two days- 1 June and 1 December?**

**Ans.** Bangalore shows little change in temperature on the two days – 1June and 1December.

---

## **7. Rabbits in Australia:**

Earlier there were no rabbits in Australia. Rabbits were brought to Australia around the year 1780. At that time there were no animals in Australia which ate rabbits. So the rabbits began to multiply at a very fast rate. Imagine what they did to the crops! The table shows how rabbits grew every year.

Time	No. of Rabbits
Start	10
1 year	18
2 year	32
3 year	58
4 year	105
5 year	
6 year	

**(a) After each year the number of rabbits was-**

---

**(1) a little less than double the number of rabbits in the last year.**

**(2) double the number in the last year.**

**(3) 8 more than the number of rabbits in the last year.**

**(4) more than double the number of rabbits in the last year.**

**Ans. (1) a little less than double the number of rabbits in the last year.**

**(b) At the end of year 6, the number of rabbits cross 1000?**

- 400
- 600
- 800

**Ans. 400.**

**(c) After which year did the number of rabbits cross 100?**

**Ans. In the year 1788, the number of rabbits cross 100.**

---

**8. Madhav's mother helped him understand his family with the help of this drawing .  
You can also find out about your older generations using such a family tree.**

**(a) How many grandparents in all does Shobhna have?**

**Ans. In all Shobhna has four grandparents.**

**(b) How many great great grandparents in all does Madhav have?**

**Ans. Madhav has 8 great, great grand parents.**

**(c) How many elders will be in the VII generation of his family?**

**Ans. There will be 32 elders in the VII generation of Madhav's family.**

**(d) If he takes his family tree forward in which generation will he find 128 elders?**

**Ans. 128 elders will be in IX generation of Madhav's family tree.**

---

---

**9. Find out the growth chart**

**(a) Between which days did the length of the plant change the most?**

- (i) 0-4**
- (ii) 4-8**
- (iii) 8-12**
- (iv) 12-16**
- (v) 16-20**

**Ans. (iii) 8-12**

**(b) What could be the length of this plant on the 14 th day? Guess.**

- (i) 8.7 cm**
- (ii) 9.9 cm**
- (iii) 10.2 cm**
- (iv) 10.5 cm**

**Ans. (ii) 9.9 cm**

**(c) Which plant keep growing all the time? What will be its length on the 100 th day?  
Make a guess.**

**Ans.** The plant will not keep growing in the height all the time. I think it's on the 100 th day may be 16.4 cm.

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**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER-13**  
**WAYS OF MULTIPLY AND DIVIDE**

---

**1. Use Bela's method to multiply these numbers.**

**(a)  $32 \times 46$**

**Ans. (a)**

$$\begin{array}{r} 32 \\ \times 46 \\ \hline 192 \\ + 1280 \\ \hline 1472 \end{array}$$

**(b)  $67 \times 18$**

**Ans. (b)**

$$\begin{array}{r} 67 \\ \times 18 \\ \hline 536 \\ + 670 \\ \hline 1206 \end{array}$$

---

**2. Do these in your notebook using Bela's method:**

**(a)  $47 \times 19$**

**Ans. (a)**

$$\begin{array}{r} 47 \\ \times 19 \\ \hline 423 \\ + 470 \\ \hline 893 \end{array}$$

**(b)  $188 \times 91$**

**Ans. (b)**

$$\begin{array}{r}
 188 \\
 \times 91 \\
 \hline
 188 \\
 + 16920 \\
 \hline
 17108
 \end{array}$$

(c)  $63 \times 57$

Ans. (c)

$$\begin{array}{r}
 63 \\
 \times 57 \\
 \hline
 441 \\
 + 3150 \\
 \hline
 3591
 \end{array}$$

(d)  $225 \times 22$

Ans. (d)

$$\begin{array}{r}
 225 \\
 \times 22 \\
 \hline
 450 \\
 + 4500 \\
 \hline
 4950
 \end{array}$$

(e)  $360 \times 12$

Ans. (e)

$$\begin{array}{r}
 360 \\
 \times 12 \\
 \hline
 720 \\
 + 3600 \\
 \hline
 4320
 \end{array}$$

3. Shantaram is a special cook who comes only on party days. Last year he was called for only 28 days. For each day he has to be paid Rs. 165. Find out how much money he will get in all?

Ans. Shantaram's one day wages = Rs. 165

Shantaram's 28 days wages = Rs. (165x 28)

$$\begin{array}{r}
 165 \\
 \times 28 \\
 \hline
 1320 \\
 + 3300 \\
 \hline
 4620
 \end{array}$$

Hence, Shantaram will be paid Rs. 4620.

**4. If he called for all days for the year, how much salary will he get?**

**Ans.** Shantaram's one day salary = Rs. 165

Shantaram's one year i.e. 365 days salary = Rs. (165x 365)

$$\begin{array}{r}
 165 \\
 \times 365 \\
 \hline
 825 \\
 + 9900 \\
 + 49500 \\
 \hline
 60225
 \end{array}$$

Hence, Shantaram gets a salary of Rs. 60225.

**5. Now find the salaries of the minister and horse rider for 1 year.**

**Ans.** For the minister:

Minister's salary for 1 day = Rs. 195

Minister's salary for 1 year i.e, 365 days = Rs. (195x 365)

$$\begin{array}{r}
 195 \\
 \times 365 \\
 \hline
 975 \\
 + 17700 \\
 + 58500 \\
 \hline
 71175
 \end{array}$$

Hence, the salary of Minister of 1 year is Rs. 71175.

For the horse rider:

Horse rider's salary for one day = Rs. 76

Horse rider's salary for 1 year i.e. 365 days = Rs.(76x 365)

$$\begin{array}{r}
 365 \\
 \times 76 \\
 \hline
 2190 \\
 + 25550 \\
 \hline
 27740
 \end{array}$$

Hence, the salary of horse rider for 1 year is Rs. 27740. \_

## 6. Years and Years

**(a) How many glasses will he drink in one month?**

**Ans. (a)** Number of glasses of water Sohan drinks in one month i.e. 30 days =  $(8 \times 30) = 240$

**(b) How many glasses will he drink in one year?**

**Ans. (b)** Number of glasses of water Sohan drinks in one year i.e. 365 days =  $(8 \times 365) = 2920$

**(c) If 125 people living in a colony drink 8 glasses of water in a day, how much water will they drink in a year.**

**Ans. (c)** Number of glasses of water a person drinks in 1 day = 8

Number of glasses of water 125 persons drink in one day =  $(8 \times 125) = 1000$

Number of glasses of water 125 persons drink in one year =  $(365 \times 1000) = 365000$

**7. If Soha's heart beats 72 times in one minute, how many times does it beat in one hour.**

**(a) Now find out how many times it beats in one day.**

**Ans. (a)** Number of times of Soha's heart beats in 1 minute = 72

Number of times Soha's heart beats in one hour i.e. in 60 minutes =  $(72 \times 60) = 4320$

And Number of times Soha's heart beats in one day i.e. in 24 hours =  $(4320 \times 24)$

We have,

$$\begin{array}{r}
 4320 \\
 \times 24 \\
 \hline
 17280 \\
 + 86400 \\
 \hline
 103680
 \end{array}$$



---

**(b) Count your heart beats to find out how many times your heart beats in one week?**

**Ans. (b)** On counting I find that my hearts 71 times in one minute.

My heart beats  $(71 \times 60) = 4260$  times in one hour

My heart beats  $(4260 \times 24) = 102240$  times in a day.

My heart beats  $(102240 \times 7) = 715680$  times in one week.

**(c) A baby elephant drinks around 12 L of milk everyday. How much milk will it drink in two years?**

**Ans. (c)** Number of days in 2 years =  $(2 \times 365) = 730$

Milk consumption of baby elephant in 1 day = 12 L

Milk consumption of baby elephant in 2 years i.e. 730 days

$$\begin{array}{r} 730 \\ \times 12 \\ \hline 1460 \\ + 7300 \\ \hline 8760 \end{array}$$

Hence, the baby elephant drinks 8760 L of milk in 2 years.

**(d) A baby blue whale drinks around 200 L of milk in one day. Just imagine how much milk that is! Find out in how many days your family would use 200 L milk. How much milk would the baby blue whale drink in eight months?**

**Ans. (d)** Milk consumption of baby whale per day = 200 L

My family will use 200 L milk at the rate of 20 L per day  $(200/20)$  i.e. 10 days

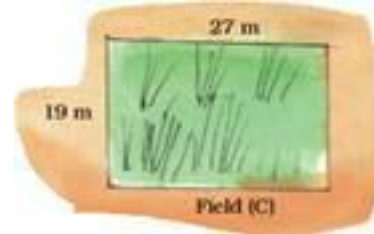
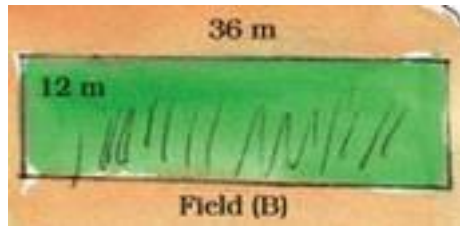
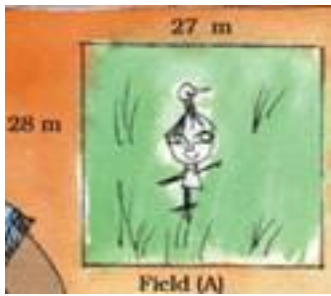
Milk consumption of baby whale in one month i.e. in 30 days =  $(200 \times 30)$  L = 6000 L

Milk consumption of baby whale in 8 months =  $(6000 \times 8)$  L = 48000 L.

---

## 8. Karunya- The Landlord

**Karunya bought three fields**



**(a) Find the area of all the three fields.**

**Field (A) .... Square metre.**

**Field (B) .... Square metre.**

**Field (C) .... Square metre.**

**He bought field (A) at the rate of Rs. 95 for a square metre , field (B) at Rs. 110 for a square metre and field (C) at Rs. 120 for a square metre.**

**Ans. (a)** We know that

Area of rectangle = Length x Breadth

To find the area of fields A, B and C, we have to find

$28 \times 27$ ,  $36 \times 12$  and  $27 \times 19$  respectively.

We have,

$$\begin{array}{r}
 28 \\
 \times 27 \\
 \hline
 196 \\
 + 560 \\
 \hline
 756 \\
 36 \\
 \times 12 \\
 \hline
 72 \\
 + 360 \\
 \hline
 432
 \end{array}$$

**(b) Find the cost of all three fields.**

**Ans. (b)** Area of Field (A) = 756 square metre

Area of Field (B) = 432 square metre

---

Area of Field (C) = 513 square metre

Cost of field (A) at the rate of Rs 95 per square metre = Rs. (95 x 756) = Rs 71820

$$\begin{array}{r} 756 \\ \times 95 \\ \hline 3780 \\ + 68040 \\ \hline 71820 \end{array}$$

Cost of field (B) at the rate of Rs. 110 per square metre = Rs. (110x 432) = Rs. 47520

$$\begin{array}{r} 110 \\ \times 432 \\ \hline 220 \\ + 3300 \\ + 44000 \\ \hline 47520 \end{array}$$

Cost of field (C) at the rate of Rs. 120 per square metre = Rs (120x 513) = Rs. 61560

$$\begin{array}{r} 120 \\ \times 513 \\ \hline 360 \\ + 1200 \\ + 60000 \\ \hline 61560 \end{array}$$

Total costs of these fields = Rs. 71820 + Rs. 47520 + Rs. 61560

= Rs. 180900

---

**9. Tulsi and her husband work on Karunya's farm. The Government has said that farm workers should be paid at least Rs 71 for one day's work. But he pays Rs. 55 to Tulsi and Rs. 58 to her husband.**

**If Tulsi works for 49 days, how much money does she get?**

**If her husband works for 42 days, how much money does he get?**

**Find the money they earn together.**

**Ans.** Tulsi one day's wage = 55 = Rs. (55x 49)

$$\begin{array}{r} 55 \\ \times 49 \\ \hline 495 \\ + 2200 \\ \hline 2695 \end{array}$$

---

Hence, Tulsi gets Rs. 2695 for her work.

Husband's one-day wage = Rs. 58

Husband's 42 day's wage = Rs. (58x 42)

We have,

$$\begin{array}{r} 58 \\ \times 42 \\ \hline 116 \\ +2320 \\ \hline 2436 \end{array}$$

Hence, Tulsi's husband gets Rs. 2436 for his work.

Money they earned together = Rs. (2695 + 2436) = Rs. 5131

---

**10. The table shows the amount fixed by four states.**

**(a) For farmwork which state has fixed the highest amount? Which state has fixed the lowest?**

**Ans. (a)** Haryana has fixed the highest salary for one day of the farmworkers whereas Rajasthan has fixed the lowest.

**(b) Bhairon Singh is a worker in Rajasthan? If he works for 8 weeks on the farm, how much will he earn?**

**Ans. (b)** Bhairon Singh's 1-day earning = Rs. 73

Bhairon Singh's 1 week earning = Rs. (73x 7) = Rs. 511

Bhairon Singh's 8 weeks earning = Rs. (8x 511) = Rs. 4088

**(c) Neelam is a worker in Haryana. If she works for  $2\frac{1}{2}$  months on the farm, how much will she earn?**

**Ans. (c)** Number of days in  $2\frac{1}{2}$  months =  $30 \times 2 + \frac{30}{2} = 60 + 15 = 75$

Neelam's 1 day's earning = Rs. 135

Neelam's  $2\frac{1}{2}$  months, 75 day's earning = Rs. (135x 75)

---

We have,

$$\begin{array}{r} 135 \\ \times 75 \\ \hline 675 \\ + 9450 \\ \hline 10125 \end{array}$$

Hence, Neelam will earn Rs. 10125.

**(d) How much more will a farm worker in Madhya Pradesh get than a worker in Orissa after working for 9 weeks.**

**Ans. (d)** Difference in the salary of workers of Madhya Pardesh and Orissa

$$= \text{Rs. } (97 - 75) = \text{Rs. } 22$$

$$\text{Difference in their salary in 1 week} = \text{Rs. } (22 \times 7) = \text{Rs. } 154$$

$$\text{Difference in their salary in 9 weeks} = \text{Rs. } (154 \times 9) = \text{Rs. } 1386$$

Hence, a farmworker in Madhya Pardesh gets Rs. 1386 more than a worker in Orissa after working for 9 weeks.

---

**11. Satish's is a 13 year-old boy. His father had taken loan for farming. But the crops failed. Now Satish's mother has to pay Rs. 5000 every month for the loan. Satish started working- he looked after 17 goats of the village. He earns rupee 1 everyday for one goat.**

**(a) How much will he earn in one month?**

**Ans. (a)** Satish's earning on 1 goat per day = Re 1

$$\text{Satish's earning on 17 goats per day} = \text{Rs } (1 \times 17) = \text{Rs } 17$$

$$\text{Satish's earning on 17 goats in one month i.e. 30 days} = \text{Rs } (17 \times 30) = \text{Rs. } 510$$

**(b) Does he earn enough to help pay the loan every month?**

**Ans. (b)** Satish's earning of 1 year i.e. 12 months = Rs (510x 12) = Rs 6120

---

**12. To help the farmers the State Government gave cows, Kamla Bai Gudhe got a cow. The cost of the cow is 17500. She had to pay Rs. 5500 and the government spent the rest of the money.**

**(a) How much did the government spend on the cow?**

---

**Ans.** Cost of the cow = 17500

Kamla Bai Gudhe had to pay the cost of cow = Rs 5500

Money spend by government = Rs 17500 – Rs 5500 = Rs 12000

Hence, the government spend Rs 12000 on the cow.

**(b) If 9 people from her village got cows, how much did the government spend in all?**

**Ans. (b)** The amount of money spent by the government on 9 cows = Rs (12000x 9) = Rs 108000.

**(c) If Kamla Bai spends Rs. 85 a day, find out how much she will spend in one month?**

**Ans. (c)** Amount spent by Kamla Bai in 1 day = Rs 85

Amount spent by Kamla Bai in 1 month = Rs (85x 30) = Rs 2550

**(d) The cow gives 8 liters of milk every day. How much milk it give in one month?**

**Ans. (d)** Quantity of milk given by cow in 1 day = 8 litres

Quantity of milk given by cow in 1 month = (8x 30) litres = 240 litres

**(e) If the milk is sold at Rs. 9 per litre, how much money will Kamla Bai make in one month?**

**So the money spent on keeping the cow was Rs. ....**

**Money earned by selling the milk Rs. ....**

**Which is more .... Money spent on the cow or money earned from it? How much?**

**Ans. (e)** Money earned by selling the milk = Rs. (240x 9) = Rs 2160

Since 2550 > 2160

Therefore, money spent on cow was more than the money earned. The difference was Rs (2550-2160) = Rs 390

Due to this loss she wanted to sell the cow.

---

**13. (a) Sukhi works on a farm. He is paid Rs. 98 for one day. If he works for 52 days, how much will he earn?**

---

**Ans. (a)** Sukhi's 1-day earning = Rs. 98

= Rs (98x 52) = Rs 5096

$$\begin{array}{r} 98 \\ \times 52 \\ \hline 196 \\ + 4900 \\ \hline 5096 \end{array}$$

Hence, Sukhi earns Rs 5096 in 52 days.

**(b) Hariya took a loan to build his house. He has to pay back Rs 2750 every month for two years. How much will he pay in 2 years?**

**Ans. (b)** Amount of loan paid back in 1 month = Rs. 2750

Amount of loan paid back in 2 years i.e. (2x 12 = 24 months) = Rs. (2750x 24)

= Rs. 66000

$$\begin{array}{r} 2750 \\ \times 24 \\ \hline 11000 \\ + 55000 \\ \hline 66000 \end{array}$$

**(c) Ratiram is a milk seller in the city. He sells 13 litres of milk every day at Rs 23 per litre. How much does he earn?**

**Ans.** Selling price of 1 litres of milk = Rs. 23

Selling price of 13 litres of milk = Rs. (23x 13) = Rs. 299

**(d) A farmer sells 1 litres of milk for Rs. 11. In one month he sells 210 litres of milk. How much does he earn in a month?**

**Ans. (d)** Selling price of 1 litres of milk = Rs. 11

Selling price of 210 litres of milk = Rs. (210x 11) = Rs. 2310

**(e) A company sells 1 litre of packed water for Rs. 12. A shopkeeper buys 240 litres of packed water. How much does he pay?**

**Ans. (e)** Amount paid for 1 litre of packed water = Rs. 12

Amount paid for 240 litres of packed water = Rs. (12x 240) = Rs. 2880

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---

#### 14. Fun with Multiplication:

(A) Look for the pattern and take this forward.

$$(0 \times 9) + 1 = 1$$

$$(1 \times 9) + 2 = 11$$

$$(12 \times 9) + 3 = 111$$

$$(123 \times 9) + 4 = \underline{\hspace{2cm}}$$

$$(1234 \times 9) + 5 = \underline{\hspace{2cm}}$$

$$(12345 \times 9) + 6 = \underline{\hspace{2cm}}$$

**Ans. (A)**  $(123 \times 9) + 4 = 1107 + 4 = 1111$

$$(1234 \times 9) + 5 = 11106 + 5 = 11111$$

$$(12345 \times 9) + 6 = 11105 + 6 = 111111$$

(B) Each letter a, b, c here stands for a number.

$$\begin{array}{r} \text{a a a} \\ \times \text{a a a} \\ \hline \text{a a a} \\ \text{a a a 0} \\ \text{a a a 0 0} \\ \hline \text{a b c b a} \end{array}$$

Taking a =1, then find what the number b and c will be.

**Ans. (B)** Taking a = 1, so we have to compute 111 x 111 to find the value of b and c.

$$\begin{array}{r} 111 \\ \times 111 \\ \hline 111 \\ 1110 \\ 11100 \\ \hline 12321 \end{array}$$

On Comparing the answers, we find b =2 and c = 3.

(C) Tricks with your age:

Write your age \_\_\_\_\_

Multiply it by 7 \_\_\_\_\_



---

Again multiply the answer by 13 \_\_\_\_

Now look at your last answer. Can you find your age in that answer? How many times does your age show in the answer? Now try this trick with other people.

**Ans. (C)** Let be my age by 9 years

On multiplying 9 by 7, we get 63.

Again, multiply 63 by 13, we get 819

Yes, I find my age in the final result. My age occurs two times in the answer.

---

### 15. Practice Time:

**(a)**  $4228 \div 4$

**Ans. (a)**

$$\begin{array}{r} 1000 \\ 4 \overline{)4228} \\ - 4000 \\ \hline 228 \\ - 200 \\ \hline 28 \\ - 28 \\ \hline \underline{X} \end{array}$$

**(b)**  $770 \div 22$

**Ans. (b)**

$$\begin{array}{r} 35 \\ 22 \overline{)770} \\ - 660 \\ \hline 110 \\ - 110 \\ \hline \underline{X} \end{array}$$

**(c)**  $9872 \div 8$

**Ans. (c)**

---


$$\begin{array}{r}
 1234 \\
 8 \overline{)9872} \\
 \underline{-8000} \\
 1872 \\
 \underline{-1600} \\
 272 \\
 \underline{-240} \\
 32 \\
 \underline{-32} \\
 \underline{X}
 \end{array}$$

**(d)  $672 \div 21$**

**Ans. (d)**

$$\begin{array}{r}
 32 \\
 21 \overline{)672} \\
 \underline{-630} \\
 42 \\
 \underline{-42} \\
 \underline{X}
 \end{array}$$

**(e)  $772 \div 7$**

**Ans. (e)**

$$\begin{array}{r}
 100 \\
 7 \overline{)772} \\
 \underline{-770} \\
 2
 \end{array}$$

**(f)  $639 \div 13$**

**Ans. (f)**

---


$$\begin{array}{r}
 49 \\
 13 \overline{)639} \\
 \underline{-520} \\
 119 \\
 \underline{-117} \\
 2
 \end{array}$$


---

**16. Isha has Rs 100 with her. She wants to buy petrol. One litre of petrol costs Rs. 47. ow How many litres can she buy?**

**Ans.** Money with Isha = Rs. 1000

Cost of one litre = Rs. 47

Litres of petrol she can buy =  $1000 \div 47 = 21$  (Quotient), 13 (Remainder)

$$\begin{array}{r}
 21 \\
 47 \overline{)1000} \\
 \underline{-940} \\
 60 \\
 \underline{-47} \\
 13
 \end{array}$$


---

**17. If Is ha comes to your city, how much petrol can she buy with the same money?**

**Ans.** Money left with Isha = Rs. 1000

Cost of 1 litres of petrol in the city = Rs. 50

Litres of petrol she can buy =  $\text{Rs. } 1000 \div 50 = 20$

Isha can buy 20 litres of petrol for the same money.

---

**18. 576 books are to be packed in boxes. If one box has 24 books, how many boxes are needed?**

**Ans.** Total number of books = 576

Number of books per box = 24

Number of boxes needed or packing =  $576 \div 24 = 24$

---

---


$$\begin{array}{r}
 24 \\
 24 \overline{)576} \\
 \underline{-48} \phantom{0} \\
 96 \\
 \underline{-96} \\
 \text{X} \\
 \hline
 \end{array}$$


---

**19. 836 people are watching a movie in a hall. If the hall has 44 rows, how many people can sit in 1 row?**

**Ans.** Number of people watching a movie = 836

Number of rows = 44

Number of people sitting in 1 row =  $836 \div 44 = 19$

$$\begin{array}{r}
 19 \\
 44 \overline{)836} \\
 \underline{-44} \phantom{0} \\
 396 \\
 \underline{-396} \\
 \text{X} \\
 \hline
 \end{array}$$


---

**20. A gardener bought 458 apples trees. He wants to plant 15 trees in each row. How many rows can he plant?**

**Ans.** Number of trees bought = 458

Number of trees planted in 1 row = 15

Number of rows =  $458 \div 15$

$$\begin{array}{r}
 30 \\
 15 \overline{)458} \\
 \underline{-450} \\
 8 \\
 \hline
 \end{array}$$

We get 30 as quotient and 8 as remainder.

Hence, he can plant in 30 rows and 8 trees are left over.

---

---

**21. Shyamli bought a battery. She road on it 'Life: 2000 hours'. She uses it throughout the day and the night. How many days will the battery run?**

**Ans.** Life of battery = 2000 hours

The number of days the battery will run =  $2000 \div 24$

$$\begin{array}{r} 83 \\ 24 \overline{)2000} \\ \underline{-192} \phantom{00} \\ 80 \phantom{00} \\ \underline{-72} \phantom{00} \\ 8 \phantom{00} \\ \hline \end{array}$$

We get 83 as quotient and 8 as remainder. Hence, the battery will run for 83 days.

---

**22. A tank is full of 300 L of water. How much water will be filled in 25 tanks? If 15 buckets can be filled with one tank of water, how many buckets all can be filled with the water in 25 tanks?**

**Ans.** Capacity of water tank = 300 L

25 tanks can be filled with  $(25 \times 300)$  L i.e. 7500 L of water.

Number of buckets that can be filled with 1 tank = 15

Number of buckets that can be filled with 25 tanks =  $(15 \times 25) = 375$

---

**23. There are 28 laddoos in 1 kg. How many laddoos will be there in 12 kg? If 16 laddoos can be packed in 1 box, how many boxes are needed to pack all these laddoos?**

**Ans.** Number of laddoos in 1 kg = 28

Number of laddoos in 12 kg =  $28 \times 12 = 336$

Total number of laddoos = 336

Number of laddoos packed in 1 box = 16

Number of boxes needed for packing =  $336 \div 16 = 21$

---


$$\begin{array}{r}
 21 \\
 16 \overline{)336} \\
 \underline{-32} \phantom{0} \\
 16 \\
 \underline{-16} \\
 \text{X} \\
 \hline
 \end{array}$$


---

**24. There are 26 rooms in a school. Each room has 4 plant. If each plant needs 2 cups of water, how much water do we need for all the plants?**

**Ans.** Number of rooms in a school = 26

Number of plants per room = 4

Total number of plants =  $26 \times 4 = 104$

Water needed for each plant = 2 cups

Water needed for 104 plants =  $104 \times 2 = 208$  cups

---

**25. Do these divisions. Check your result by multiplication.**

**(a)  $438 \div 9$**

**Ans. (a)**

$$\begin{array}{r}
 48 \\
 9 \overline{)438} \\
 \underline{-36} \phantom{0} \\
 78 \\
 \underline{-72} \\
 6 \\
 \hline
 \end{array}$$

Check:  $9 \times 48 + 6 = 432 + 6 = 438$

**(b)  $3480 \div 12$**

**Ans. (b)**

---


$$\begin{array}{r}
 290 \\
 12 \overline{)3480} \\
 \underline{-24} \phantom{0} \\
 108 \phantom{0} \\
 \underline{-108} \\
 \phantom{0} \text{X} \\
 \hline
 \end{array}$$

Check:  $290 \times 12 + 0 = 3480 + 0 = 3480$

**(c)  $450 \times 7$**

**Ans. (c)**

$$\begin{array}{r}
 64 \\
 7 \overline{)450} \\
 \underline{-42} \phantom{0} \\
 30 \phantom{0} \\
 \underline{-28} \\
 \phantom{0} 2 \\
 \hline
 \end{array}$$

Check:  $64 \times 7 + 2 = 448 + 2 = 450$

**(d)  $900 \times 10$**

**Ans. (d)**

$$\begin{array}{r}
 90 \\
 10 \overline{)900} \\
 \underline{-90} \phantom{0} \\
 0 \phantom{0} \\
 \underline{-0} \\
 \phantom{0} \text{X} \\
 \hline
 \end{array}$$

Check:  $90 \times 10 + 0 = 900 + 0 = 900$

**(e)  $678 \times 6$**

**Ans. (e)**

$$\begin{array}{r}
 90 \\
 6 \overline{)678} \\
 \underline{-6} \phantom{0} \\
 7 \phantom{0} \\
 \underline{-6} \phantom{0} \\
 18 \phantom{0} \\
 \underline{-18} \\
 0
 \end{array}$$

Check:  $113 \times 6 + 0 = 678$

**(f)  $2475 \times 11$**

**Ans. (f)**

$$\begin{array}{r}
 225 \\
 11 \overline{)2475} \\
 \underline{-22} \phantom{0} \\
 27 \phantom{0} \\
 \underline{-22} \phantom{0} \\
 55 \phantom{0} \\
 \underline{-55} \\
 \underline{\phantom{0}X}
 \end{array}$$

Check:  $225 \times 11 + 0 = 2475$

**26. Solve the given sums and colour the answers in the grid given below:**

21 x 16	15 x 7	93 x 2	10x 10
26 x 26	77 x 10	50 x 10	59 x 7
31 x 19	85 x 30	64 x 42	3200 x 40
19 x 3	248 x 8	432 x 18	729 x 9
825 x 5	221 x 13	576 x 12	288 x 4
869 x 11	847 x 7	981 x 3	475 x 19

**Ans.**



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21 x 16=336	15 x 7=105	93 x 2=186	10x 10 =100
26 x 26= 676	77 x 10= 770	50 x 10=500	59 x 7 =413
31 x 19=589	85 x 30=2550	64 x 42=2688	3200 x 40=80
19 x 3 = 57	248 x 8 = 31	432 x 18=24	729 x 9=81
825 x 5= 165	221 x 13=17	576 x 12=48	288 x 4=72
869 x 11=79	847 x 7=121	981 x 3=327	475 x 19=25

Let us colour the given grid as desired:

545	110	434	642	709	623	919	341	72	168
984	165	561	608	236	513	529	62	259	905
709	907	367	632	336	121	492	178	431	475
165	806	584	186	100	589	72	717	248	676
624	80	105	24	165	17	85	770	126	500
247	997	485	2688	81	80	48	901	327	121
742	427	756	531	79	2550	347	1001	314	57
945	1000	687	854	1200	999	24	3126	918	53
109	799	845	1999	864	955	123	1234	678	56
549	459	614	1864	834	559	900	1111	268	171

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**CBSE Class 5 Mathematics**  
**NCERT Solutions**  
**CHAPTER - 14**  
**HOW BIG? HOW HEAVY?**

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**1. A stage platform is made with 5 Math-Magic books. The volume of this stage is the same as \_\_\_\_\_ cm cubes.**

**Ans.** 546 cm.

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**2. Guess the volume of these things in cm cubes.**

**(a) A matchbox is about \_\_\_\_ cm cubes.**

**Ans. (a)** 24 cm.

**(b) A geometry box is about \_\_\_\_ cm cubes.**

**Ans. (b)** 90 cm.

**(c) An eraser is about \_\_\_\_ cm cubes.**

**Ans. (c)** 6 cm.

---

**2. How will you check your guess?**

**Ans. In case of matchbox:** It is about 6 cm long, 4 cm wide and 1 cm thick. So,  $6 \times 4 \times 1$  i.e. 24 cm cubes will fit in it. Therefore, guess is correct.

**In case of geometry box:** It is about 16 cm long, 6 cm wide and 1 cm thick. So,  $16 \times 6 \times 1$  i.e. 96 cm cubes will fit in it.

**In case of eraser:** It is about 3 cm long, 2 cm wide and 1 cm thick. So,  $3 \times 2 \times 1$  i.e. 6 cm cubes will fit in it.

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**3. Matchbox Play:**

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Tanu is making a stage with matchboxes. She first puts 14 matchboxes like this in the first layer. She makes 4 such layers and her stage looks like this.

(a) She used \_\_ matchboxes to make this stage.

Ans. (a)  $4 \times 14 = 56$ .

(b) The volume of one matchbox is the same as 10 cm cubes. Then the volume of this stage is same as \_\_ cm cubes.

Ans. (b) 560 cm.

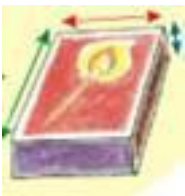
(c) If all these cubes are arranged in a line, how long will that line be?

Ans. (c) 56 cm.

(d) Which has more volume- your Math-Magic book or Tanu’s platform?

Ans. (d) Tanu’s platform has more volume.

4. With your friend’s collect many empty matchboxes of the same size. Measure the sides and write here.



Ans. My matchbox is 3 cm wide. It is 5 cm long. It is 1 cm high.

5. Use 56 matchboxes to make platforms of different height. Fill this table.

Ans.

	How high is it?	How long is it?	How wide is it?
Platform 1	4 layers	7 matchboxes	2 matchboxes
Platform 2	2 layers	7 matchboxes	4 matchboxes
Platform 3	1 layer	8 matchboxes	7 matchboxes

---

The volume of each platform if equal to 56 matchboxes.

---

**6. Mohan arranged his matchboxes like this.**

**How many matchboxes did he use to make it? What is its volume in matchboxes? \_\_\_\_ matchboxes.**

**Ans.** Mohan first puts  $4 \times 4 = 16$  matchboxes on the lower most layer. In the second he puts  $3 \times 3 = 9$  matchboxes. In the third he puts  $2 \times 2 = 4$  matchboxes and 1 matchboxes on the top most layer.

Total number of matchboxes used =  $(16 + 9 + 4 + 1) = 30$

$\therefore$  The volume of this platform is 30 matchboxes.

---

**7. How big is your cube?**

**(a) How long is the side of your cube?**

**Ans. (a)** The side of the cube is 7 cm.

**(b) How many centimetres cubes can be arranged along its:**

**Length?** \_\_\_\_\_

**Width?** \_\_\_\_\_

**Height?** \_\_\_\_\_

**Ans. (b)** Number of centimetres cubes that can be arranged along its:

Length = 7 Width = 7 and Height = 7.

**(c) Answer Thimpu's questions:**

**To make the first layer on the table how many cm cubes will I use? How many such layers will I need to make?**

**Ans. (c)** 49 cm cubes are needed for the first layer.

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7 such layers are needed to make the cube.

**(d) So the total cm cubes = \_\_\_\_**

**Ans. (d)** The total cm cubes = 343.

**(e) The volume of the paper cube is same as \_\_ cm cubes.**

**Ans. (e)** The volume of the paper cubes is same as 343 cm cubes.

---

**8. Anan made big cube having double the side of your paper cube. How many of the your paper cubes will fit in it? Try doing by collecting all the cubes made in your class.**

**Ans.** Side of Anan's cube =  $2 \times 7 \text{ cm} = 14 \text{ cm}$

In its first layer, we can arranged  $2 \times 2 = 4$  paper cubes (of side 7 cm). And 2 such layers of 4 paper cubes each can be packed. So, in Anan's cube, we can arranged  $4 \times 2 = 8$  cubes.

---

**9. Ganesh and Dinga went to pack 4000 centimetre cubes in boxes. These are to be sent to a school. There are three different boxes available for packing.**

**(a) What is your guess? Who is right?**

**Ans. (a)** I think Ganesh is right.

**(b) How can Ganesh and Dinga test their guesses before packing the cubes in the boxes? Discuss with your friend.**

**Ans. (b)** Ganesh and Dinga should find the number of cubes to be fitted in the first layer and find the number of layers to fill the cubes. Their products gives us the total number of cubes that can be packed in each cube. In this way, they are able to check up their guesses.

**(c) Use Ganesh's method and write:**

\_\_\_\_ centimeter cubes can be arranged in box B.

\_\_\_\_ centimeter cubes can be arranged in box C.

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---

**Ans. (c)** In first layer of box B, we can arrange  $11 \times 11 = 121$  cubes. And 10 such layers of 121 cubes each can be packed. So,  $121 \times 10 = 1210$  centimetre cubes can be arranged in box B.

In first layer of box C, we can arrange  $15 \times 9 = 135$  cubes. And 10 such layers of 135 cubes each can be packed. So,  $135 \times 10 = 1350$  centimetre cubes can be arranged in box C.

**(d) So \_\_\_ centimeter cubes in all can be packed in the three boxes.**

**Ans. (d)** So,  $2000 + 1210 + 1350 = 4560$  centimetre cubes in all can be packed in the three boxes.

---

**10. (a) For 6 days, each person will need**

**Rice and flour \_\_\_ g**

**Pulses \_\_\_ g**

**Dried onion \_\_\_ g**

**Ans. (a)** For 6 days, each person will need

Rice and flour =  $6 \times 200 = 1200$  g

Pulses =  $\left( \frac{1200}{3} \right) = 400$  g

Dried onions =  $6 \times 10 = 60$  g

**(b) How much of fresh tomatoes should be dried for 6 days for 10 people?**

**Ans. (b)** Dried tomatoes need for 6 days for 10 people

=  $6 \times 10 \times 10 = 600$  g

**(c) What is the total weight of food (for 6 days) in each person's bag?**

**Ans. (c)** The total weight of food (for 6 days) in each person's bag

---


$$= 1200 \text{ g} + 400 \text{ g} + 60 \text{ g} + 50 \times 6 \text{ g} + 50 \times 6 \text{ g} + 40 \times 6 \text{ g} + 10 \times 6 \text{ g} + 40 \times 6 \text{ g} + 5 \times 6 \text{ g} + 10 \times 6 \text{ g}$$

$$= (1200 + 400 + 60 + 300 + 240 + 60 + 240 + 30 + 60) = 2890 \text{ g}$$


---

**11. Can you guess the weight of the heaviest animal on this Earth? No, it's not me. I weigh only 5000 kg! It is the Blue Whale. Its weight is around 35 times more than me. So how many thousand kg does it weigh?**

**Ans.** The weight of the blue whale =  $35 \times 5000 \text{ kg} = 175000 \text{ kg} = 175 \text{ thousand kg}$ .

---

**12. Guess how many children of your weight will be equal to the weight of an elephant of 5000 kg.**

**Ans.** Since my weight is 31 kg, I think that about 160 children of my weight will be equal to the weight of an elephant of 5000 kg.

---

**13. At birth, a baby elephant weighs around 90 kg. How much did you weigh when you were born? Find out. How many times is a baby elephant heavier than you were at birth?**

**Ans.** Weight of a baby elephant at birth = 90 kg

My weight at the time of birth = 3 kg

Therefore, a baby elephant was  $\frac{90}{3} = 30$  times heavier than me at birth.

---

**14. If a grown up elephant eats 136 kg of food in a day than it will eat around \_\_ kg in a month. Guess about how much it will eat in a year.**

**Ans.** Weight of food eaten by a grown elephant in 1 day = 136 kg

Weight of food eaten by a grown elephant in 1 month i.e. 30 days =  $136 \times 30 \text{ kg} = 4080 \text{ kg}$

Weight of food eaten by a grown elephant in a year i.e. 12 months

$$= 4080 \times 12 \text{ kg} = 48960 \text{ kg}$$


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**15. Shahid works in a bank. He sits at the cash counter. Whenever there are too many coins he does not count them. He just weighs them. Can you hold these coins and say which is the heaviest?**

**(1) How many coins are there in a sack of 5 rupees coins if it weighs:**

**(a) 18 kg?**

**Ans. (a)** Since 1 kg = 1000 g. So, 18 kg = 18000 g.

If one coin weighs 9g, then the sack weighing 18000 g has  $\frac{18000}{9} = 2000$  coins in it.

**(b) 54 kg?**

**Ans. (b)** Since 1 kg = 1000 g. So, 54 kg = 54000 g.

If one coin weighs 9g, then the sack weighing 54000 g has  $\frac{54000}{9} = 6000$  coins in it.

**(c) 4500 g?**

**Ans. (c)** If one coin weighs 9g, then the sack weighing 4500 g has  $\frac{4500}{9} = 500$  coins in it.

**(d) 2kg and 250 g?**

**Ans. (d)** 2 kg and 250 g =  $2 \times 1000 \text{ g} + 250 \text{ g} = 2000 \text{ g} + 250 \text{ g} = 2250 \text{ g}$ .

If one coin weighs 9g, then the sack weighing 2250 g has  $\frac{2250}{9} = 250$  coins in it.

**(e) 1 kg and 125 g?**

**Ans. (e)** 1 kg and 125 g =  $1 \times 1000 \text{ g} + 125 \text{ g} = 1000 \text{ g} + 125 \text{ g} = 1125 \text{ g}$



---

If one coin weighs 9g, then the sack weighing 4500 g has  $\frac{1125}{9} = 125$  coins in it.

**(2) A 2 rupee coin weighs 6 g. What is the weight of a sack with:**

**(a) 2200 coins? \_\_\_\_ kg \_\_\_\_ g**

**Ans. (a)** Weight of 2 rupee coins = 6 g

Weight of 2200 such coins =  $2200 \times 6 \text{ g} = 13200 \text{ g} = 13000 \text{ g} + 200 \text{ g} = 13 \text{ kg } 200 \text{ g}$

**(b) 3000 coins? \_\_\_\_ kg**

**If 100 one rupee coins weigh 485 g then how much will 10000 coins weigh? \_\_ kg \_\_ g.**

**Ans. (b)** Weight of 2-rupee coins = 6 g

Weight of 3000 such coins =  $3000 \times 6 \text{ g} = 18000 \text{ g} = 18 \times 1000 \text{ g} = 18 \text{ kg}$

If 100 one-rupee coins weigh 485 g, then 10000 such coins weigh

$= 485 \times 100 \text{ g} = 48500 \text{ g} = 48 \times 1000 \text{ g} + 500 \text{ g} = 48 \text{ kg } 500 \text{ g}$