CHAPTER -9

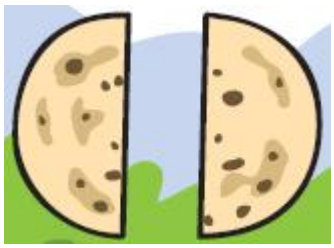
Halves and Quarters

2MARK QUESTIONS

Q1.If the cat asks you to divide the chapati equally, how will you divide it?

Answer:

I will fold the chapati into two equal halves and then break them from the creased line. Now, the chapati is half.

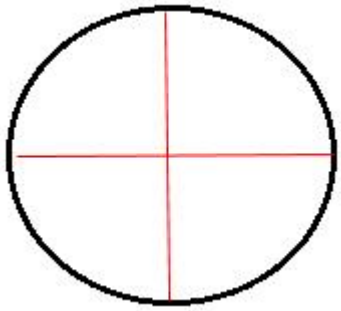


Half of Half

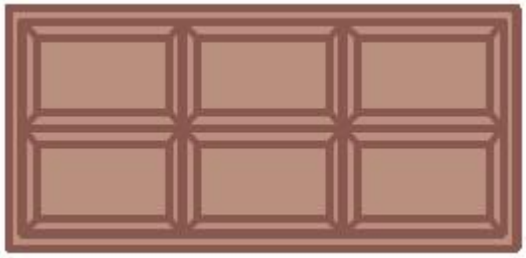
Q2.If two more cats come for food, how will you divide one chapatti equally for four cats?

Answer:

First, divide the chapatis into two halves. Again, divide it into further two halves. Finally, I will break the chapatti from the creased line, as shown below:

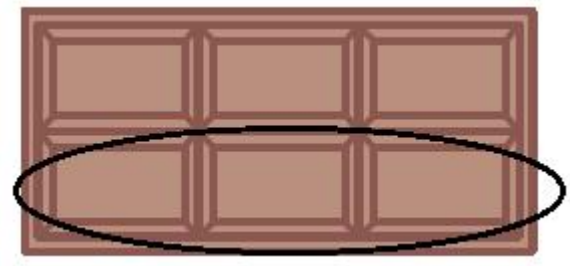


Rani got a chocolate. She divided it equally and gave half to her friend Reena.



Q3.(a) Circle the portion that Reena got.

Answer:



(b) How many pieces of chocolate are there?

Answer:

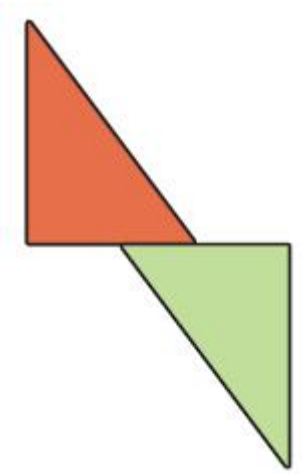
There are six pieces of chocolate in total.

(c) How many pieces were left with Rani?

Answer:

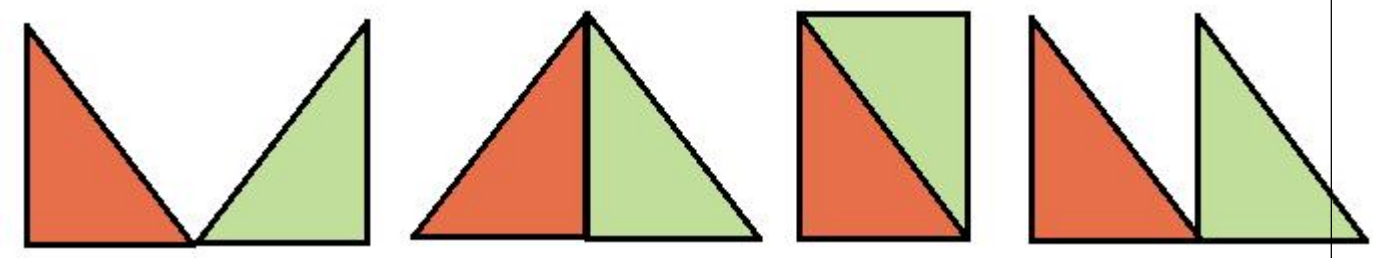
Rani gave half of her chocolate to her friend Reena. So, Rani was left with 3 pieces of chocolate.

Q4.Draw different shapes using these triangles. One such shape is shown here.

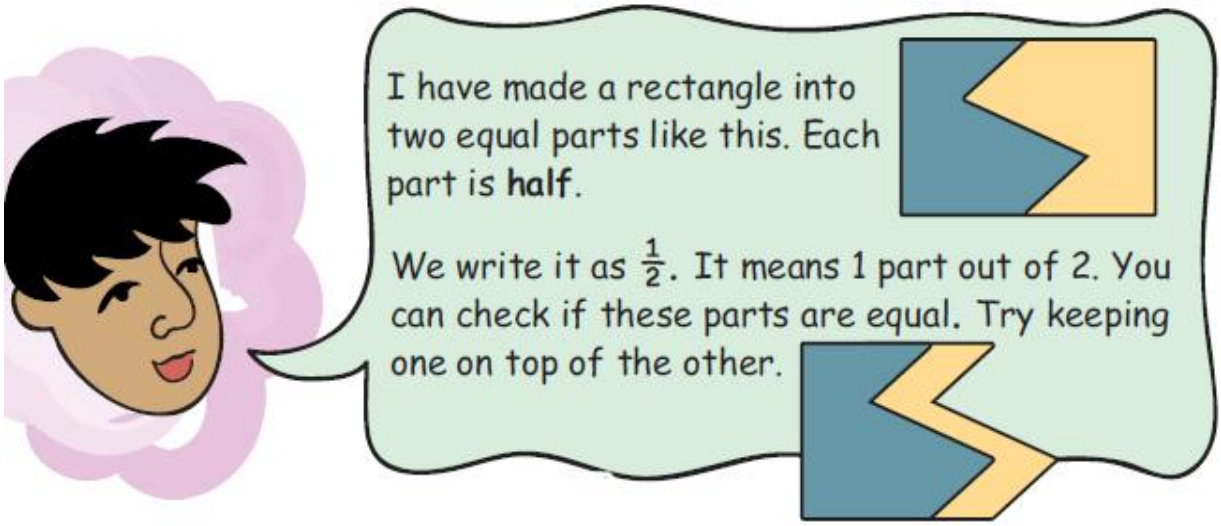


Answer:

Shapes using these triangles are shown below:



Many Ways to Cut into Half



Q5.In how many different ways can you cut a rectangle into half? Draw 5 different ways. Can you check if they are equal?

Answer:

The five different ways of a rectangle are shown below.

Each part of the rectangle is equal as it exactly coincides with the other part.

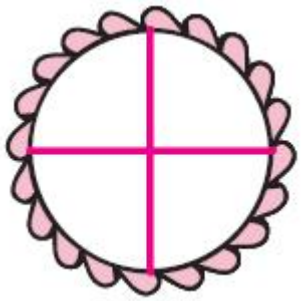
Q6.In how many different ways can you cut a rectangle into four equal parts? Draw five different ways. Can you check if they are equal?

Answer:

A rectangle divided into four equal parts is shown below. Yes, they are equal since each part exactly coincides with the remaining three parts.

Rajni's father brought a cake. She divided the cake into 4 equal parts – for herself, her brother Raju, her father and her mother.

Q7.Colour each share with different colours.



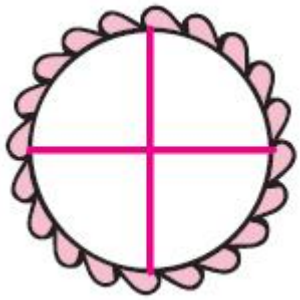
Answer:

Q8.How much does each get?

Answer:

Each get 1/4 of the cake.

Q9.Mother gave her share of the cake to Rajni. Now, colour the total part that Rajni will get.



Answer:

Each person gets 1/4 of the cake. So,

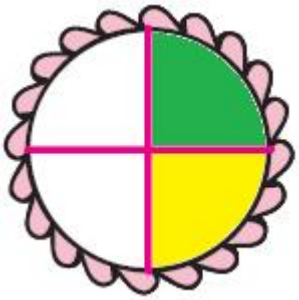
The cake that Rajni got = her share + her mother's share

= 1/4 + 1/4

= 2 / 4

= 1 / 2

Hence, Rajni got 1/2 part of the cake.



Q10.Out of 4 parts, Rajni will get _____ parts, which is equal to half of the cake.

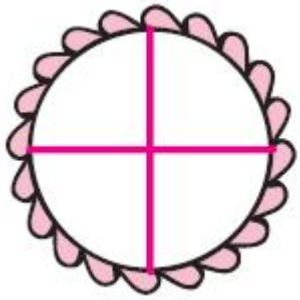
So, she can write it as ____ /4 or 1/2

Answer:

Rajni gets 2 parts of cake out of 4 parts. Hence, she can write it as 2/4 or ½.

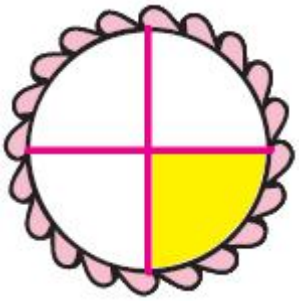
5MARK QUESTIONS

Q1.Colour the share Raju got.

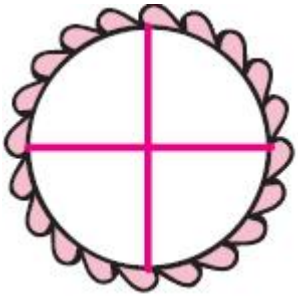


Answer:

The shaded part shows 1/4 part of the cake, which Raju has got.



Q2.How much of the cake do Rajni and Raju together get? Colour their total share.



Answer:

The total cake together Rajni and Raju got is 3/4

Q3.The full pumpkin will cost Rs. _____

Answer:

Cost of 1/4 pumpkin = Rs. 10

Cost of one pumpkin = Rs 10 ÷ 1/4

= 10 × 4

= 40

Hence, the cost of one pumpkin = Rs. 40.

Kundu — Eh! For Rs 10, you should give me $\frac{1}{2}$ of this pumpkin.

First pumpkin-seller — Then you go to the next seller, he can give you $\frac{1}{2}$ of such a big pumpkin for Rs 10. I keep only good quality pumpkins.

Kundu walks to the next seller and looks for a pumpkin of the same size.

Q4.Kundu, how much of this pumpkin will I get for Rs 10? The second pumpkin seller told him half.

This full pumpkin will cost Rs. _____

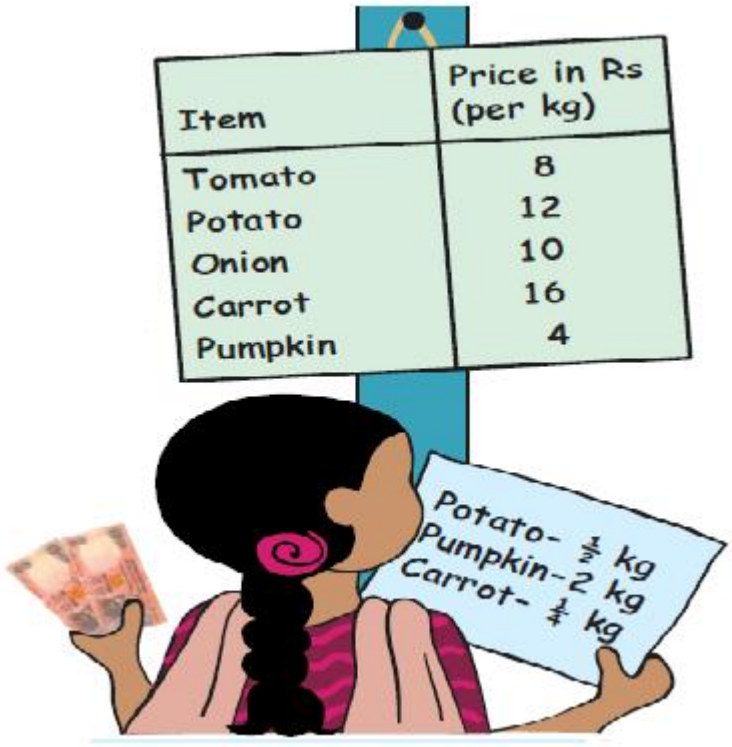
Answer:

The cost of half a pumpkin = Rs. 10

So, the cost of full pumpkin = Rs. 10 + Rs. 10

= Rs. 20

Therefore, the cost of one full pumpkin is Rs. 20.



Q5.(a) How much does 1/2 kg of tomatoes cost?

Answer:

The cost of 1 kg tomato = Rs. 8

Hence, the cost of 1/2 kg tomato = Rs. 8 / 2

= Rs. 4

Therefore, the cost of 1/2 kg tomatoes = Rs. 4

(b) Which costs more – 1/2 kg of onions or 1/4 kg of carrots?

Answer:

The cost of 1 kg onion = Rs. 10

Therefore, the cost of 1/2 kg onion = 10 / 2

= Rs. 5

The cost of 1 kg carrot = Rs. 16

Hence, the cost of 1/4 kg carrot = 16 / 4

= Rs. 4

Hence, the cost of 1/2 kg of onions is more than the cost of 1/4 kg of carrots.

(c) What is the price of 3/4 kg of potatoes?

Answer:

The cost of 1 kg of potatoes = Rs. 12

The cost of 3/4 kg of potatoes = Rs. 12 × 3/4

= Rs. 36/4

= Rs. 9

Therefore, the cost of 3/4 kg of potatoes = Rs. 9

(d) Keerthi is going for shopping. She has only Rs. 20 with her. Can she buy all the things on her shopping list?

Answer:

Total money Keerthi has = Rs. 20

Her shopping list includes = 1/2 kg potatoes, 2 kg pumpkin and 1/4 kg carrots.

Cost of 1 kg potatoes = Rs. 12

Cost of 1/2 kg potatoes = Rs. 12 / 2

= 6

Cost of 1 kg pumpkin = Rs. 4

Cost of 2 kg pumpkin = Rs. 4 × 2

= Rs. 8

Cost of 1 kg carrot = Rs. 16

Cost of 1/4 kg carrot = Rs. 16/4

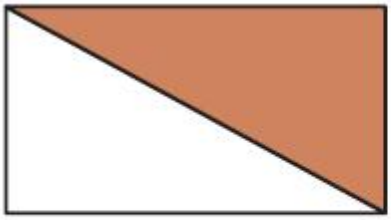
= Rs. 4

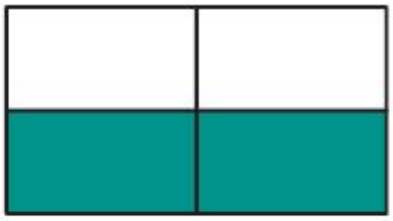
Total cost of all the vegetables = 6 + 8 + 4

= Rs. 18

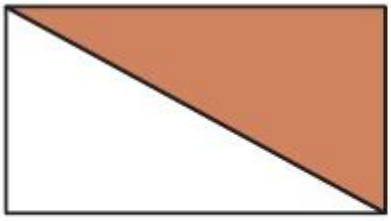
Hence, Keerthi can buy all the vegetables on her shopping list.

Q6.(a) What part of the whole is coloured? Write below each shape.

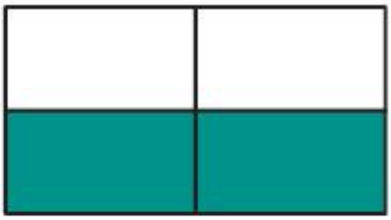




Answer:

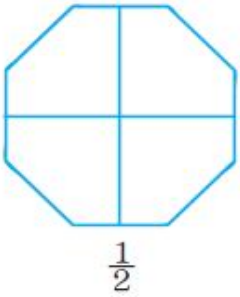


1/2

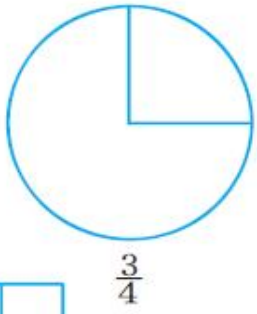


2/4

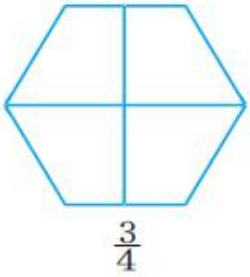
(b) Colour that part of the shape which is written below.



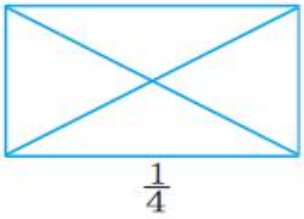
$\frac{1}{2}$



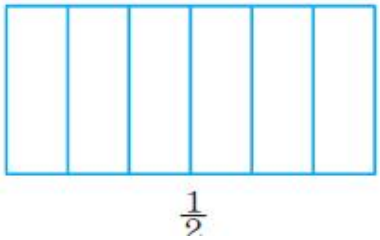
$\frac{3}{4}$



$\frac{3}{4}$



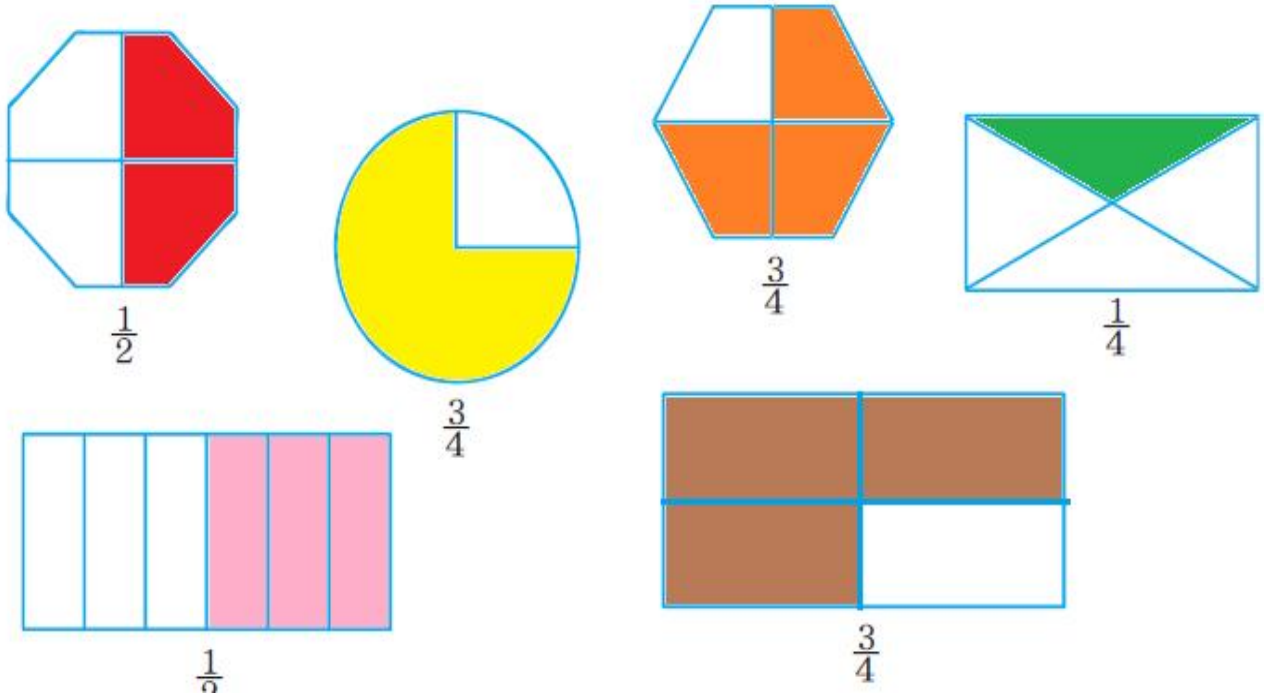
$\frac{1}{4}$



$\frac{1}{2}$

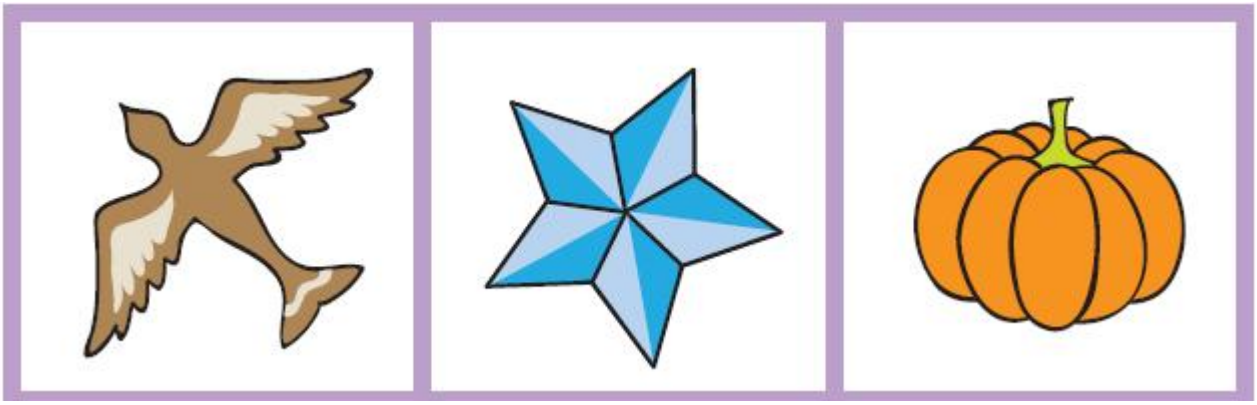
$\frac{3}{4}$

Answer:

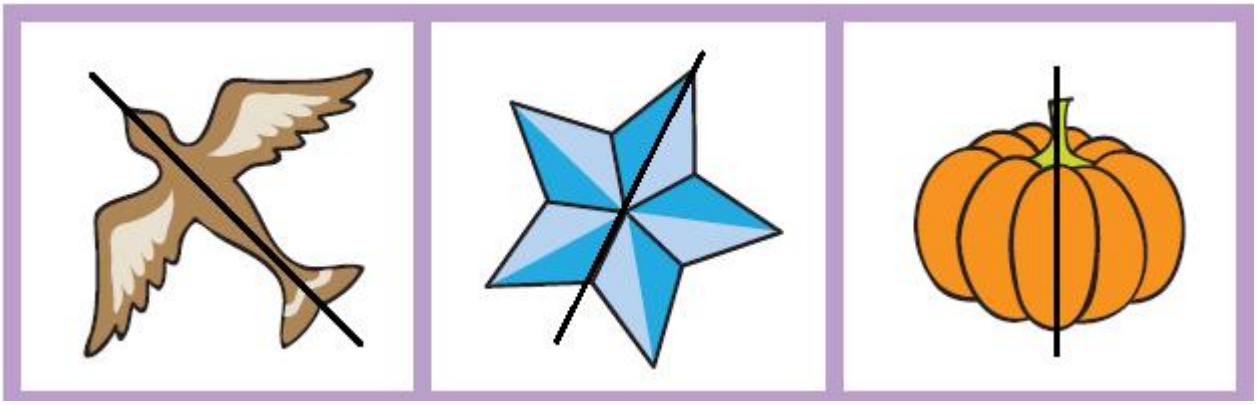


(c) Cut in half

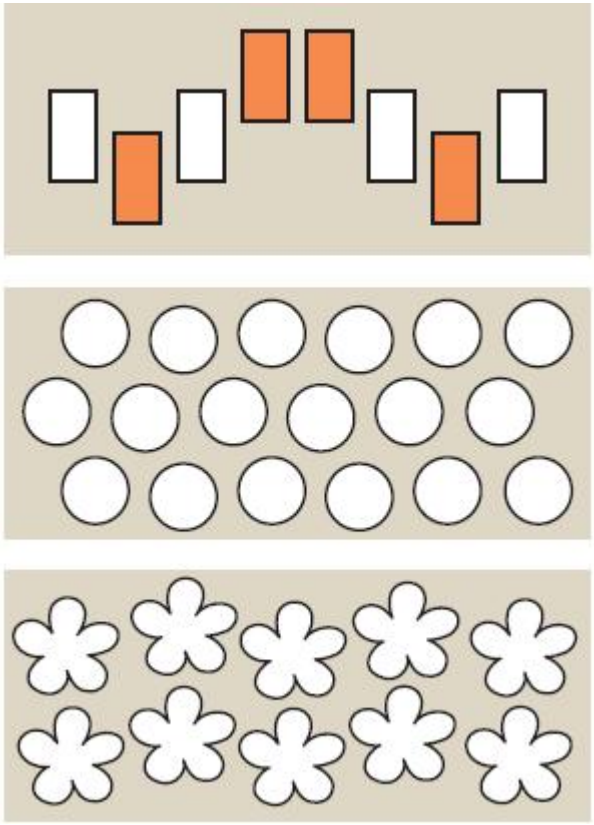
Draw a line which divides the below shapes into half.



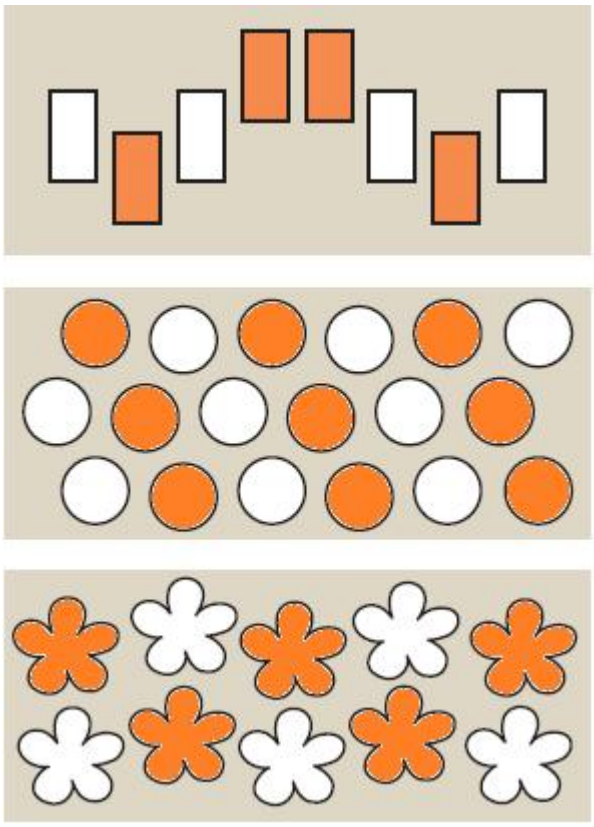
Answer:



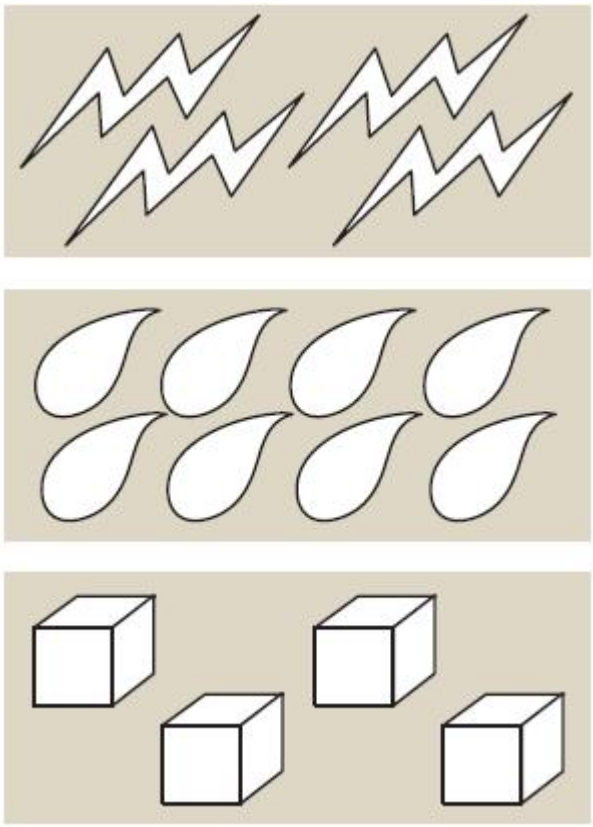
(d) Colour half the number of shapes as shown here.



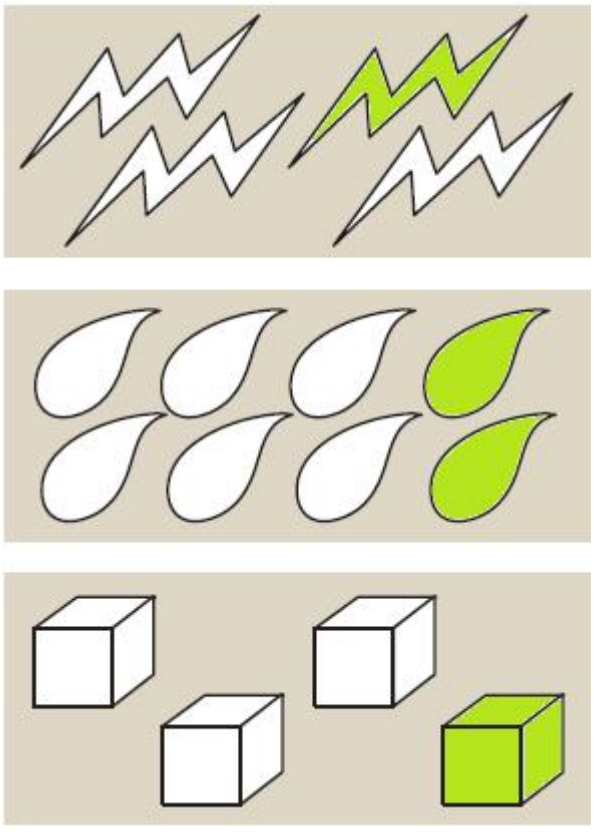
Answer:



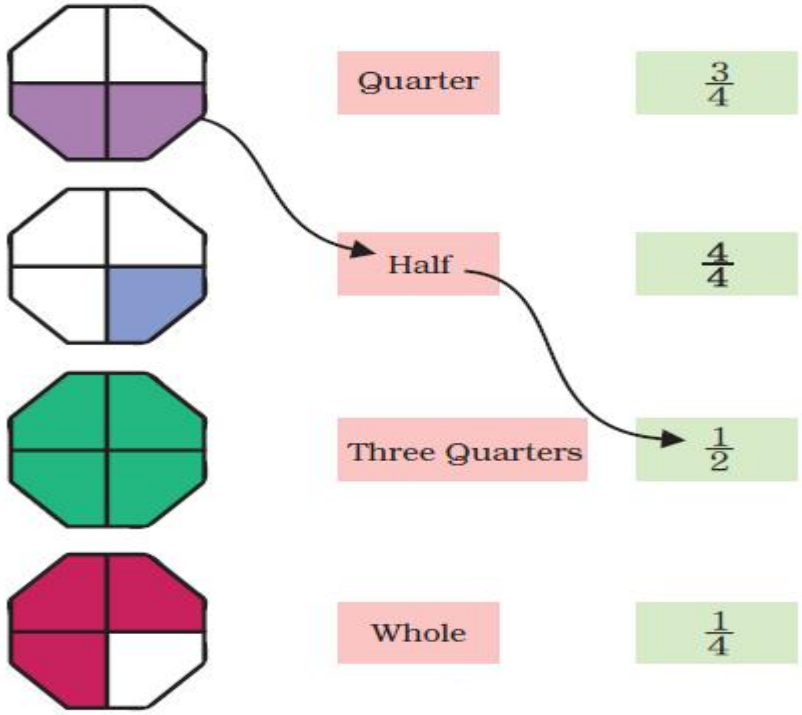
(e) Colour 1/4 of these shapes.



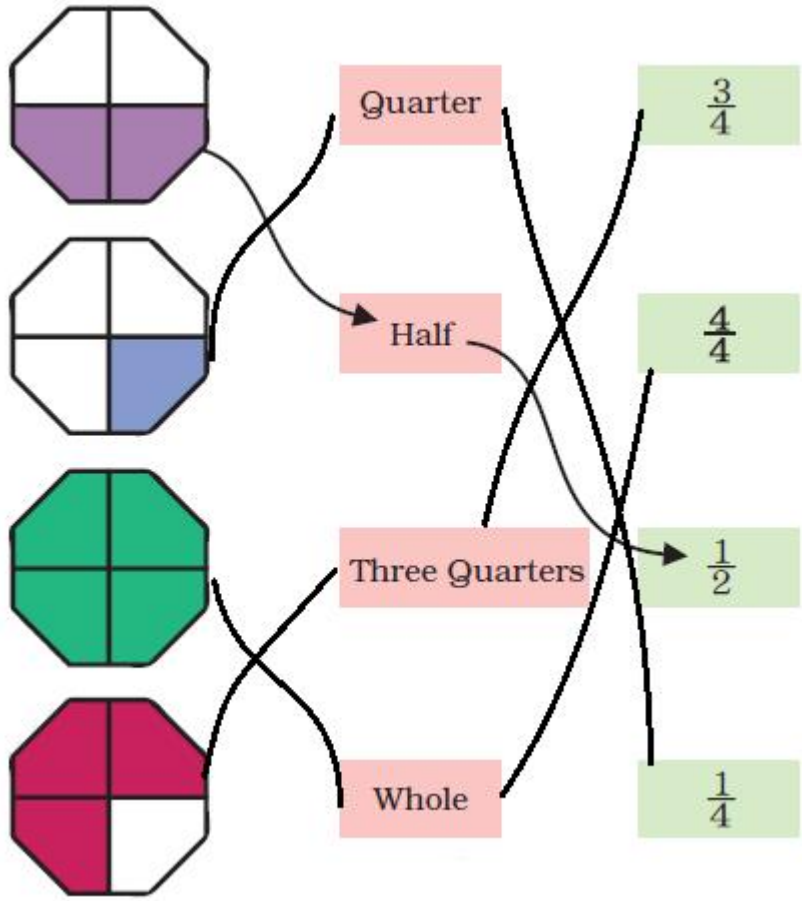
Answer:



(f) Match the coloured part as shown.

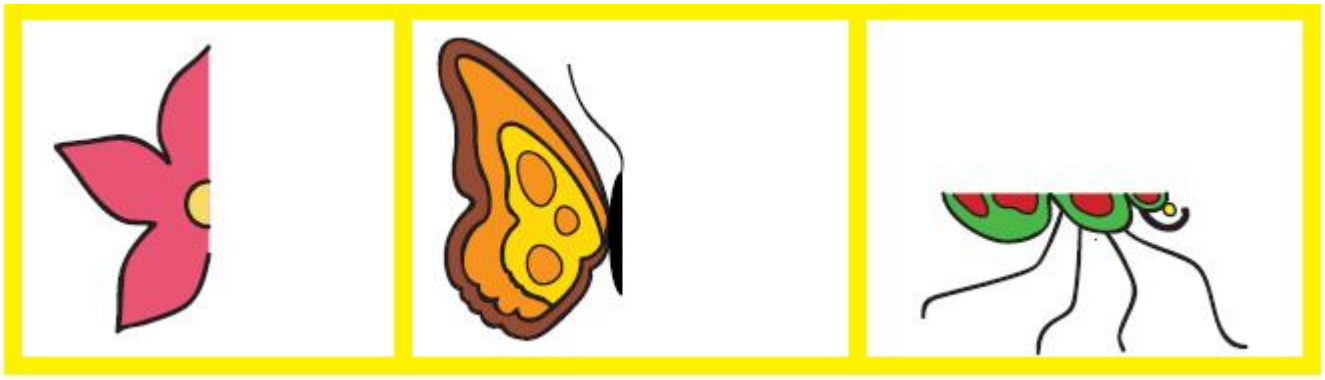


Answer:



(g) Make the other half

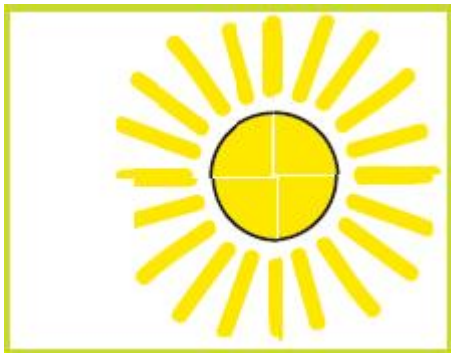
1/2 of the picture is drawn here. Can you complete the picture by drawing the other half?



Answer:

(h) This is a quarter of a picture. Can you complete it? How many more quarters will you draw to complete it?

Answer:



To complete the picture, three more quarters are required.

i.e, half and a quarter of a metre

Using your metre scale, cut a string of one metre.

On this string, mark the length 1/2 metre, 1/4 metre and 3/4 metre.

Using your string, draw a line of length ½ metre on the floor.

Q7.How many centimetres long is the line?

Answer:

We know

1 m = 100 cm

1/2 m on the floor = 100 cm ÷ 2

= 50 cm

Hence, 1/2 m on the floor = 50 cm long

Q8.So,

1/2 metre = …….. cm

1/4 metre = …….. cm

3/4 metre = …….. cm

Can you see that when we add 1/2 and 1/4, we get 3/4?

Answer:

1/2 metre = 100 × 1/2

= 50 cm

1/4 metre = 100 × 1/4

= 25 cm

3/4 metre = 100 × 3/4

= 75 cm

Now, adding 1/2 and 1/4, we get

1/2 + 1/4 = (2 + 1)/4

= 3/4

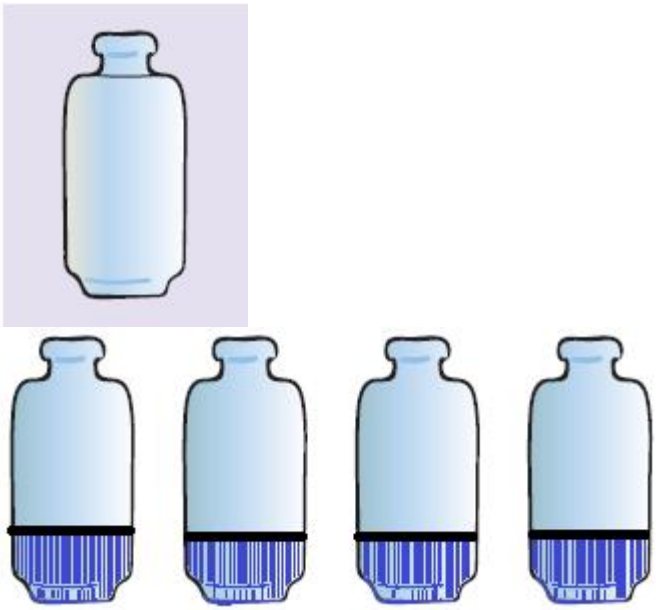
Hence, on adding 1/2 and 1/4, we get 3/4.

A bottle is full of milk, and it holds one litre. The milk is put into 4 other bottles so that each bottle has 1/4 litre of milk.

Q9.Shade the bottles to show the level of milk in each.

Answer:

The shaded portion shows the level of milk marked in the figure given below



Q10.How many millilitres of milk does each bottle have?

Answer:

We know,

1 litre = 1000 millimetres

Each bottle contains = 1/4 litre of milk

Hence, each bottle contains = 1000 mL ÷ 4

= 250 mL of milk.

Multiple-Choice Questions (MCQs):

Q1.What is the result when you divide a whole into two equal parts?

A) Thirds

B) Halves

C) Quarters

D) Fifths

Answer: B) Halves

Q2.If you have a pizza and you cut it into four equal parts, each part is called a:

A) Half

B) Quarter

C) Third

D) Full

Answer: B) Quarter

Q3.What fraction represents one-half?

A) 1/2

B) 1/4

C) 3/4

D) 1/3

Answer: A) 1/2

Q4.If you have a rectangle and you split it into two equal parts horizontally, each part is a:

A) Quarter

B) Half

C) Third

D) Whole

Answer: B) Half

Q5.When you divide a whole into four equal parts, each part is called a:

A) Third

B) Quarter

C) Half

D) Fifth

Answer: B) Quarter

Fill in the Blanks:

Q1.If you divide a pizza into two equal parts, each part is a _____.

Answer: half

Q2.Four equal parts of a whole are called _____.

Answer: quarters

Q3.In a fraction, the bottom number represents the _____ of parts into which a whole is divided.

Answer: number

Q4.If you cut a cake into four equal pieces, you have divided it into _____.

Answer: quarters

Q5.To represent one-fourth in a fraction, you write _____.

Answer: 1/4