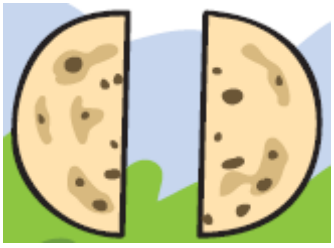
NCERT BOOK PAGE NO: 95

Half – Half

Question: 1

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.

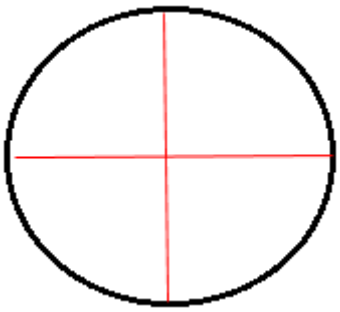


Half of Half

Question: 2

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:



NCERT BOOK PAGE NO: 95-96

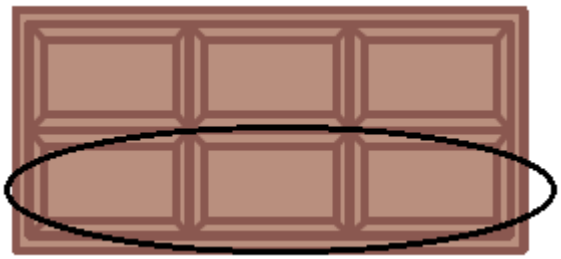
Half of Many Pieces

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

Question: 3

(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?

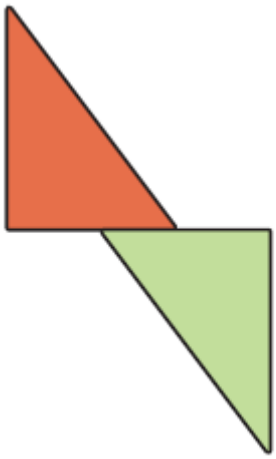
Answer: Rani gave half of her chocolate to her friend Reena. So, Rani was left with 3 pieces of chocolate.

NCERT BOOK PAGE NO: 96-97

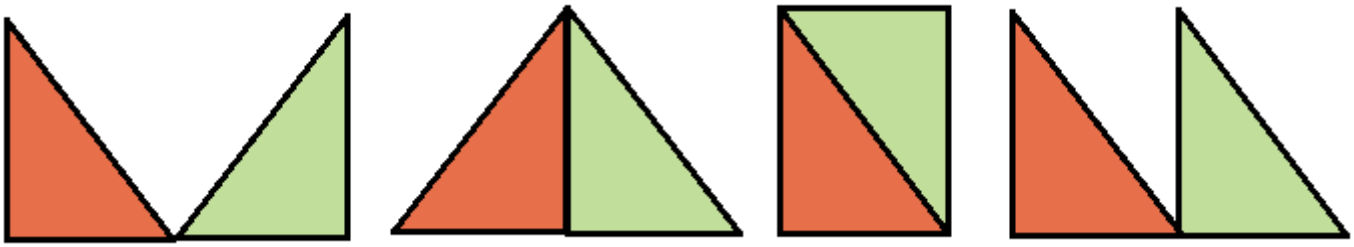
Many Shapes from a Half Sheet

Question: 4

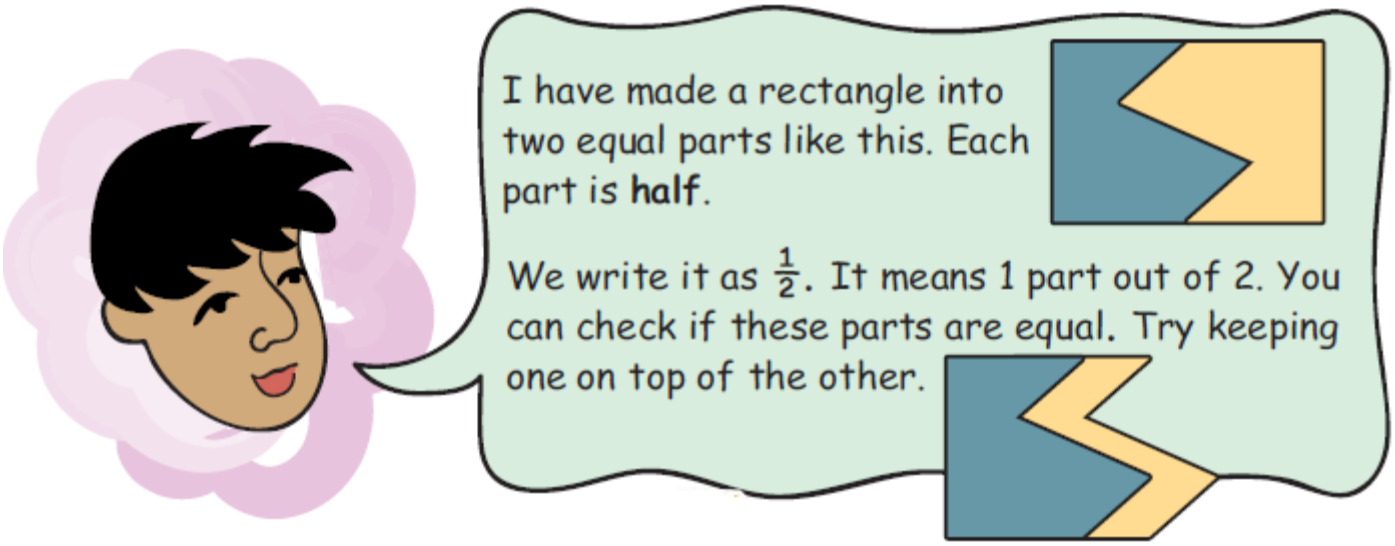
Draw different shapes using these triangles. One such shape is shown here.



Answer: Shapes using these triangles are shown below:



Many Ways to Cut into Half

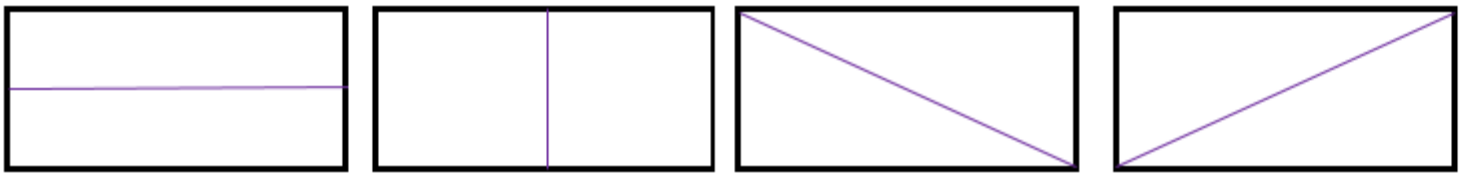


Question: 5

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.

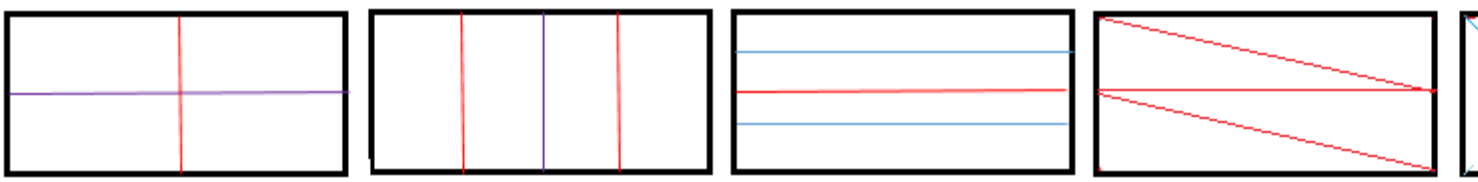
Each part of the rectangle is equal as it exactly coincides with the other part.



Question: 6

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.



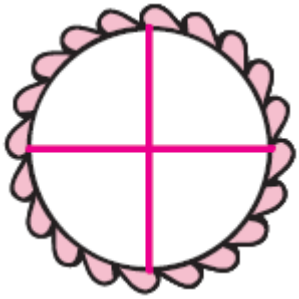
NCERT BOOK PAGE NO: 98

Cutting the Cake

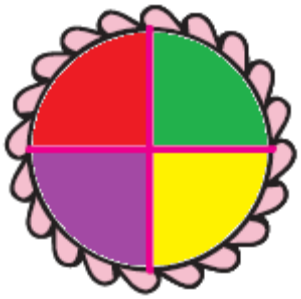
Rajni's father brought a cake. She divided the cake into 4 equal parts – for herself, her brother Raju, her father and her mother.

Question: 7

Colour each share with different colours.



Answer:



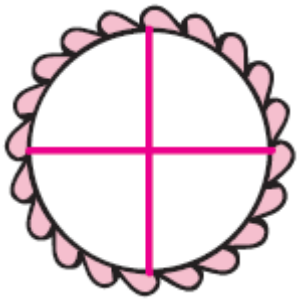
Question: 8

How much does each get?

Answer: Each get 1/4 of the cake.

Question: 9

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,

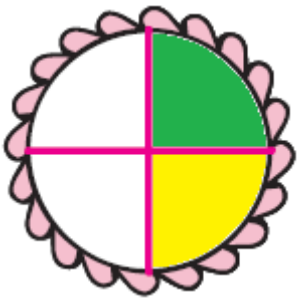
The cake that Rajni got = her share + her mother's share

= 1/4 + 1/4

= 2 / 4

= 1 / 2

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



Question: 10

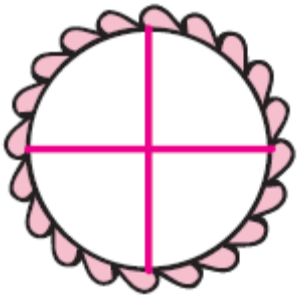
Out of 4 parts, Rajni will get _____ parts, which is equal to half of the cake.

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

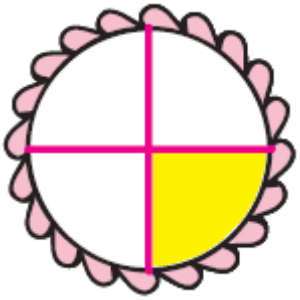
Answer: Rajni gets 2 parts of cake out of 4 parts. Hence, she can write it as 2/4 or ½.

Question: 11

Colour the share Raju got.

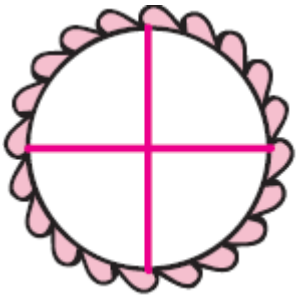


Answer: The shaded part shows 1/4 part of the cake, which Raju has got.

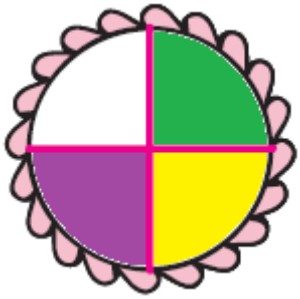


Question: 12

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



NCERT BOOK PAGE NO: 99

Greedy Kundu

Kundu is a greedy man. Whenever he goes to the market, he wants to get more and more but doesn't want to spend much money.

One day he wants to eat pumpkin *halwa* (sweet dish). He tries to buy a big pumpkin with only Rs10. He asks the first pumpkin seller the price of a big pumpkin.

First pumpkin-seller — $\frac{1}{4}$ of this pumpkin is for Rs 10.

Question: 13

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.

Question: 14

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

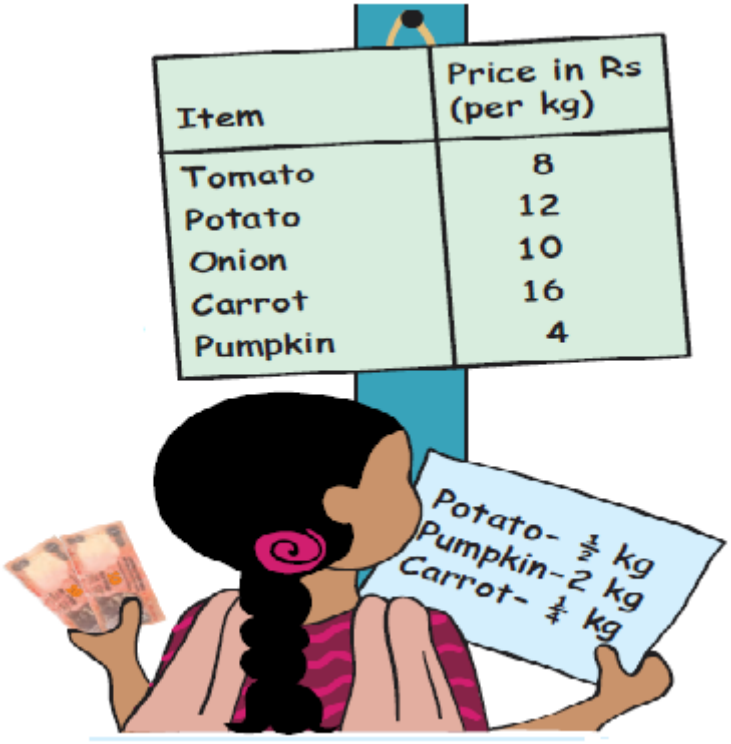
So, the cost of full pumpkin = Rs. 10 + Rs. 10

= Rs. 20

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

NCERT BOOK PAGE NO: 100

Using a Price List



Question: 15

(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

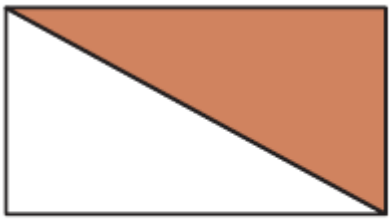
Hence, Keerthi can buy all the vegetables on her shopping list.

NCERT BOOK PAGE NO: 101-103

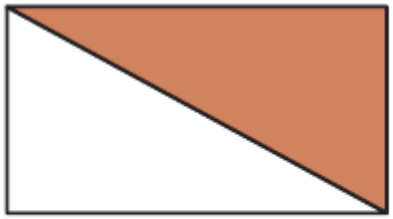
Practice Time

Question: 16

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



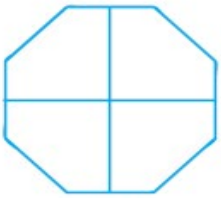
Answer:



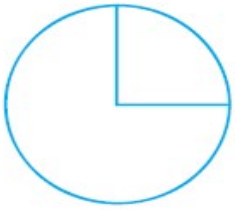
1/2

2/4

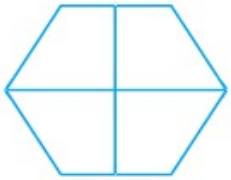
(b) Colour that part of the shape which is written below.



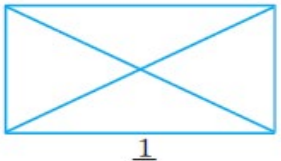
$\frac{1}{2}$



$\frac{3}{4}$



$\frac{3}{4}$

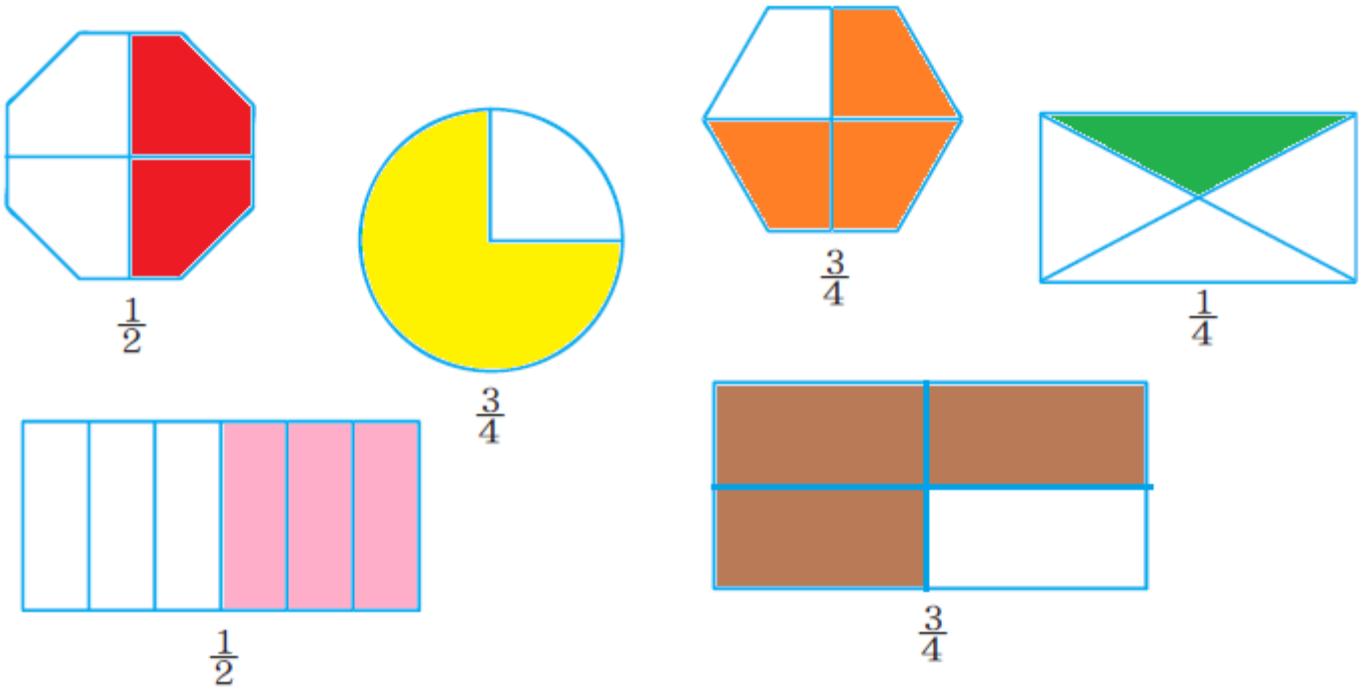


$\frac{1}{4}$

$\frac{1}{2}$

$\frac{3}{4}$

Answer:

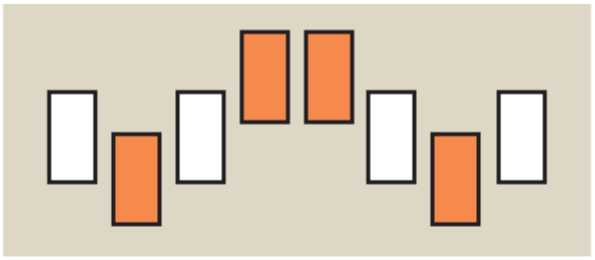


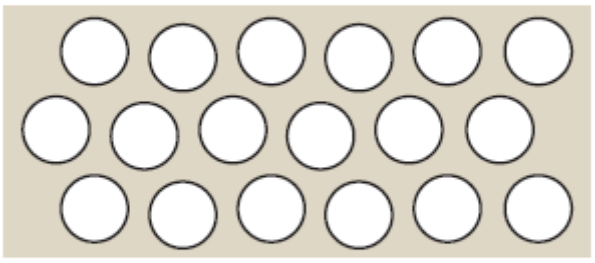
(c) Cut in half

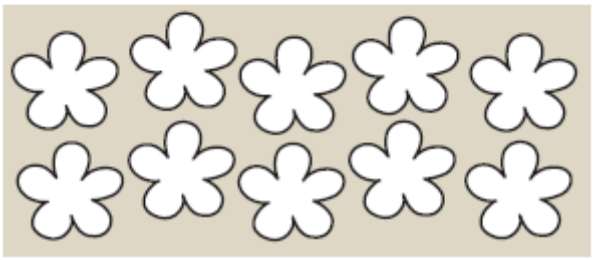
Draw a line which divides the below shapes into half.

Answer:

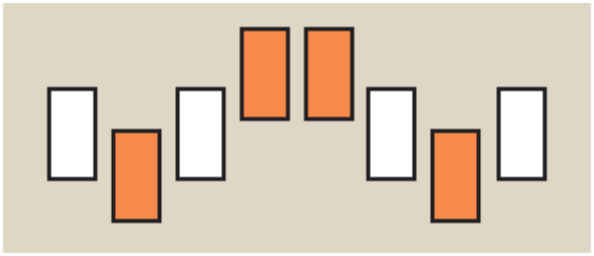
(d) Colour half the number of shapes as shown here.

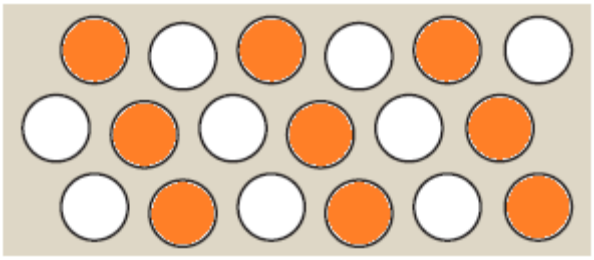


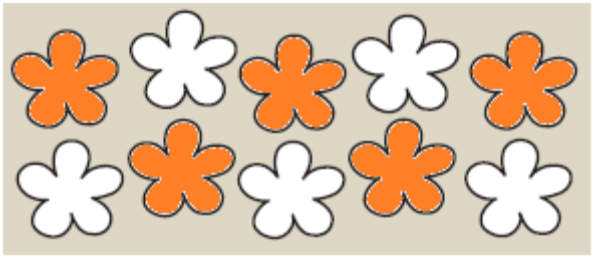




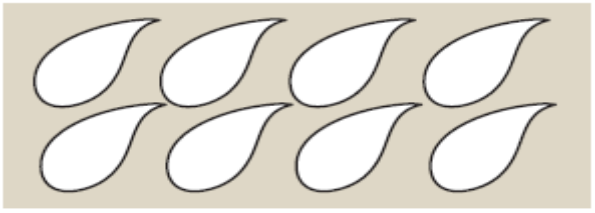
Answer:

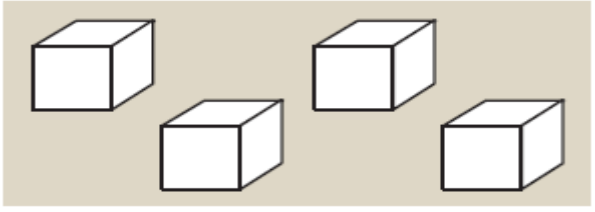




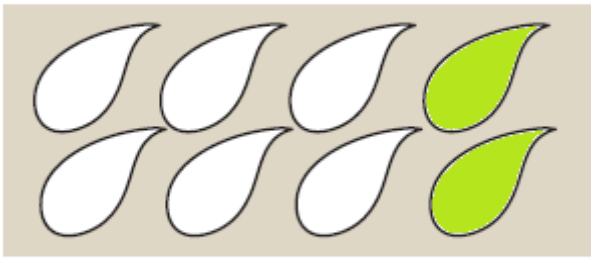


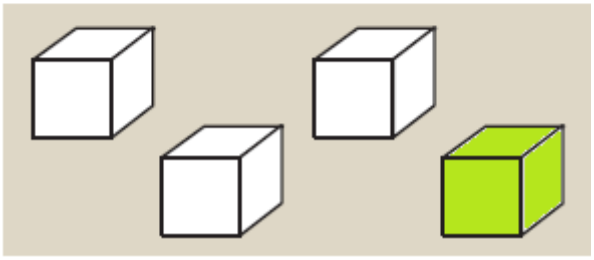
(e) Colour 1/4 of these shapes.



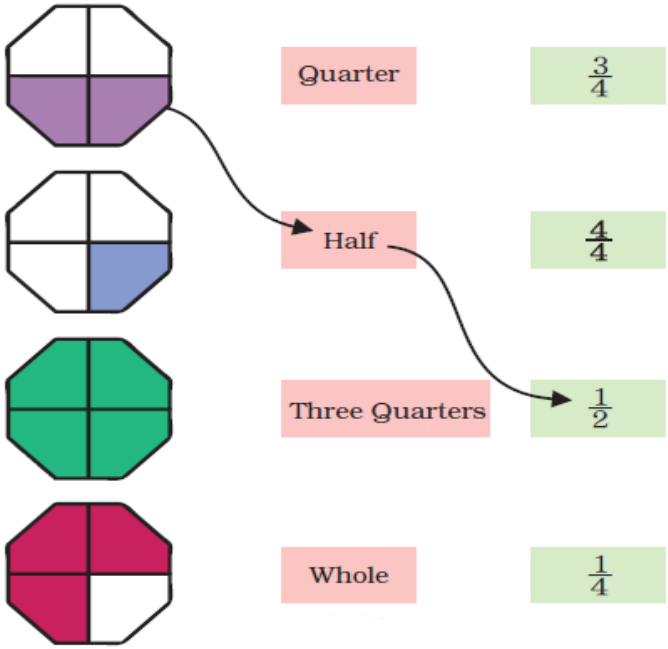


Answer:

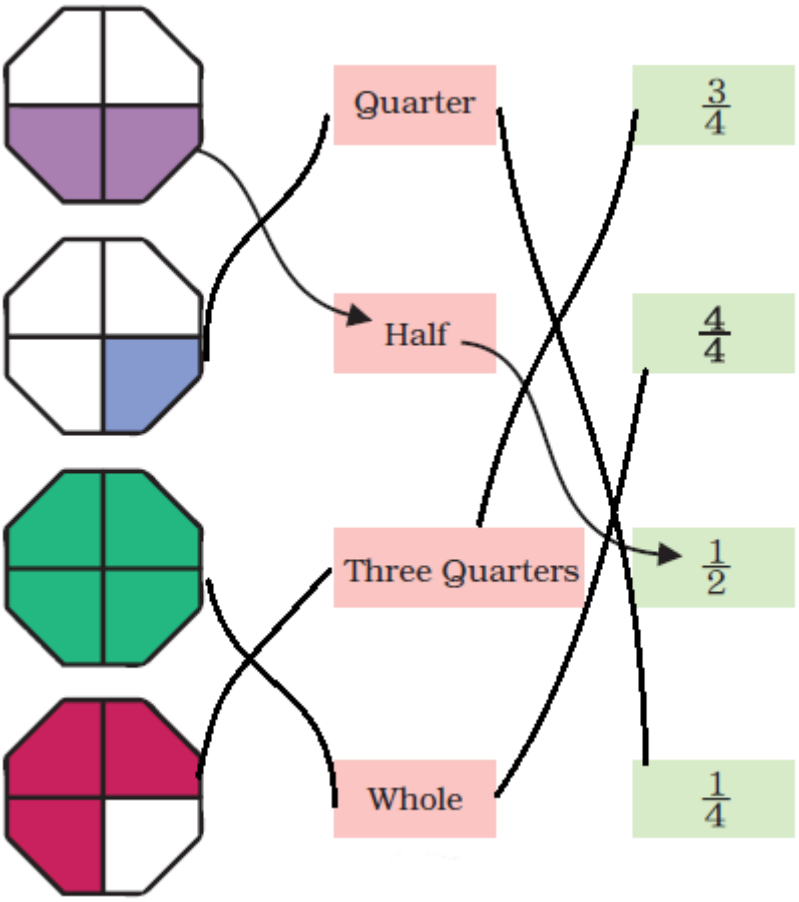




(f) Match the coloured part as shown.



Answer:



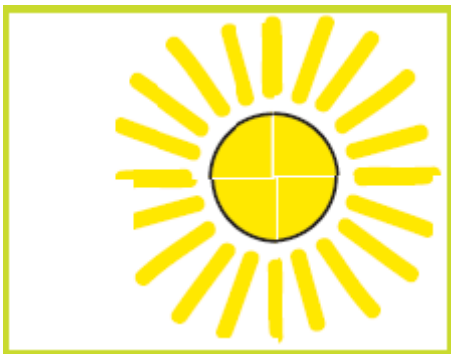
(g) Make the other half

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.

Question: 17

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

Question: 18

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.

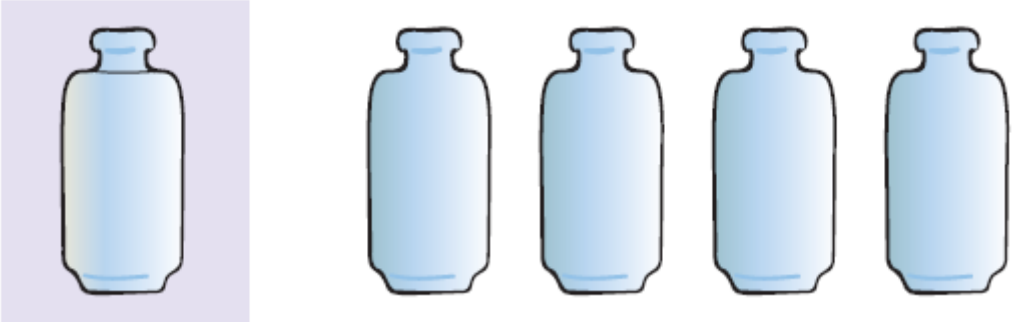
NCERT BOOK PAGE NO: 104

Sharing Milk

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.

Question: 19

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

Question: 20

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

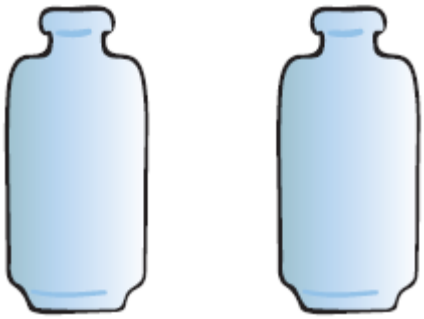
= 250 mL of milk.

Question: 21

Shan poured 1 litre of milk into two bottles so that the first bottle holds 3/4 litre and the other holds 1/4 litre.

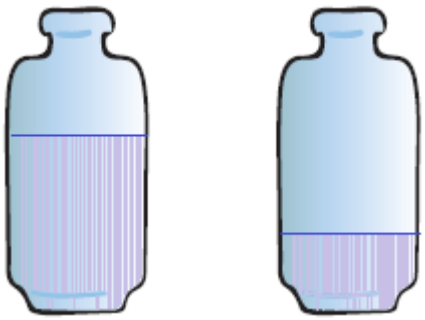
(a) Shade the level of milk in each bottle.

(b) How many millilitres of milk does each bottle hold?



Answer:

(a) The level of milk marked is shown in the below figure:



(b) We know 1 litre = 1000 millilitres

Quantity of milk in first bottle = 750 mL of milk

Quantity of milk in second bottle = 250 mL of milk

NCERT BOOK PAGE NO: 105

Balance the Weight

Question: 22

Choose from the weights above to make the two pans equal. In how many ways can you do it?

Answer: There are many ways to do it. Some of the ways are as follows:

(i) 1 kg + 500 gm + 500 gm

(ii) 1 kg + 500 gm + 250 gm + 250 gm

(iii) 1 kg + 500 gm + 200 gm + 200 gm + 100 gm

(iv) 1 kg + 250 gm + 250 gm + 250 gm + 200 gm + 50 gm

(v) 1 kg + 200 gm + 200 gm + 100 gm + 500 gm

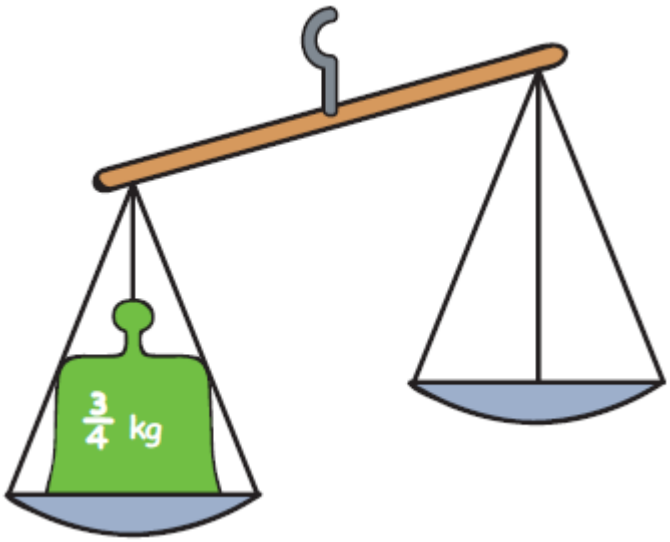
Question: 23

In how many different ways can you balance this weight of 3/4 kg?

1) ……..

2) ……..

3) ……



Answer:

3/4 kg = 1000 gm × 3/4

= 750 gm

1) 250 gm + 250 gm + 250 gm

2) 250 gm + 250 gm + 200 gm + 50 gm

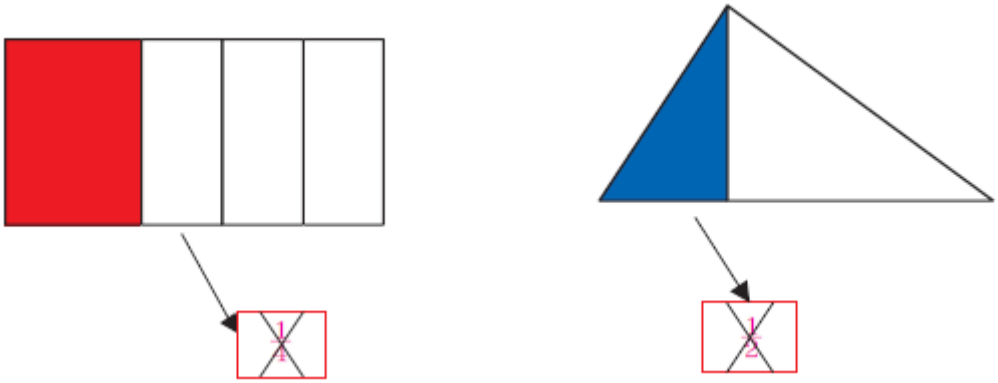
3) 500 gm + 250 gm

NCERT BOOK PAGE NO: 106

Why is it wrong?

Question: 24

Kannan shaded some parts, as shown in the figure. But his friend Mini says that it is wrong. Explain why it is wrong.



Answer: Out of 5 parts of the rectangle, only 2 parts are coloured. Hence, it is 2/5 part which is coloured. In the triangle, we cannot say how many parts of it are coloured, but it is clear that the coloured part is less than 1/2 part. Hence, 1/2 is wrong.

Practice Time

Question: 25

There are 60 mangoes, and 1/2 of them are ripe. How many mangoes are ripe?

Answer: Total number of mangoes = 60 mangoes

Hence, the number of mangoes which are ripe = 1/2 × 60

= 30 mangoes.

Therefore, 30 mangoes are ripe.

Question: 26

There are 32 children, and 1/2 of them are girls. How many children are boys?

Answer: Total number of children = 32

Half of them are girls, then remaining half will be obviously boys

Hence, half of 32 = 1/2 × 32 = 16

Therefore, the number of boys is 16.

Question: 27

There are 20 stars. A quarter of them is red. How many stars are red? How many stars are not red?

Answer: Total number of stars = 20 stars

1/4 stars are red

Hence, the number of red stars = 1/4 × 20

= 5 stars

Therefore, the number of stars which are red = 5 stars

Out of 20 stars, if 5 stars are red, then obviously remaining 15 stars are not red.

Therefore, the number of stars which are not red = 15 stars.

Question: 28

Ravi wants a pencil. It costs Rs. 2. He gives a one-rupee coin, one half-rupee coin and one quarter-rupee coin. Is it enough?

Answer: Total amount that Ravi gave = (1 + 0.50 + 0.25)

= Rs. 1.75

But, the cost of the pencil = Rs. 2

Money required to buy a pencil = Rs. (2.00 – 1.75)

= Rs. 0.25

Therefore, still, Rs. 0.25 is required to buy a pencil.

Hence, the money given by Ravi is not enough.