



Fractions

Half

Tony and Nandu were hungry. Salma had one *bhakari*. She quickly made two pieces of the *bhakari* and gave it to them.

Tony : I got less of the *bhakari*.

Nandu : That's true. I really got the bigger piece.

Salma : Oh, I'm sorry! It's because I broke it in a hurry. I have a *puri*, too. I'll divide it equally into two parts for you.

Tony : Yes, this time we have equal pieces.

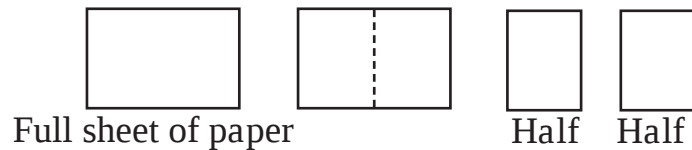
Sonu : Both of you got exactly half the *puri*.



Sonu has a large sheet of paper. Both Sonu and Salma want to draw a picture.

Sonu : Let's divide this sheet into two equal parts.

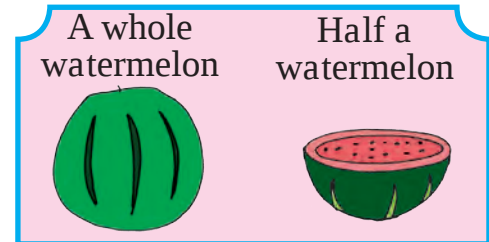
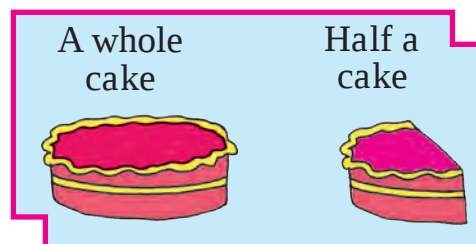
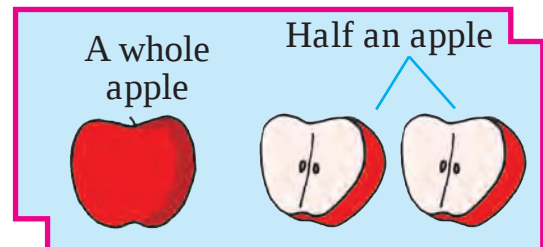
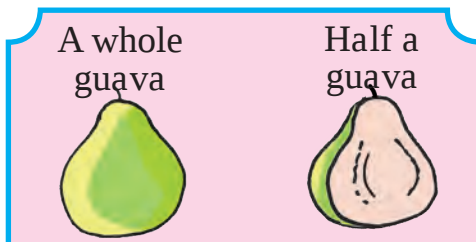
Tony : Come, I'll do it.



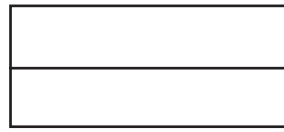
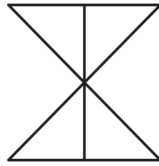
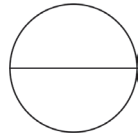
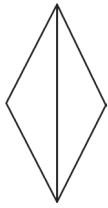
Sonu and Salma both got half a sheet of paper.

When something is divided into two equal parts, each of the parts is a half of that thing.

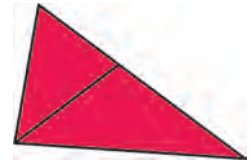
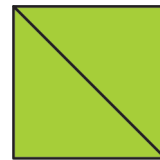
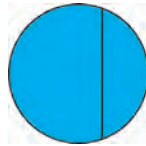
◆ Observe the pictures given below.



◆ Colour a half of each of the pictures given below.



◆ A line has been drawn in each of the figures given below. Put a tick mark (✓) under the figures which get divided into two equal parts by that line.



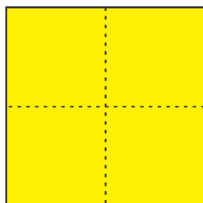
A quarter

Tai : Salma, Nandu, Sonu, Tony, come here all of you. I have a large sheet of kite paper. Each of you, use it to make a kite for yourself.

Tony : It means that we will have to make 4 equal parts of that paper.

Nandu : I'll make the four equal pieces.

Tai : Excellent. Each of these parts is a quarter of the big sheet of paper.



A quarter part



When something is divided into four equal parts, each of the parts is a quarter of that thing.

◆ Observe the pictures below to understand the meaning of 'quarter'.

A whole cucumber



A quarter of a cucumber



A whole watermelon



A quarter watermelon



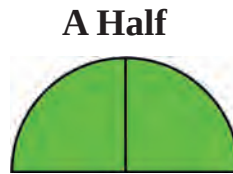
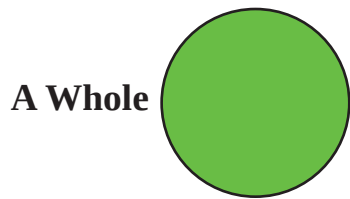
A whole cake



A quarter of a cake



■ A whole, a half and a quarter

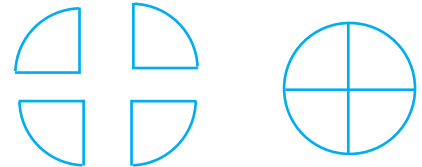


If we divide a half into halves again, we get two quarters.

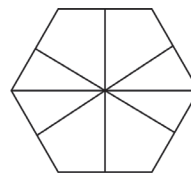
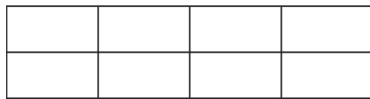
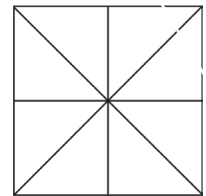
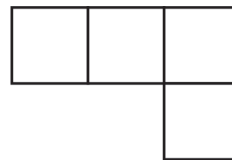
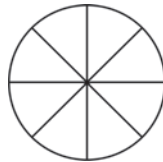
We have seen already that when a whole is divided into four equal parts, we get a quarter.

If we put two quarters together, we get a half.

Similarly, if we put four quarters together, we will get a whole.

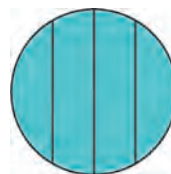


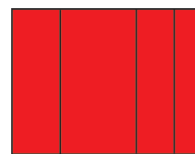
◆ Colour a quarter part of each picture below.

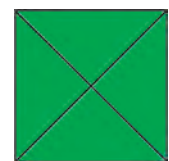


◆ In each of the pictures below, lines have been drawn to divide the figure into four parts. If a figure is divided into equal parts, put a tick (✓) mark under it. If not, put a (×) cross.

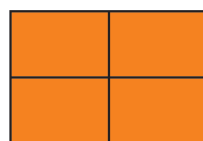


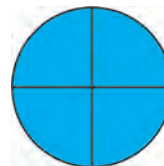


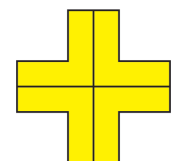












Three quarters



Nandu : I have drawn lines in this picture so that it gets divided into four equal parts. Three of these parts have been coloured. In other words, three quarters of the paper has been coloured.

If a whole is divided into four equal parts and we take three of them, the part that we have taken is called 'three quarters'.

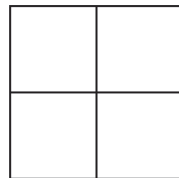
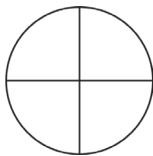
Half a guava A quarter of a guava A half and a quarter make three quarters.



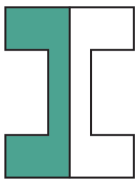
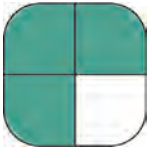
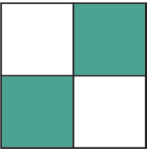
Three quarters may also be called a three quarter part of the whole.

When we take away a quarter from a whole, what we have left is also three quarters.

◆ Colour three quarters of the pictures below.



◆ Say whether the coloured and the white parts of the figures below are a quarter, a half or three quarters.

Figure						
Coloured part	Half					
White part						

A quarter, a half, and three quarters of a collection

The picture shows a collection of eight balls.

We divide the collection of eight balls into two equal parts.

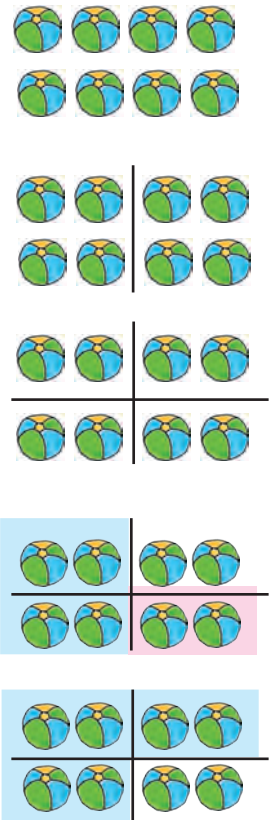
Each part is a half of the collection of eight balls. There are four balls in each part.

In this picture, a collection of eight balls has been divided into four equal parts. Each part is a quarter of the collection. Each quarter contains two balls. When a half of a collection is halved again, what do we get?

A half and a quarter together make three quarters. Hence, a quarter and a half of a collection together make three quarters of that collection.

The picture shows a three quarter part of a collection of eight balls. When a quarter is taken away from a whole, we get a three quarter part.

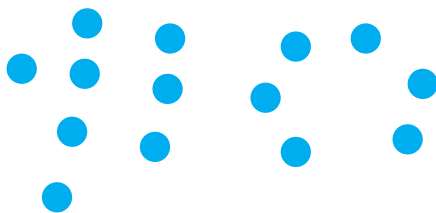
When three quarters of a collection are brought together, what is the name of the part we get?



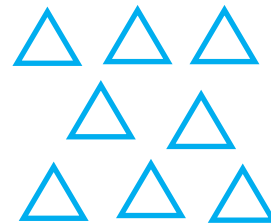
◆ Show a half of this collection.



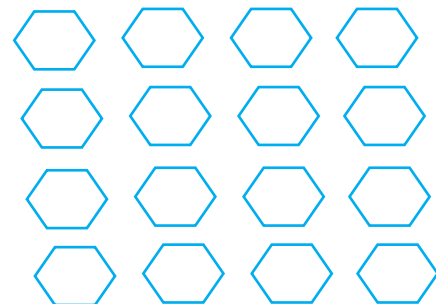
◆ Show a half of the collection given below.



◆ Colour three quarters of the collection shown below.



◆ Show a quarter of the collection given below. Colour the remaining part and say what part of the whole collection it is.



Using Half, Quarter, Three quarters

◆ **Study the following examples.**

- ❖ The length of the school ground is 20 metres. Half the length of the ground is half of 20 metres, which means 10 metres. A quarter of the length of the ground is 5 metres and three quarters is 15 m.
- ❖ One hour has 60 minutes. A half hour/ Half an hour has 30 minutes.
- ❖ A quarter of 4 litres is 1 litre.
- ❖ Jivraj has 200 rupees. He gave three quarters of that amount to Meena. It means that Jivraj gave Meena 150 rupees.
- ❖ One dozen bananas means 12 bananas. Half a dozen bananas means 6 bananas. Three quarters of a dozen bananas means 9 bananas.

◆ **Solve the following problems.**

- ❖ Anand is 8 years old today. Shruti is half as old as Anand. Then how old is Shruti ?
- ❖ Sonali has a length of 10 metres of cloth. She gave half of it to Ramu. What length of the cloth does she have left? How much did she give Ramu?
- ❖ Anagha has a hundred rupees. If she gives a quarter of that amount to her brother, what is the amount of money she gives him ?
- ❖ A rope has a length of 16 metres. If a three-quarter length is to be cut off, what length should be marked off from one end ?
- ❖ It takes 6 hours to travel from Solapur to Nanded. It takes half that time to reach Latur from Solapur. How long does it take to travel from Solapur to Latur ?

◆ **How much is each of the following ?**

- ❖ Half of a 24 metre length of cloth.
- ❖ A quarter part of 80 rupees.
- ❖ Three quarters of 40 kilograms of sugar.
- ❖ A quarter of 12 litres of kerosene.
- ❖ Half of 4 hours 40 minutes.
- ❖ Three quarters of 60 rupees.