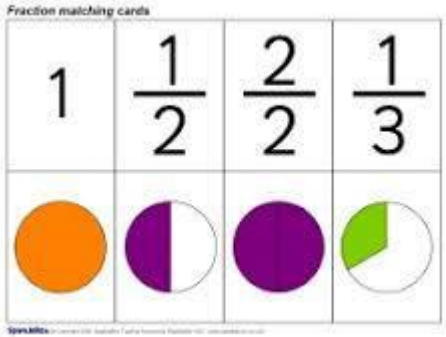
Maths - Week 3

Fractions



Lesson 1 - Unit Fractions

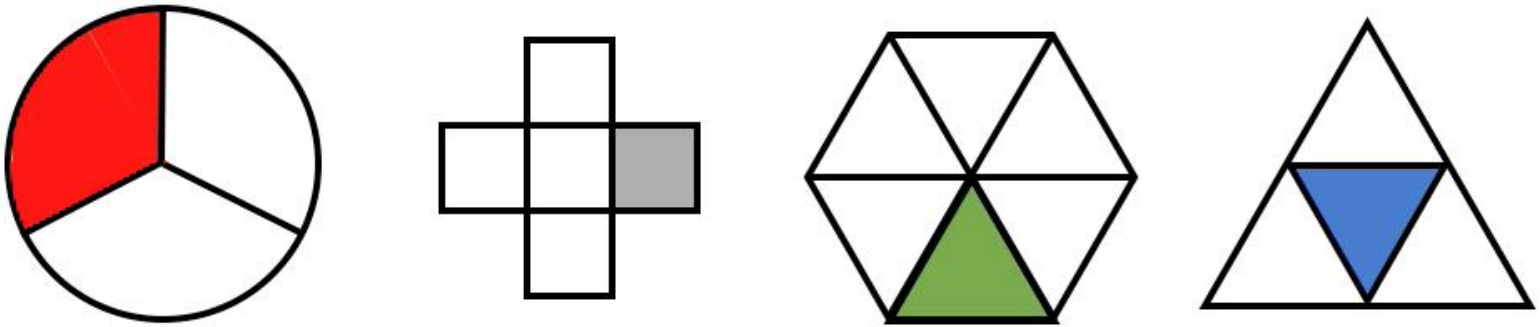
In this lesson we are looking at unit fractions. Unit fractions are fractions that have 1 at the top of the fraction, eg: $\frac{1}{4}$

https://vimeo.com/425799745

BBC Bitesize have provided additional input that your child might benefit from watching. The bitesize links relate to the day's lesson objective.

https://www.bbc.co.uk/bitesize/articles/z4j83j6

What do you notice about these shapes?



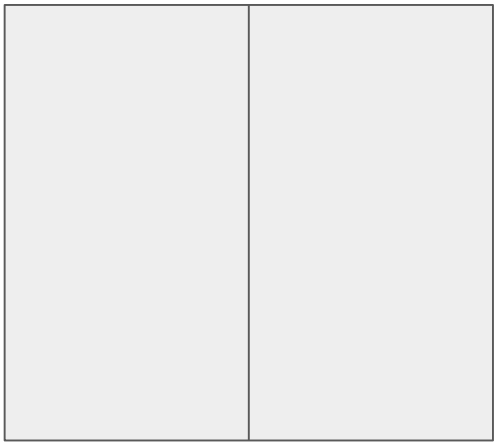
You might have said:

They are all split into equal parts.

They all show different fractions.

They all have 1 part shaded in.

Let's look at this shape.

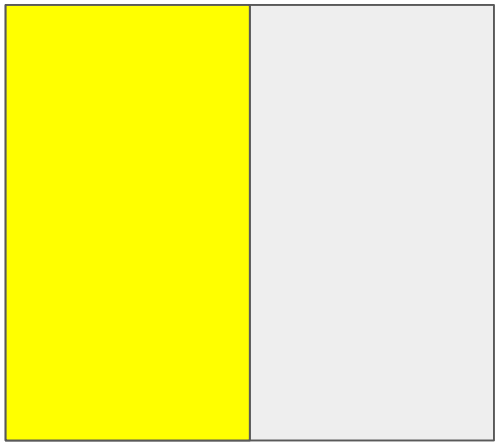


This is a square that has been split into 2 parts.

So if I'm thinking about this as a fraction I know that 2 will go on the bottom, because this is how many parts there are.

$$\frac{?}{2}$$

Now I have shaded some of my shape.



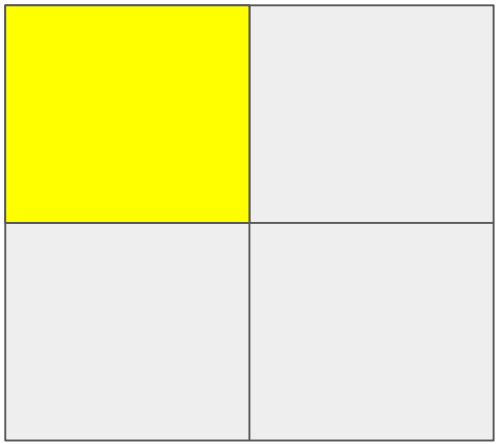
We already know 2 goes at the bottom of the fraction as this is how many total parts there are.

But now we can see that 1 part of the shape has been shaded, so the top of the fraction will be 1.

$$\frac{1}{2}$$

There are 2 equal parts.
There is 1 part shaded.
$\frac{1}{2}$ is shaded.

Using what we now know, can you write the fraction for this shape here.



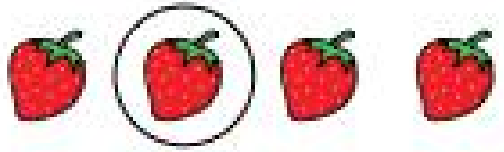
There are _____ equal parts.
There is _____ part shaded.
_____ is shaded.

$$\frac{?}{?}$$

Can you explain how you know this?

There are ____ equal parts.
There is ____ part shaded.
____ is shaded.

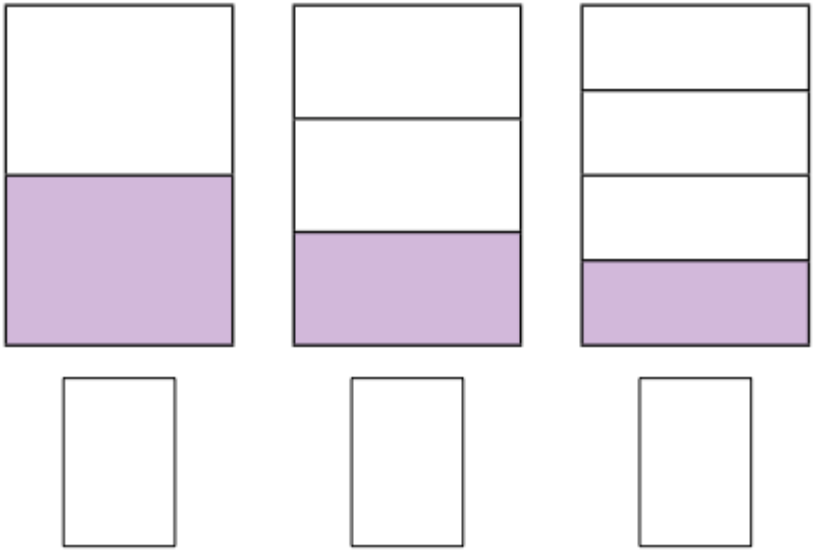
There are ☐ equal parts.



There is ☐ part circled.

☐ is circled.

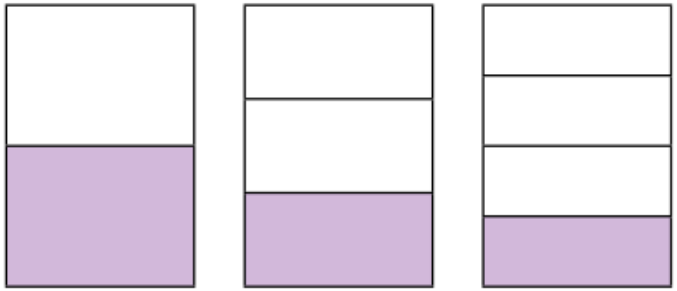
What fraction of each shape is shaded?



What is the same about the fractions?

What is different about them?

What fraction of each shape is shaded?



$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

What is the same about the fractions?

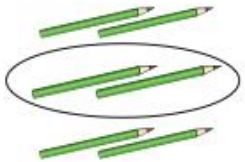
What is different about them?

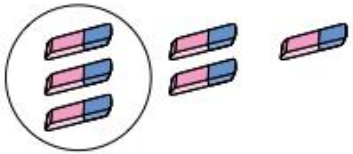
You probably noticed that each of these fractions have 1 at the top of them.

This means that they are unit fractions.

Try this challenge now!

Match the objects to the unit fractions.





$\frac{1}{2}$

$\frac{1}{3}$

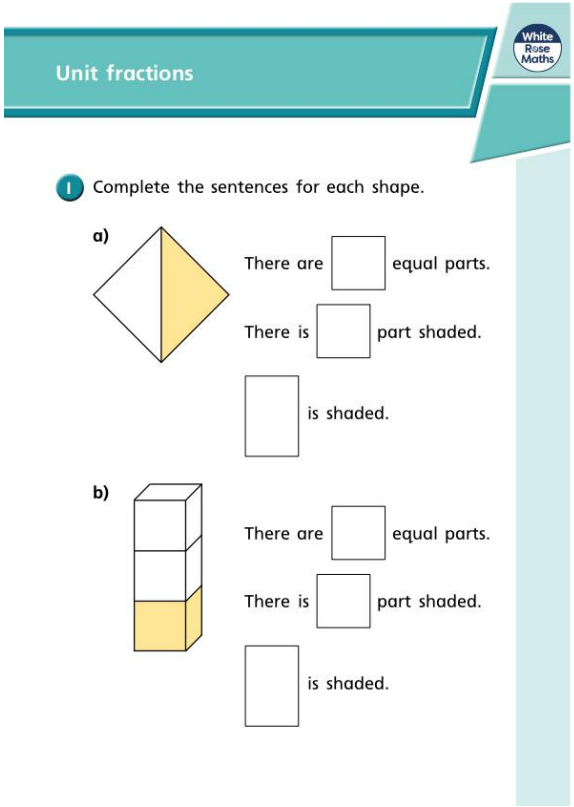
$\frac{1}{4}$

$\frac{1}{5}$

Top tip!

Remember to think about them as equal parts.

Now you can complete the optional sheet for more practice.



Unit fractions

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1 Complete the sentences for each shape.

a)

There are ☐ equal parts.

There is ☐ part shaded.

☐ is shaded.

b)

There are ☐ equal parts.

There is ☐ part shaded.

☐ is shaded.

2 There are ☐ equal parts.

There is ☐ part circled.

☐ is circled.

3 Tick the shape that has $\frac{1}{2}$ shaded.

☐ ☐ ☐

4 Tick the shape that has $\frac{1}{3}$ shaded.

☐ ☐ ☐

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Lesson 2 - Non unit fractions

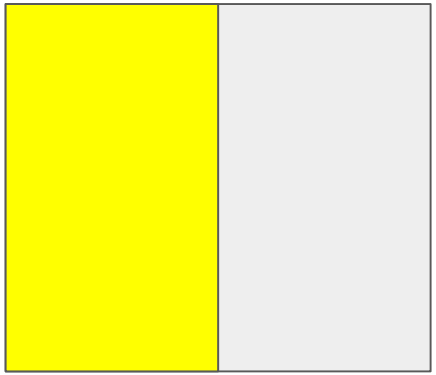
In today's lesson we are going to be looking at non unit fractions. As you might have guessed after yesterday's lesson, these are fractions with a number other than 1 at the top of them.

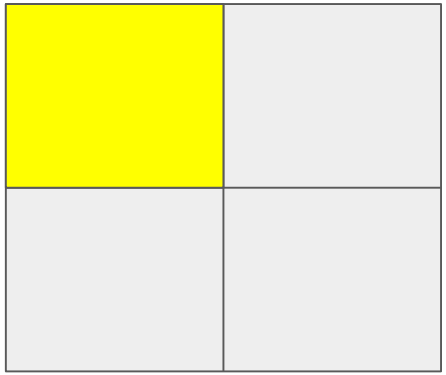
https://vimeo.com/425799860

Bitesize -https://www.bbc.co.uk/bitesize/articles/z6cbhcw

Recap from last lesson!

Can you write the fractions below each shape?

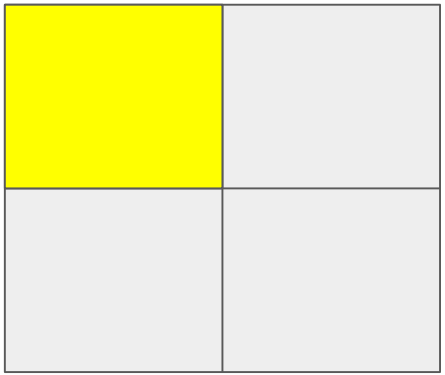




There are _____ equal parts.
There is ___ part shaded.
___ is shaded.

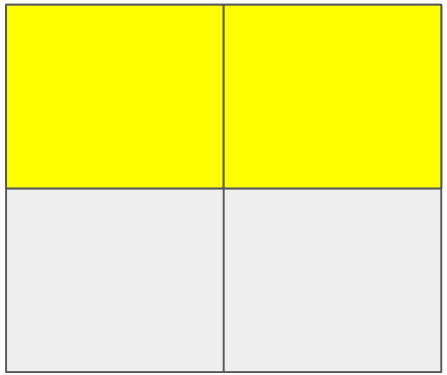
Remember:
The bottom part of the fraction is how many parts there are.
The top part is how many parts are shaded.

The $\frac{1}{4}$ shape has been done for you. Can you try the other one?



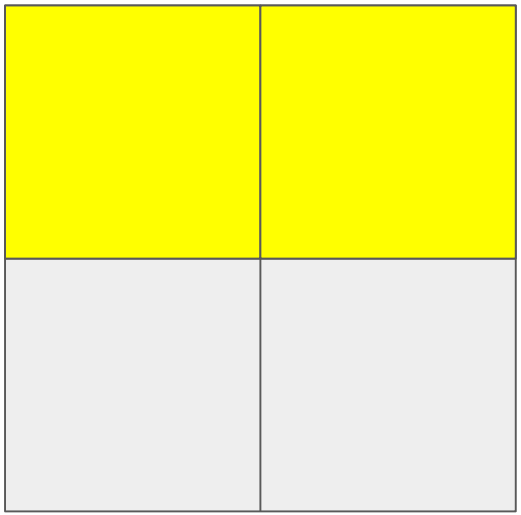
$= \frac{1}{4}$

There are 4 equal parts.
There is 1 part shaded.
$\frac{1}{4}$ is shaded.



$= \frac{?}{?}$

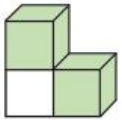
There are ___ equal parts.
There is _____ part shaded.
___ is shaded.



There are 4 equal parts.
There are 2 parts shaded.
2 is shaded.

$\frac{2}{4}$

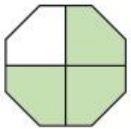
Complete the sentences.

a) 

There are 3 equal parts.

There are 2 parts shaded.

☐ is shaded.

b) 

There are ☐ equal parts.

There are ☐ parts shaded.

☐ is shaded.

c) 

There are ☐ equal parts.

There are ☐ parts shaded.

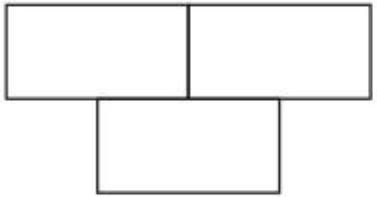
☐ is shaded.

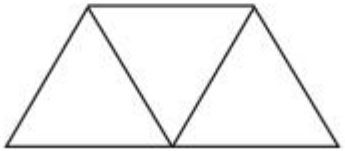
Give these ones a go.

Question a) has the first 2 sentences done for you to help.

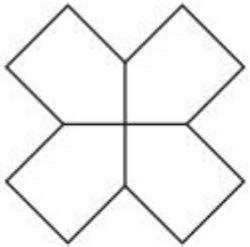
Remember the bottom of the fraction is the number of equal parts and the top is how many parts are shaded.

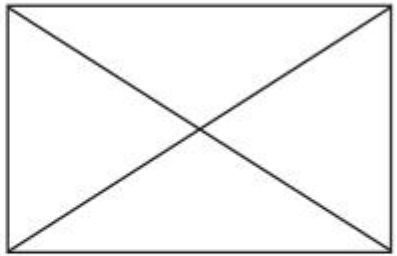
Colour $\frac{2}{3}$ of each shape.

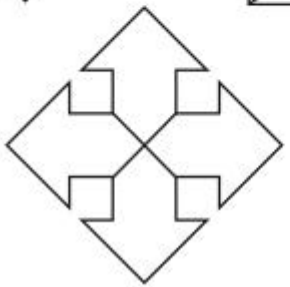




Colour $\frac{3}{4}$ of each shape.







A shape has 3 equal parts.

a) What fraction is shaded if there are 2 parts shaded?

 is shaded.

Burlington Bear thinks the answers is $\frac{3}{2}$

Can you spot his good mistake?

The fractions we have looked at today all have numbers other than 1 at the top of them.

We call these non-unit fractions.
Can you put the fractions below into the right sections?

Write the fractions in the table.

$\frac{1}{3}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{2}{3}$

Unit fractions	Non-unit fractions

Now you can complete the optional sheet for more practice

Non-unit fractions

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1 Complete the sentences.

a) 

There are 3 equal parts.

There are 2 parts shaded.

☐ is shaded.

b) 

There are ☐ equal parts.

There are ☐ parts shaded.

☐ is shaded.

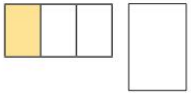
c) 

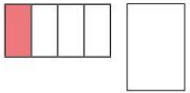
There are ☐ equal parts.

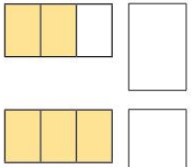
There are ☐ parts shaded.

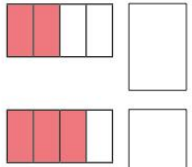
☐ is shaded.

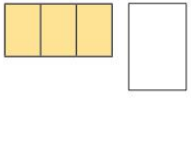
2 What fraction of each shape is shaded?

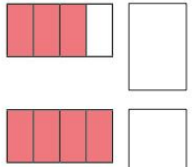
a) 

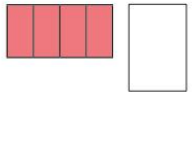
b) 



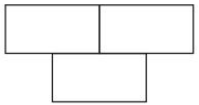


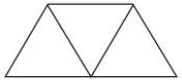






3 Colour $\frac{2}{3}$ of each shape.





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Lesson 3 - Find a half

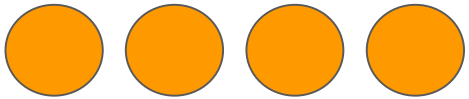
In the last two lessons we looked at finding fractions of shapes.

In this lesson we will build on this and find fractions of numbers.

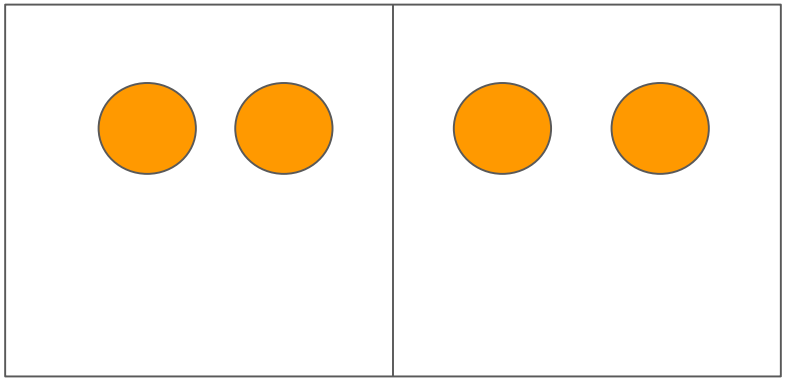
https://vimeo.com/425799938

Bitesize - https://www.bbc.co.uk/bitesize/articles/zwphjsg

Here are my 4 counters.
Can you split them into 2 equal groups?



Now I've shared them into 2 equal groups.

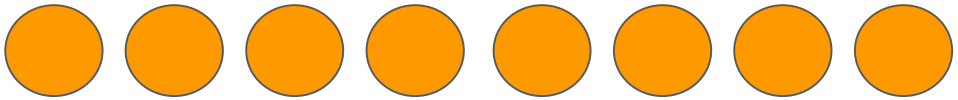


There are 4 counters.
The counters are shared equally between 2 groups.
There are 2 counters in each group.

$\frac{1}{2}$ of 4 = 2

When we share a number into 2 equal groups, we are essentially **halving.**

See if you can find half of these counters using what we just learnt.



There are _____ counters.
The counters are shared equally between _____ groups.
There are _____ counters in each group.

$\frac{1}{2}$ of ____ = ____

Burlington Bear wants to share 13 counters between him and his friend.

Can he do this?
Show your working out to prove it.

Can you find half of these numbers?
Use counters if you have them and working out to help you.

$\frac{1}{2}$ of 10 =

$\frac{1}{2}$ of 14 =

$\frac{1}{2}$ of 20 =

Ron has run 20 m.

Rosie has run half that distance.

a) Draw an arrow on the running track to show where Rosie is.

a) How far has Rosie run? ☐ m

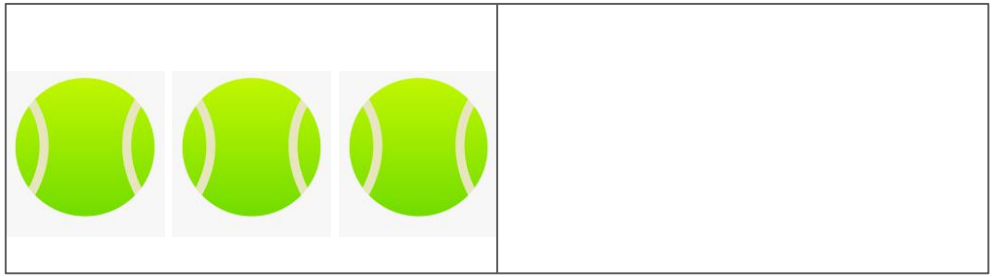
Mr Johnson has some tennis balls.

Unfortunately he has lost some of them and now he only has half left, which you can see below.

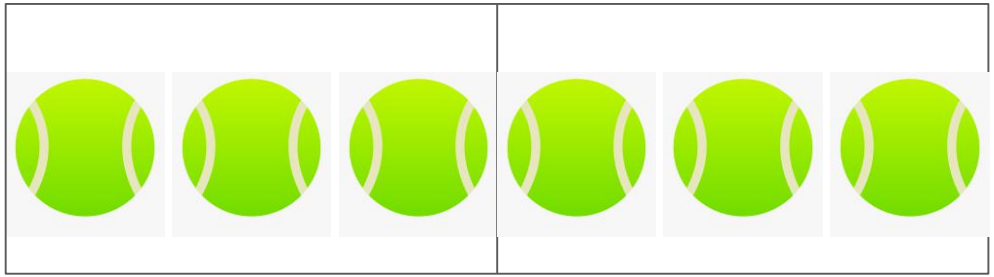
Can you figure out how many he had to start off with?

Top tip!

Think about how we found half earlier in this lesson with 2 equal groups.



To work this out we can draw out 2 equal boxes to start off.
We know that the tennis balls we have are half so we can put them in one of the boxes.
We also know that these are equal boxes so the other box must have the same amount in.



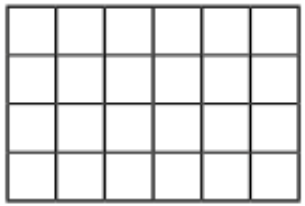
We add these all up and it gives us our answer of 6!

Challenge!

Colour $\frac{1}{2}$ of each shape.

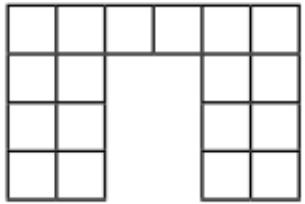
Use the shapes to help you complete the number sentences.

a)



$\frac{1}{2}$ of ☐ = ☐

b)



$\frac{1}{2}$ of ☐ = ☐

Challenge 2!

$\frac{1}{2}$ of $\square$ = 10

$\frac{1}{2}$ of $\square$ = 7

Top tip!
Think about how we solved the tennis ball problem.

Now you can complete the optional sheet for more practice

Find a half

1 Here are 6 counters.

a) Share the counters into 2 equal groups.

Group 1	Group 2

b) Complete the sentences.

There are 6 counters.

The counters are shared equally between ☐ groups.

There are ☐ counters in each group.

$\frac{1}{2}$ of 6 is equal to ☐

2 Use counters.

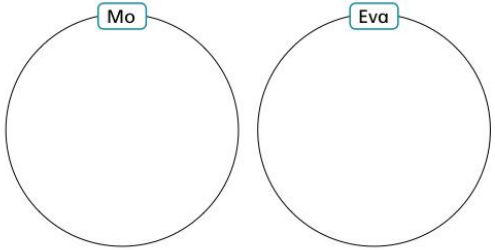
a) Can you share 10 counters into 2 equal groups? _____

b) Can you share 11 counters into 2 equal groups? _____

Talk about it with a partner.

3 Mo and Eva have 12 tennis balls.

Share the tennis balls equally between Mo and Eva.



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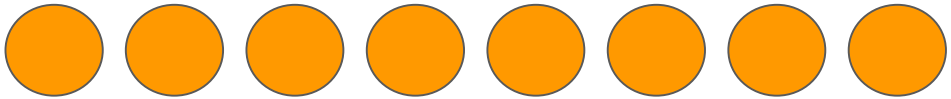
Lesson 4 - Find a quarter

In the last lesson you built on this week's learning by finding a half of a number. Today we will be using the same methods to find a quarter of a number.

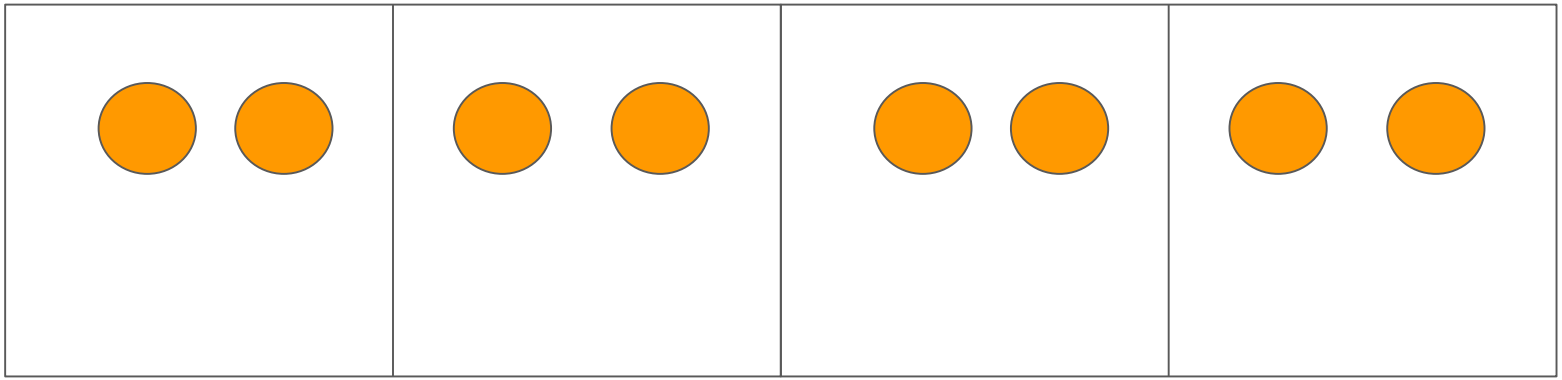
https://vimeo.com/425800005

Bitesize -https://www.bbc.co.uk/bitesize/articles/zfx6dp3

Today I have 8 counters.
Can you split them into 4 equal groups?



Now I've shared them into 4 equal groups.

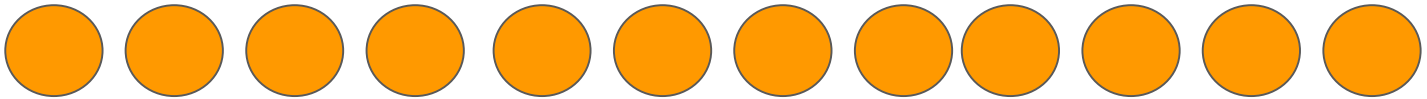


There are 8 counters.
The counters are shared equally between 4 groups.
There are 2 counters in each group.

$\frac{1}{4}$ of 8 = 2

When we share a number into 4 equal groups, we are **halving and then halving again.**

See if you can find a quarter of these counters using what we just learnt.



There are _____ counters.
The counters are shared equally between _____ groups.
There are _____ counters in each group.

$\frac{1}{4}$ of ____ = ____

Burlington Bear wants to share 22 counters between him and his friend.

Can he do this?
Show your working out to prove it.

Can you find a quarter of these numbers?
Use counters if you have them and working out to help you.

$\frac{1}{4}$ of 16 =

$\frac{1}{4}$ of 24 =

$\frac{1}{4}$ of 28 =

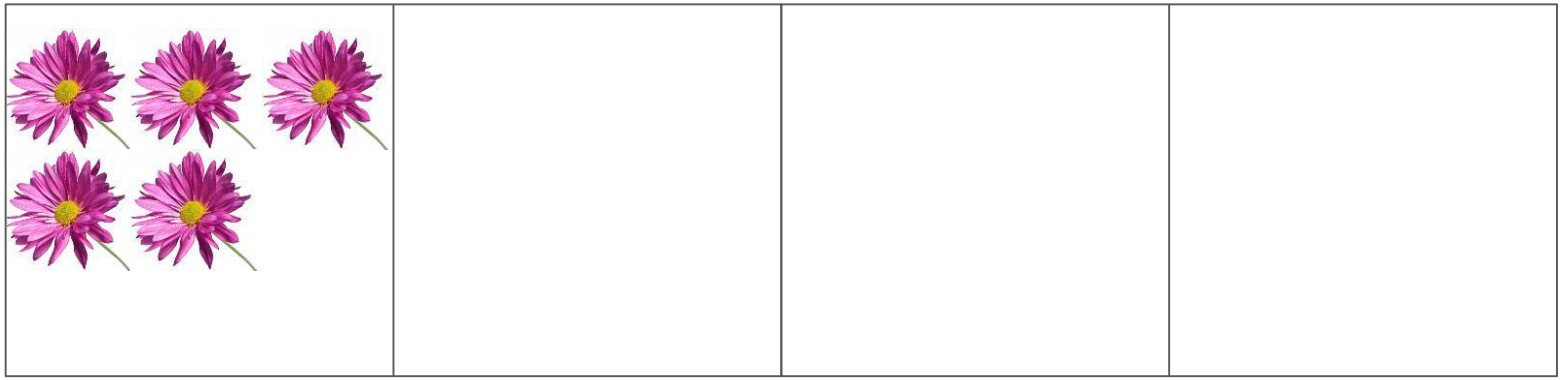
Miss Holmes has some flowers.

Unfortunately some of them were picked and now she only has a quarter left, which you can see below.

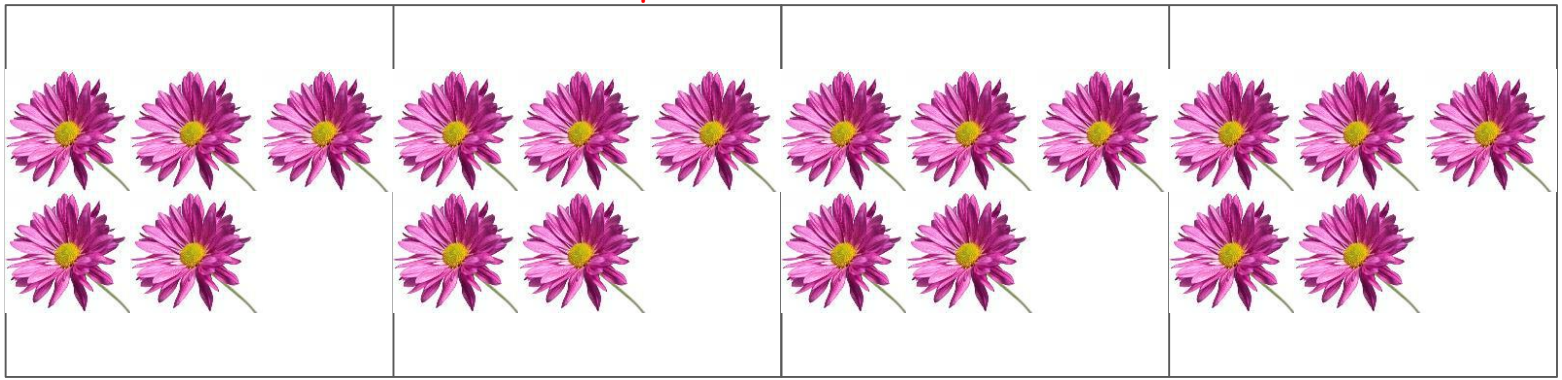
Can you figure out how many she had to start off with?

Top tip!

Think about how we found a quarter earlier in this lesson with 4 equal groups.



To work this out we can draw out 4 equal boxes to start off.
We know that the flowers we have are a quarter so we can put them in one of the boxes.
We also know that these are equal boxes so the other boxes must have the same amount in.



We add these all up and it gives us our answer of 20!

Challenge

Can you find items in your home that you can half and half again? How many are there altogether? Did you share them into 4 equal groups? What is one quarter of the items you found?

Now you can complete the optional sheet for more practice.

Find a quarter

1 Here are 8 counters.

a) Share the counters equally into 4 groups.

b) Complete the sentences.

☐ counters are shared equally between ☐ groups.

There are ☐ counters in each group.

c) What is $\frac{1}{4}$ of 8? ☐

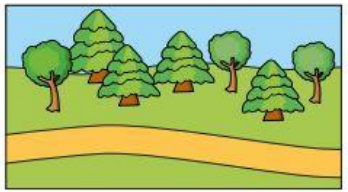
How did you work this out?

2 There are 12 pencils.

a) Share them equally between 4 pencil pots.

b) What is $\frac{1}{4}$ of 12? ☐

3 Tom and Dora are walking along a path.
By midday Dora has walked halfway.
Tom has walked a quarter of the way.



a) Draw an arrow to show where Dora is.

b) Draw an arrow to show where Tom is.

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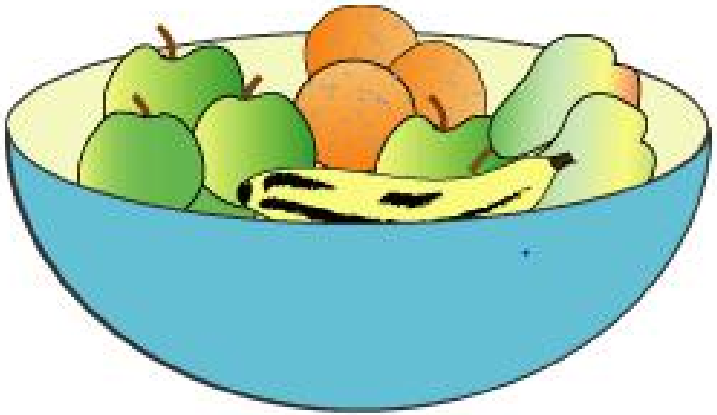
Lesson 5

In this lesson the children are given the opportunity to solve a problem. There are 2 levels of challenge so please ask your child to only complete the second problem if appropriate.

Can you use your knowledge of fractions to solve the tricky problems?



Problem 1 You have a bowl of fruit.

Half of the pieces of fruit in the bowl are apples.

There are also 3 oranges, 2 pears and a banana.

How many apples are there in the bowl?

My tip is to draw the fruit. Remember halves are two equal parts of a whole.

What is the whole number in this problem?

Problem 2 You have a different bowl of fruit.

One quarter of the pieces of fruit in the bowl were apples and **one quarter** were oranges.

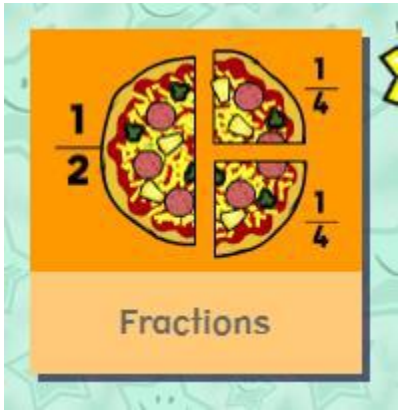
There were also 4 bananas, 3 pears and 3 plums

How many apples are there in the bowl?

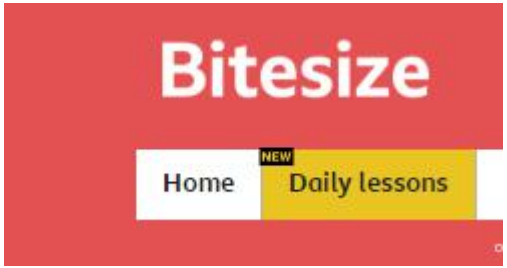
My tip is to draw the fruit. Remember quarters are four equal parts of a whole.

What is the whole number in this problem?

Busy things



BBC Bitesize



If you have time you might want to check out Bitesize daily lessons. They will have lots of activities linked to fractions.

Flashback 4

1) Is 14 odd or even?

2) What is 18 ÷ 2?

3) There are 5 pencils in a pot.
How many pencils in 3 pots?

4) How many tens are there in 24?

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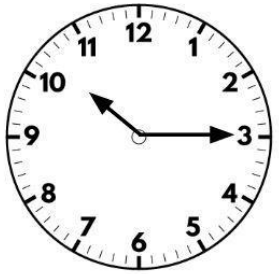
Flashback 4

Year 2 | Week 2 | Day 2



1) Divide 20 by 5

2) What is 20 ÷ 10?

3) How much money altogether?

4) How many tens are there in 87?

Q & A Notes Pointer Tips

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Flashback 4

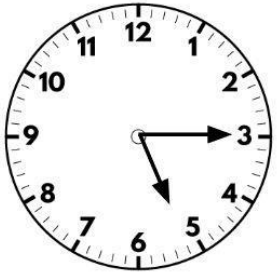
Year 2 | Week 2 | Day 3

1) Calculate 15 ÷ 5

2) Multiply 2 by 7

3) How much money altogether?

4) Find the sum of 22 and 35



Q & A Notes Pointer Tips

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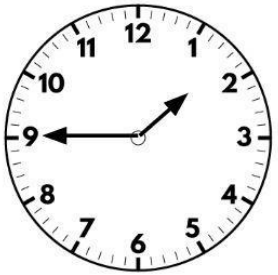
Flashback 4

Year 2 | Week 2 | Day 4



1) Calculate 80 ÷ 10

2) Multiply 5 by 6

3) How much money altogether?

4) Find the sum of 26 and 44

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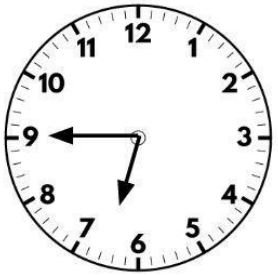
Flashback 4

Year 2 | Week 2 | Day 5



1) What is 40 ÷ 10?

2) Divide 40 by 5

3) How much money altogether?

4) Find the difference between 100 and 65

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