Released January 2018

Years 1/2

Small Steps Guidance and Examples

Block 2 – Number: Fractions

White Rose Maths

Year 1 /2– Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value				Number: Addition and Subtraction				Geometry: Shape		Measurement: Money	
Spring	Number: Multiplication and Division (Y1: Place Value to 50 included)				Number: Fractions			Measurement: Length and Height		Measurement: Mass, Capacity and Temperature		Consolidation
Summer	Year 1: Place Value within 100 Year 2: Statistics		Geometry: Position and Direction		Problem solving and efficient methods		Measurement: Time			Investigations		Consolidation

Week 5 to 7 – Number: Fractions

Overview

Small Steps

Year 1	Year 2
	Make equal parts
Halving shapes or objects	Recognise a half
Halving a quantity	Find a half
Finding a quarter of a shape or object	Recognise a quarter
Finding a quarter of a quantity	Find a quarter
	Recognise a third
	Find a third
	Unit fractions
	Non-unit fractions
	Equivalence of a half and two quarters
	Find three quarters
	Count in fractions

Make Equal Parts

Notes and Guidance

Children should understand the concept of a whole being one object or one quantity.

It is important to explore the difference between equal parts and unequal parts. Children link their understanding o equal parts to the whole throughout the whole step.

Mathematical Talk

What is the whole? What is the part?

How many parts is the object/quantity split into?

Are the parts equal? How do you know?

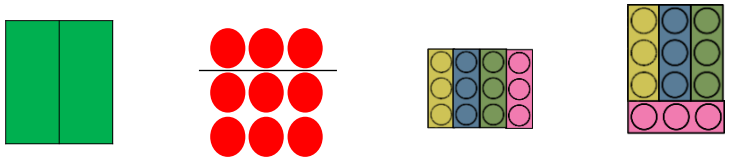
Do equal parts always look the same?

Is there more than one way to split the object/quantity into equal parts?

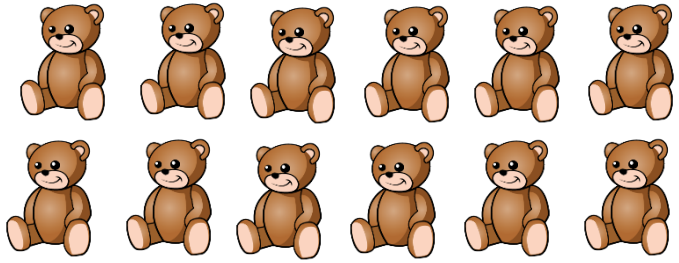
Varied Fluency

1 Take two identical rectangular pieces of paper.
Cut or fold one of the rectangles into two equal parts, and the other into two unequal parts.
Is there more than one way to do this?

2 Look at the representations. Decide which show equal parts and which show unequal parts.



3 Can you split the teddies into three equal groups?
Can you split the teddies into three unequal groups?

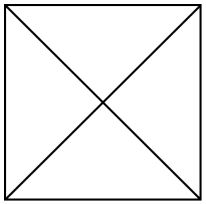


Make Equal Parts

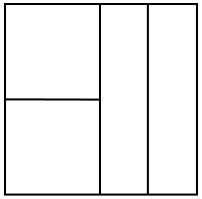
Reasoning and Problem Solving

Three children are splitting a square into equal parts.

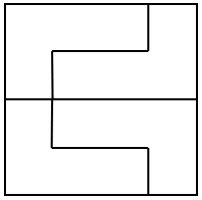
Child A



Child B



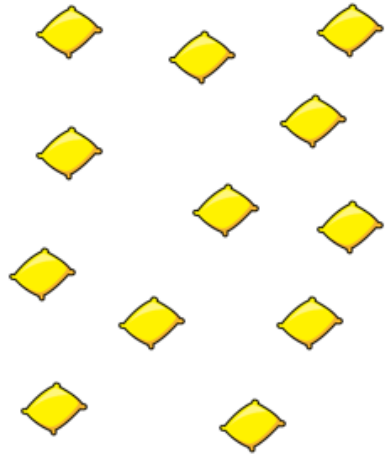
Child C



Who has split the square into equal parts? Explain why.

All children have split the square into equal parts. Children may need to cut out the pieces and manipulate them to prove why.

How many different ways can you put these beanbags into equal groups?



Children can sort the beanbags into groups of 1, 2, 3, 4, 6 and 12

Find a Half (1)

Notes and Guidance

Children explore finding a half for the first time using shapes and sets of objects. They will use the vocabulary 'half' and 'whole'.
Children will not at this stage use the fractional notation of $\frac{1}{2}$

It is important that they know that a half means 'one of two equal parts' and are able to count them.

Mathematical Talk

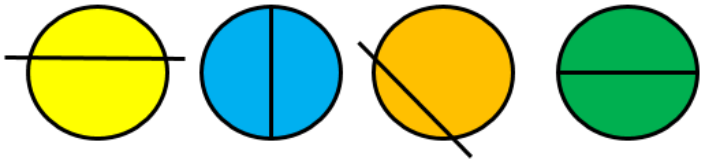
How many parts have I split my object into?
How can you show a half of something?
How do you know if a shape is split into halves?
How many halves make a whole?
Can we count them?
How do you know if an object or shape has not been split in half?
Is there more than one way to show a half on a shape?
Is this the same for all shapes?

Varied Fluency

1 Show the children real life objects and how they can be cut in half.
How can we cut these objects in half?
Draw a line to cut the objects in half.

Can any of the objects be cut in half in more than one way?

2 Which circles have been split into equal halves?



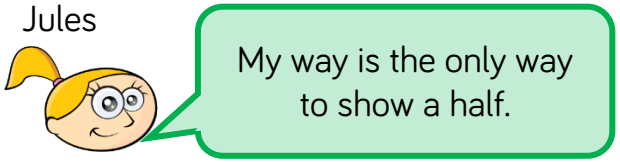
3 Match the half shapes below to make 5 complete shapes.

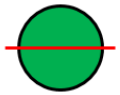
Find a Half (1)

Reasoning and Problem Solving

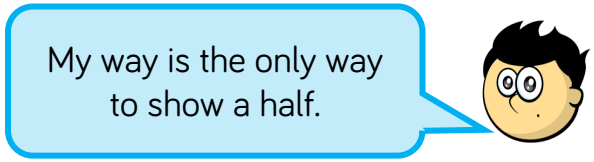
Jules and Freddy are both attempting to split a circle in half.

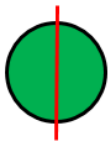
Jules





Freddy





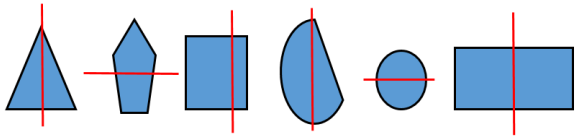
Who has correctly split the shape in half? Explain your answer.

Possible answer:

They are both correct. There are lots of ways a circle can be split in half.

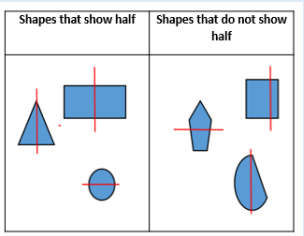
Sort the shapes into the table.

Shapes that are split in half	Shapes that are not split in half



Can you add one more shape to each box in the table?

Possible answer:



There are a number of different answers for other shapes children could add to the table.

Recognise a Half

Notes and Guidance

Children understand that halving is splitting a whole into two equal parts. They are introduced to the notation $\frac{1}{2}$ for the first time and will use this alongside sentence stems and 'half' or 'halves'.

Children will also explore halves in different contexts, for example, half of a length, shape or object.

Mathematical Talk

How many equal parts has the shape/object/length been divided into?

What fraction is this part worth?

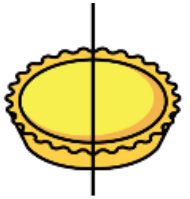
In the notation $\frac{1}{2}$, what does the 1 represent? What does the 2 represent?

Varied Fluency

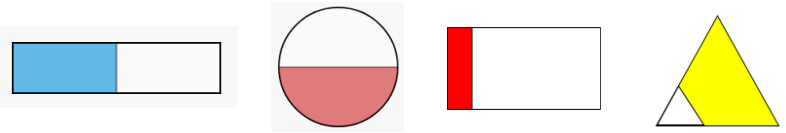
1 The whole pie is split into ☐ equal parts.

Each part is worth a ☐

This is the same as ☐/☐



2 Which pictures represent $\frac{1}{2}$?



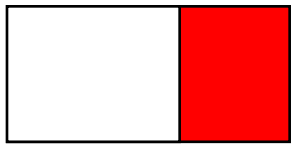
3 Laura, Susie and Jasmine are running a race.
Laura has run further than half way. Susie has run exactly half way. Jasmine has run less than half way.
Draw on the line where each child could be between the start and the end of the race.

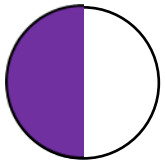
Start _____ End

Recognise a Half

Reasoning and Problem Solving

Odd One Out



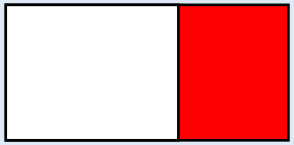


$\frac{1}{2}$

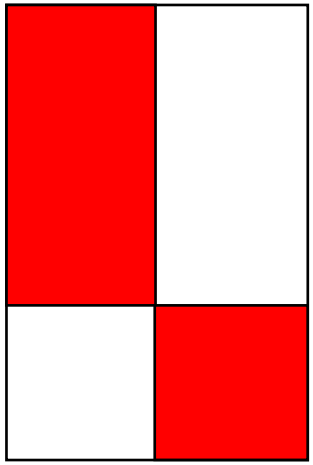
One half

Which is the odd one out?
Explain your answer.

Children need to link their explanation to the shape not having two equal parts.



Sandy says the shaded part of the shape does not show a half because there are four parts, not two equal parts.



Do you agree? Explain why.

Possible answer:
I disagree because you can swap the red and white squares/rectangles and you would have two equal parts with one shaded.

Find a Half (2)

Notes and Guidance

Children use their understanding of finding half of an object or shape and apply this to finding half of a small quantity.

It is important that children find the total amount and can then show how this number can be shared equally into two.

Mathematical Talk

How can we find half of a number?

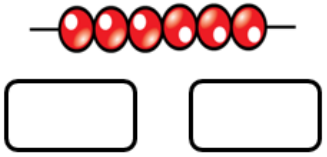
How many groups do we need to share our beads between?

How can you check that you have found half?

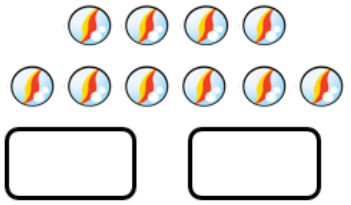
How many equal parts should you have when you have split the objects in half?

Varied Fluency

1 Find half of the amounts.



There are ___ beads.
Half of ___ is ___



There are ____ marbles.
Half of ___ is ___

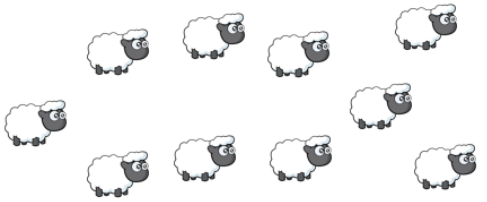
2 What is half of the amounts shown?

The total is ___ *p*
Half of ___ *p* is ___ *p*

The total is ___ *p*
Half of ___ *p* is ___ *p*

3 Find half of the sheep.

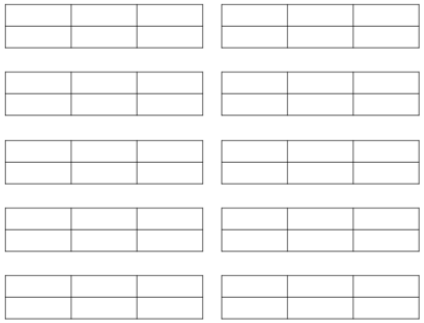
There are ___ sheep altogether.
Half of ___ is ___



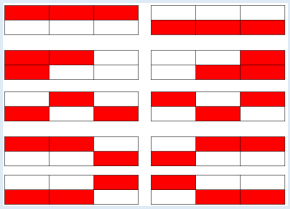
Find a Half (2)

Reasoning and Problem Solving

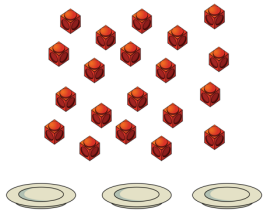
How many different ways can you shade one half of the shapes?



Possible answer:



Sam is halving the number 20
He gets 20 cubes and 3 plates
Has he done this correctly? Explain why.



He has done this wrong because when we find a half we split into two groups not 3
He only needs 2 plates

Matthew is finding halves. He says, "It is hard to find half of an odd numbers."
Do you agree?
Dan you explain using concrete apparatus to help?

Possible answer: I agree with Matthew because an odd number cannot be easily shared between 2
It would not give a whole number answer.

Find a Half

Notes and Guidance

Children apply their understanding of whole and two equal parts to quantities.
It is important they understand that the total amount equals the whole and in order to find a half, this must be split into 2 equal groups.
Links can be made here to dividing by 2

Mathematical Talk

How did you halve the sweets?

What is the whole? How much is half worth?

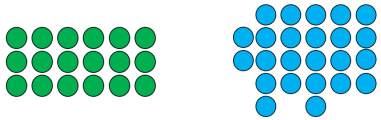
What do you notice about the whole and a half?

Varied Fluency

1 James has 20 sweets. He gives half of them to his friend. How many do they each have?

The whole is ____. Half of ____ is ____

2 Use counters to find half of the amounts. Complete the stem sentences for each amount.



26 30

The whole is ____. Half of ____ is ____

3 Fill in the blanks. Use counters to help you if needed.

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

$\frac{1}{2}$ of 12 = ☐ $\frac{1}{2}$ of ☐ = 12

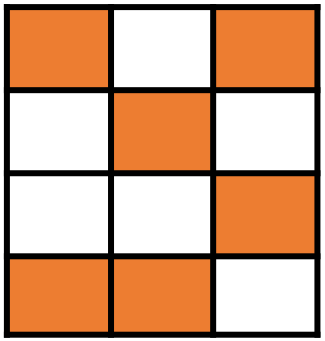
$\frac{1}{2}$ of 14 = ☐ $\frac{1}{2}$ of ☐ = 14

What do you notice?

Find a Half

Reasoning and Problem Solving

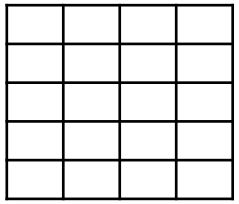
Sarah is asked to shade half of her shape.
This is what she shades.



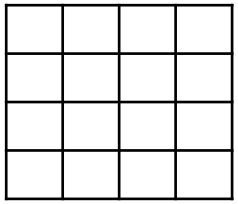
Is she correct? Explain why.

Yes because there are 12 squares altogether and 6 squares are shaded.
12 is the whole, half of 12 is 6

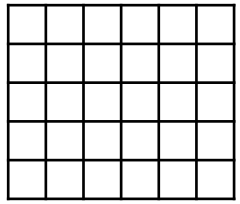
Tina is designing tiles for her kitchen.
She wants half of each tile to be red and half of each tile to be blue.



Tile 1



Tile 2



Tile 3

Can you create 3 different designs for each tile?

There are many possible solutions for each tile.
For tile 1, 10 squares should be red and 10 blue.
For tile 2, 8 squares should be red and 8 should be blue.
For tile 3, 15 squares should be red and 15 blue.

Find a Quarter (1)

Notes and Guidance

Children explore quarters for the first time. They will develop their understanding of equal parts and non-equal parts and relate this to a shape of object being split up into four equal parts.

Children will use the word quarters and parts at this stage, but will not use the fractional notation of $\frac{1}{4}$

Mathematical Talk

How many parts does my whole have?
Are my parts equal or not equal?
How many equal parts can we see/count?

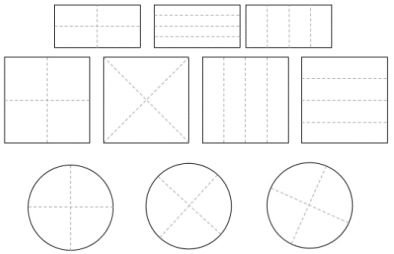
Can we make a quarter in a different way?

Which shapes show equal parts?
Which shapes show four equal parts?
Which shapes show quarters?

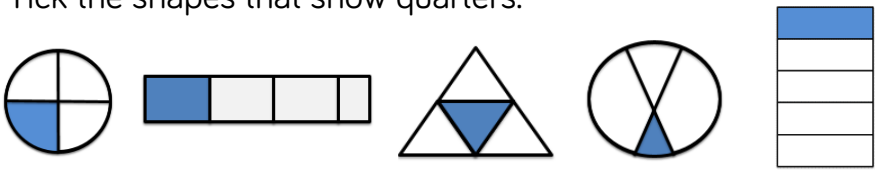
Varied Fluency

1 Take two square pieces of paper, two circular pieces of paper and two rectangular pieces of paper.
Model folding one of each into four equal parts and the other into four non-equal parts.
Which shapes show equal parts? Which do not?
How many equal parts can we see?
Can we fold any of the shapes in a different way and still get equal parts?
Count the equal parts and then model counting them in quarters.

2 Colour a quarter of each shape. Can you colour it in different ways?

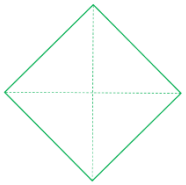


3 Tick the shapes that show quarters.



Find a Quarter (1)

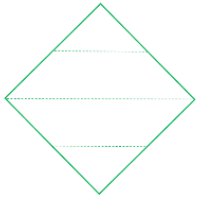
Reasoning and Problem Solving



My shape shows quarters because it has four equal parts.

Harriet

My shape shows quarters because it has four parts.



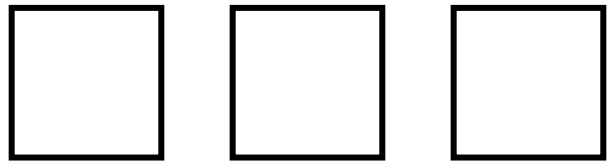
Henry

Who is correct?
Can you explain why?

Harriett is correct because quarters must be four equal parts.
Henry has split his square into four unequal parts so they are not quarters.

Use the squares to show:

- Less than a quarter shaded.
- Exactly a quarter shaded.
- More than a quarter shaded.



There are lots of possible ways to show each one.

Recognise a Quarter

Notes and Guidance

Children apply their knowledge of halves to recognising quarters of shapes, objects and quantities.

They continue to work concretely and pictorially understanding that they are splitting the whole into 4 equal parts and that each part is one quarter.

Mathematical Talk

How many equal parts have you split the whole in to if you have split it into quarters?

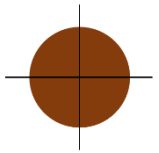
In $\frac{1}{4}$ what does the 1 represent? What does the 4 represent?

Can you shade one quarter in different ways? How do you know that you have shaded one quarter?

How many quarters make a whole?

Varied Fluency

1 Four friends are sharing a cake.

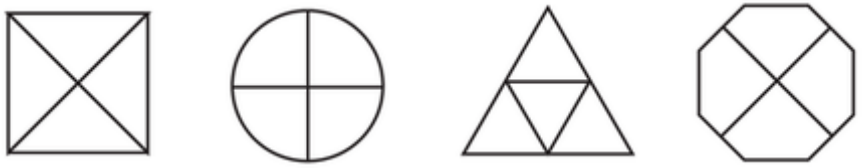


The cake is split into ☐ equal parts.

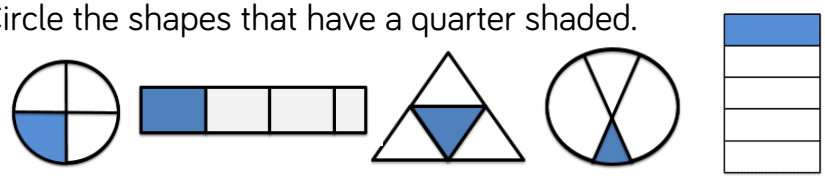
Each part is worth a ☐

This is the same as ☐/☐

2 Shade $\frac{1}{4}$ of each shape.



3 Circle the shapes that have a quarter shaded.



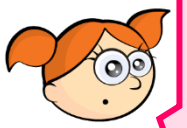
Which shapes do not have a quarter shaded? How do you know?

Can you draw the shapes again and split into quarters correctly?

Recognise a Quarter

Reasoning and Problem Solving

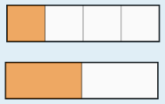
Amy is folding two identical paper strips.



I think $\frac{1}{4}$ of the strip will be bigger than $\frac{1}{2}$ of the strip because 4 is bigger than 2

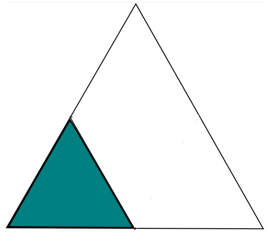
Use paper strips to prove Amy is incorrect.

Possible answer:
When the whole is the same one quarter will be smaller because it is one of four equal parts compared to a half which is one of two equal parts.



True or False?

$\frac{1}{4}$ of the shape is shaded.



Explain your answer.

Children will need to split the shape into four equal parts in order to show that this is true.

Find a Quarter (2)

Notes and Guidance

Children look at finding a quarter of a small quantity using equal sharing. It is important they can show the groups clearly by drawing around quantities or by physically sharing into something.

They also begin to describe capacity using the terminology 'a quarter full'.

Mathematical Talk

How many sweets do I have? How can I share them equally into four groups? What is one quarter worth?

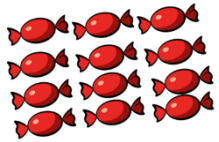
Are my containers the same or different?
Can you should me a quarter full in each container.

How can I quarter this amount?
If I have 2, and it is a quarter, what will the whole look like?
What will the whole be worth?

Varied Fluency

1 Share each quantity into four equal groups.

There are ___ cakes.
There is ___ cake in each quarter.
A quarter of ___ is ___



There are ___ sweets.
There are ___ sweets in each quarter.
A quarter of ___ is ___

There are ___ peaches.
There are ___ peaches in each quarter.
A quarter of ___ is ___

2 Use a range of containers and rice/water.
Can you show me a quarter full in each container?
Do they look the same or different?

3 Use counters to complete the sentences.

A quarter of 4 is ☐

A quarter of 8 is ☐

1 is one quarter of ☐

3 is one quarter of ☐

Find a Quarter (2)

Reasoning and Problem Solving

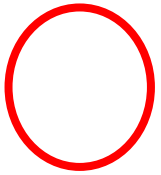
I have 16 apples. If I give 4 to Dan he will have a quarter.

Do you agree? Explain why.

Would this always be true for different amounts?

Yes. When you split 16 into four equal parts there are four in each part.
No because when you split something into quarters there are four equal groups not just four things.

Mr. White has asked his class to put one quarter of the balls into the hoop.



Ben

I'm going to put one ball in the hoop.

I'm going to put three balls in the hoop.

Libby

I'm going to put four balls into the hoop.

Harry

Who is correct? Can you explain any mistakes made?

Libby is correct because one quarter of 12 is 3

Ben has misinterpreted **one** quarter to just mean one.

Harry knows that quarters are linked to fours but hasn't split the balls into four equal groups.

Find a Quarter

Notes and Guidance

Children find quarters of shapes, objects and quantities.
They develop year one strategies of physically sharing amounts into four equal groups, or drawing around quantities, to working in the abstract.
Support children in seeing the relationship between half of an amount and a quarter of an amount.

Mathematical Talk

What is the whole? What is a half? What is a quarter?

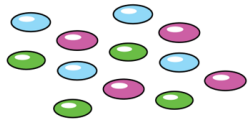
Can you circle a quarter in a different way?

How do you know you have found $\frac{1}{4}$?

What do you notice about half of 12 and one quarter of 12? Can you explain what has happened?

Varied Fluency

1 Share the smarties equally between 4 people.

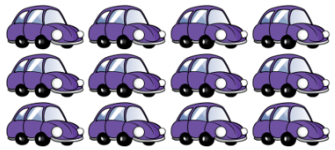


The cake is split into ☐ equal parts.

Each part is worth a ☐

This is the same as ☐/☐

2 Circle one quarter of the cars.



One quarter of ____ is ____

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

3 Complete

$\frac{1}{2}$ of 12 = ☐ $\frac{1}{2}$ of 12 = ☐

$\frac{1}{2}$ of 20 = ☐ $\frac{1}{4}$ of 20 = ☐

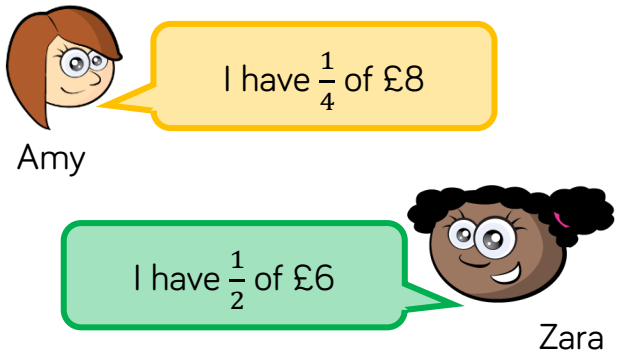
$\frac{1}{2}$ of 8 = ☐ $\frac{1}{4}$ of 8 = ☐

What do you notice?

Find a Quarter

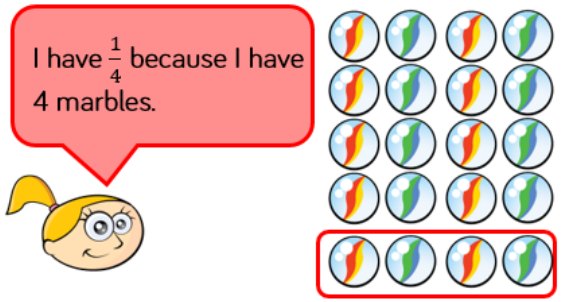
Reasoning and Problem Solving

Who has more? Explain why.



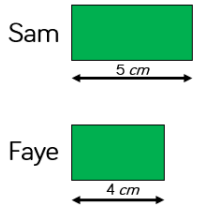
Zara has more because half of £6 is £3, whereas a quarter of £8 is only £2

Do you agree? Explain your answer.



This is incorrect, one quarter means 4 equal groups not just 4
One quarter of the marbles would be 5

Sam and Faye each have a piece of ribbon that they have cut into quarters.



How long was Sam's whole piece of ribbon?

How long was Faye's whole piece of ribbon?

Whose whole piece of ribbon was the longest?

Sam's whole piece of ribbon was 20 cm

Faye's whole piece of ribbon was 16 cm

Sam's whole piece of ribbon was 4 cm longer than Faye's.

Recognise a Third

Notes and Guidance

Children apply their understanding from recognising halves and quarters to finding thirds.
They continue to use the language of 'whole' and 'equal parts' and understand that one third is equal to one part out of three equal parts.
They write one third as a fraction and explain what each of the digits represents in the fractional notation.

Mathematical Talk

How many equal parts have you split the whole in to if you have split it into thirds?

In $\frac{1}{3}$ what does the digit 1 represent? What does the digit 3 represent?

Can you shade $\frac{1}{3}$ in a different way? How do you know that you have shaded $\frac{1}{3}$?

How many thirds make a whole?

Varied Fluency

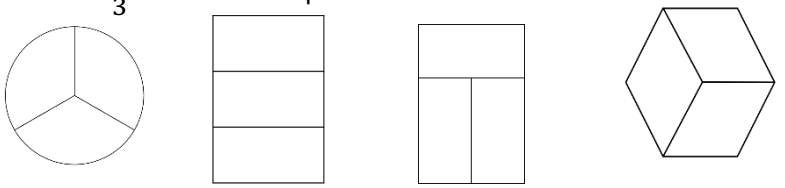
1 Three friends are sharing a cake.

The cake is split into ☐ equal parts.

Each part is worth a ☐

This is the same as ☐/☐

2 Shade $\frac{1}{3}$ of each shape.



What is the same? What is different?

3 Which represent one third?

Explain why the other circles do not represent one third.

Recognise a Third

Reasoning and Problem Solving

Becky says,

I have one third of a pizza because I have one slice and there are three slices left.

Do you agree? Explain your reasoning.

Becky is incorrect. She has one quarter of a pizza because there were four slices and she has one of them.

Shania, Leo and Alby each have a piece of ribbon.

Shania has $\frac{1}{2}$ 

Leo has $\frac{1}{4}$ 

Alby has $\frac{1}{3}$ 

Who will have the longest piece?

Who will have the shortest piece?

Explain why.

Possible answer:

Leo's piece will be the longest because he will have four pieces. Shania's piece will be the shortest because she will have two pieces.

Find a Third

Notes and Guidance

Children build on their understanding of a third and three equal parts to find a third of a quantity.

They use their knowledge of division as sharing in order to find a third of different quantities using concrete and pictorial representations to support their understanding.

Mathematical Talk

How many objects make the whole?

Can we split the whole amount into three equal groups?

What is a third of ____ ?

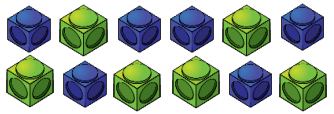
Can we use $\frac{1}{3}$ *of* ____ = *?* to represent our problem?

What is staying the same? What is changing? How does changing the whole amount change the answer?

Is the answer still worth a third? Explain why?

Varied Fluency

1 Use the cubes to make three equal groups.



There are ☐ cubes altogether.

One third of ☐ is ☐

$\frac{1}{3}$ of ☐ is ☐

2 Christina is organising her teddy bears.

She donates $\frac{1}{3}$ of them to charity.

How many bears does she have left?

3 Complete

$\frac{1}{3}$ of 9 = ☐ $\frac{1}{3}$ of 15 = ☐

$\frac{1}{3}$ of 12 = ☐ $\frac{1}{3}$ of 18 = ☐

Find a Third

Reasoning and Problem Solving

Hannah has a piece of string.

She cuts it into three equal parts.

One third of the ribbon is 5 cm long.

How long is the whole piece of string?

15 cm

Children may draw a diagram to support their working.

I am thinking of a number.

One third of my number is greater than 8 but smaller than 15

My number is even.

My number has an odd amount of tens.

What could my number be?

30 or 36

Unit Fractions

Notes and Guidance

Children understand the concept of a unit fraction by recognising it as one equal part of a whole. They link this to their understanding of recognising and finding thirds, quarters and halves.
Children also need to understand that the denominator represents the number of parts of that a shape or quantity is divided into so the larger the denominator the smaller the fraction.

Mathematical Talk

How can we represent these unit fractions in different ways?

Why do we call them a unit fraction? Where can we see the unit?

Show me $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ of the model/counters etc. What is the same? What is different?

Which unit fraction is bigger/smaller if the whole is the same?

Varied Fluency

1 Complete the missing information.

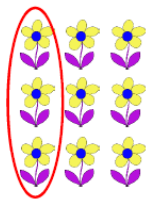
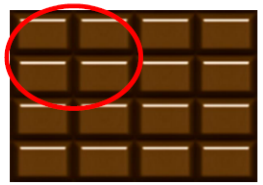
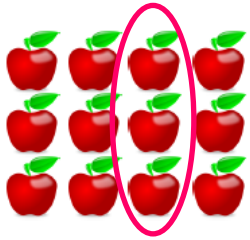
Fraction	Bar Model	Words
$\frac{1}{2}$		
		
		One quarter

2 Take 12 counters. Find:

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

Repeat for 24 counters
What is the same? What is different?

3 Write down the fraction of the objects that have been circled.

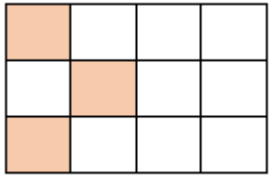




Unit Fractions

Reasoning and Problem Solving

True or False?

This shows $\frac{1}{4}$



Can you shade the same shape to show $\frac{1}{3}$?

True. There are 12 squares altogether and 3 are shaded. One quarter of 12 is 3

Lots of different answers.

Look at 20 toy cars. Is it possible to find $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ of the cars without breaking any of them?

One half would be 10, one quarter would be 5 but you cannot find one third without breaking any cars.

I am thinking of a number.

$\frac{1}{4}$ of my number is 3 less than $\frac{1}{3}$ of my number.

$\frac{1}{3}$ of my number is 12

What is $\frac{1}{2}$ of my number?

18

Non-Unit Fractions

Notes and Guidance

Children are introduced to the non-unit fractions $\frac{2}{3}$ and $\frac{3}{4}$ for the first time.

They look at fractions where the whole is shaded and how these fractions are written. Children see that the numerator and denominator are the same when the fraction is equivalent to one whole.

Mathematical Talk

How many quarters make a whole?

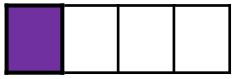
How many quarters are there in $\frac{3}{4}$?

In $\frac{3}{4}$ what does the digit 3 represent? What does the digit 4 represent?

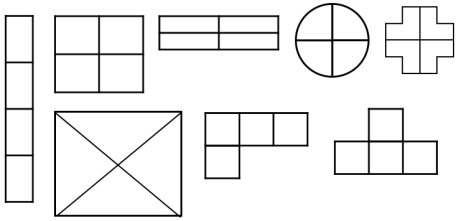
What is the difference between unit fractions and non-unit fractions?

Varied Fluency

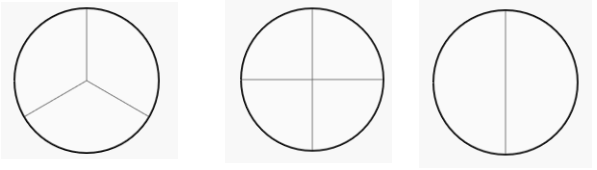
1 Complete the table.

Fraction	Bar Model	Words
$\frac{1}{4}$		One quarter
		
$\frac{3}{4}$		
		One whole

2 Shade $\frac{3}{4}$ of each shape.



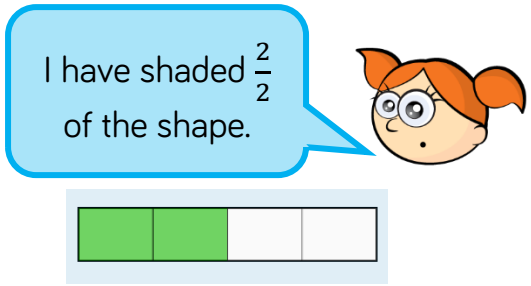
3 Shade in the whole of each circle. What fraction is represented in each case?



Non-Unit Fractions

Reasoning and Problem Solving

Kira says,



Explain her mistake.

She has shaded two quarters of the shape. She has misunderstood and thought that the numerator represents the number of parts that are shaded and the denominator represents the number of parts that aren't. She doesn't realise the denominator represents the whole.

Sort the fractions into the table.

	Fractions equal to one whole	Fractions less than one whole
Unit fractions		
Non-unit fractions		

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

Are there any boxes in the table empty? Why?

Top left: Empty

Top right: $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{2}$

Bottom left: $\frac{2}{2}$, $\frac{3}{3}$ and $\frac{4}{4}$

Bottom right: $\frac{3}{4}$ and $\frac{2}{3}$

There are no unit fractions that are equal to one whole other than $\frac{1}{1}$ but we would just write this as 1

Equivalence of $\frac{1}{2}$ and $\frac{2}{4}$

Notes and Guidance

Children explore the equivalence of two quarters and one half of the same whole and understand that they are the same.

Children tackle this practically, using strips of paper and concrete apparatus (e.g. counters, Cuisenaire rods, number pieces).

Children need to be reminded of the equal parts that the whole is being divided into.

Mathematical Talk

What does equivalent mean? What symbol do we use?

Are these two fractions equal? (half and two quarters)

Are the numerators the same? Are the denominators the same?

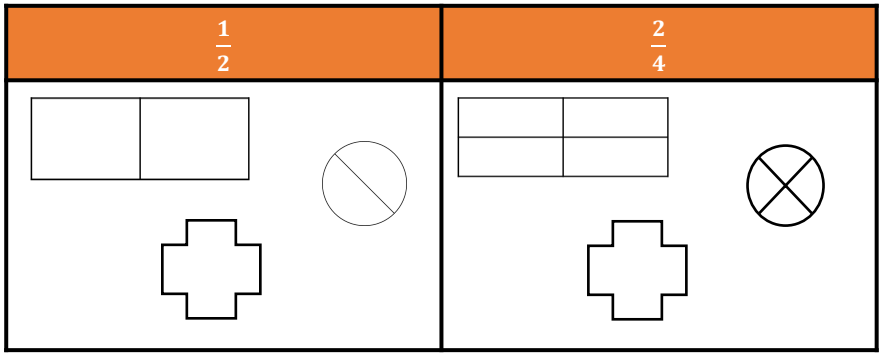
How many quarters are equivalent to a half?

Varied Fluency

1 Using two identical strips of paper, explore what happens when you fold the strips into two equal pieces and four equal pieces. Compare on of the two equal pieces with two of the four equal pieces.

What do you notice?

2 Shade in one half and two quarters of each shape.



3 Give children an amount of counters or concrete objects, can you find one half of them? Can you find two quarters of them? What do you notice?

Equivalence of $\frac{1}{2}$ and $\frac{2}{4}$

Reasoning and Problem Solving

George has a jar of 12 cookies. He gives half of them to Sam, and $\frac{2}{4}$ of them to Ben.

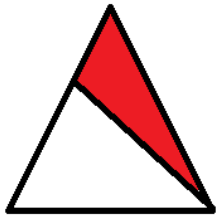
Who gets the most cookies?

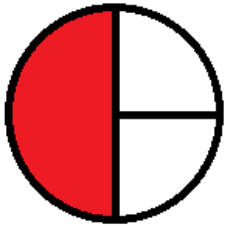
They both get the same amount. They will each get 6 cookies.

Using red and blue cubes, build two towers to convince me that $\frac{1}{2}$ and $\frac{2}{4}$ are equal.

Answers vary depending on the amount of cubes used.

Tick the shapes below that show either $\frac{1}{2}$ or $\frac{2}{4}$





Explain how you know.

The circle on the right can show either $\frac{2}{4}$ or $\frac{1}{2}$ but the triangle cannot since it is not cut into **equal** parts.

Find Three Quarters

Notes and Guidance

Children use their understanding of quarters to find three quarters of a quantity.

They work concretely and pictorially to make connections to the abstract.

Children should be encouraged to spot patters and relationships between quarters of amounts.

Mathematical Talk

How many quarters make a whole?

Can you represent this in a bar model?

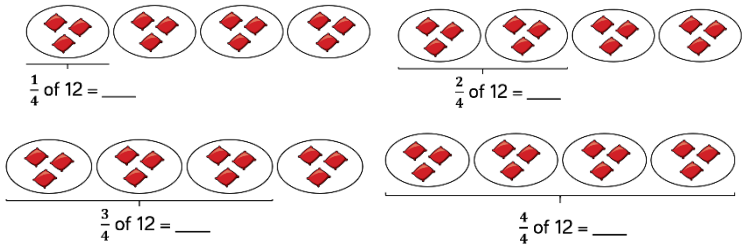
How many equal parts is $\frac{3}{4}$?

Can you spot any patterns?

What has stayed the same? What has changed? What do you notice?

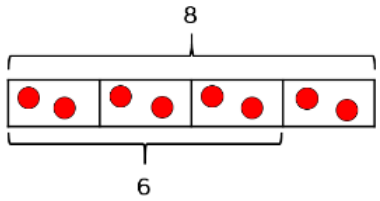
Varied Fluency

1 Taylor shares 12 beanbags into 4 equal groups. Fill in the blanks.



2 Ahmed uses counters to create a bar model when finding $\frac{3}{4}$ of 8

$\frac{3}{4}$ of 8 = 6



3 Use counters, cubes, or bar models to help you fill in the blanks:

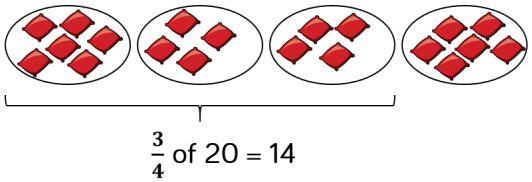
$\frac{1}{4}$ of 24 = ☐	$\frac{1}{4}$ of 4 = ☐	$\frac{1}{4}$ of ☐ = 5
$\frac{2}{4}$ of 24 = ☐	$\frac{3}{4}$ of 4 = ☐	$\frac{3}{4}$ of ☐ = 15
$\frac{3}{4}$ of 24 = ☐	$\frac{1}{4}$ of 8 = ☐	$\frac{1}{4}$ of ☐ = 2
$\frac{4}{4}$ of 24 = ☐	$\frac{3}{4}$ of 8 = ☐	☐ $\frac{}{4}$ of 8 = 6

Find Three Quarters

Reasoning and Problem Solving

Taylor is using beanbags and hoops to find three quarters of 20

Can you spot his mistake?



$\frac{3}{4}$ of 20 = 14

Taylor hasn't created equal groups. 20 should be shared into 4 equal parts, there should be 5 beanbags in each hoop and so three quarters of 20 is 15 not 14

There are 24 hours in one day.

A panda slept for $\frac{3}{4}$ of a day.

How many hours was the panda asleep for?

How many hours was the panda awake for?

The panda slept for 18 hours and was awake for 6 hours.

Count in Fractions

Notes and Guidance

Using their knowledge of halves, thirds and quarters, children count in fractions from any number up to 10.

Teachers can use a counting stick or hoop to support them in counting in fractions.

Mathematical Talk

Which number are you starting on?

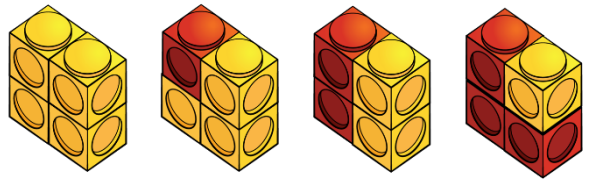
How many parts are there in your fraction whole?

Which fraction will come next?

What patterns can you spot?

Varied Fluency

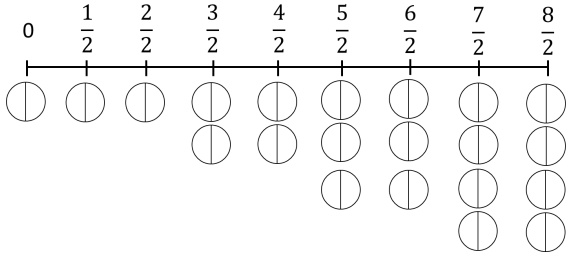
1 What would the next image in the sequence look like?



What do you notice about the fraction of yellow cubes? Can you count the fractions represented?

2 In groups of 4, give each child an identical strip of paper. Fold each of them into 2 equal parts. Can you count how many halves there are? How many different ways can you count them?

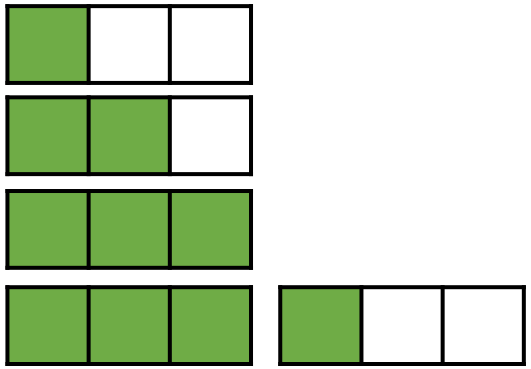
3 Can you shade in the fractions on the circle? What do you notice about the number of whole circles?



Count in Fractions

Reasoning and Problem Solving

Look at this pattern.



What would come next?
Write the next fractions and draw the representation.

Five thirds, $\frac{5}{3}$
Children may think that the later models are in sixths, it is important to stress that the whole one is still made up of three and so we are still counting in thirds.

Ophelia and Scarlett are counting in quarters.

Ophelia

One quarter, two quarters, three quarters, four quarters…

One quarter, one half, three quarters, one whole…

Scarlett

Who is correct? Explain your answer.

They are both correct. Two quarters is equivalent to one half and four quarters is equivalent to one whole.