

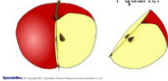
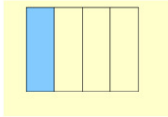
# Fractions

Parent Workshop  
31/1/17

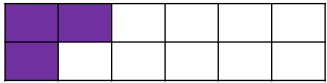
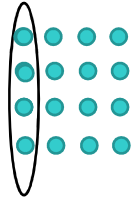
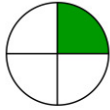



## What do these all have in common?

$\frac{1}{4}$



$\frac{1}{4}$



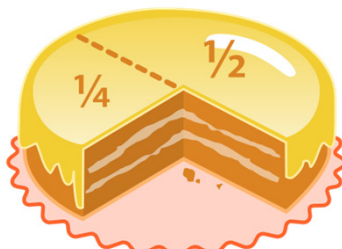
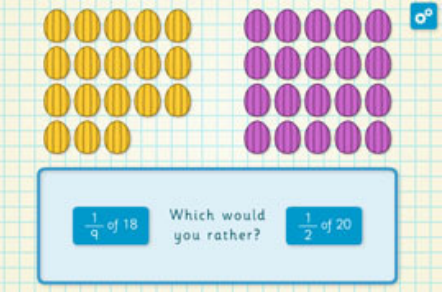
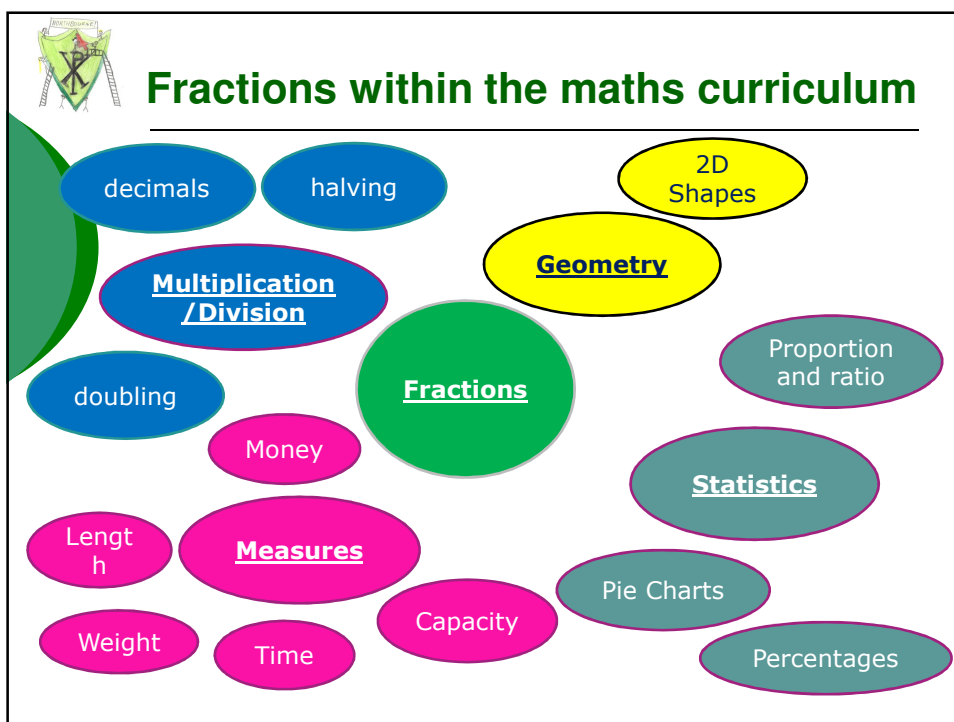


## What is a fraction?

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A fraction is a part of something.

It could be part of a number.  
It could be part of an object.



## Misconception - 'Equalness'

Many children believe that if an object has been split in two, it has been halved. Each part is worth  $\frac{1}{2}$ .



However, each part **MUST** be **equal** in order to be a true half.



## Different Types of Fractions

$$\frac{1}{2} \quad \frac{1}{5}$$

$$\frac{1}{100}$$

Unit Fractions

Smaller →  $\frac{3}{5}$

Larger →  $\frac{3}{5}$

Proper Fraction

Larger (or equal) →  $\frac{9}{5}$

Smaller (or equal) →  $\frac{9}{5}$

Improper Fraction

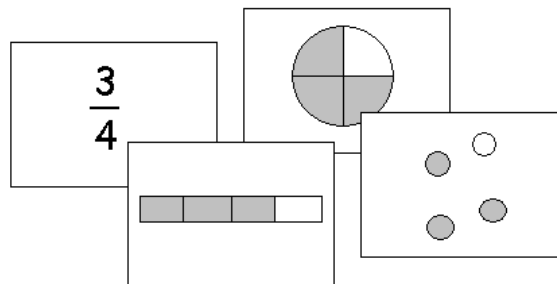
$$2\frac{1}{3}$$

Mixed Fraction

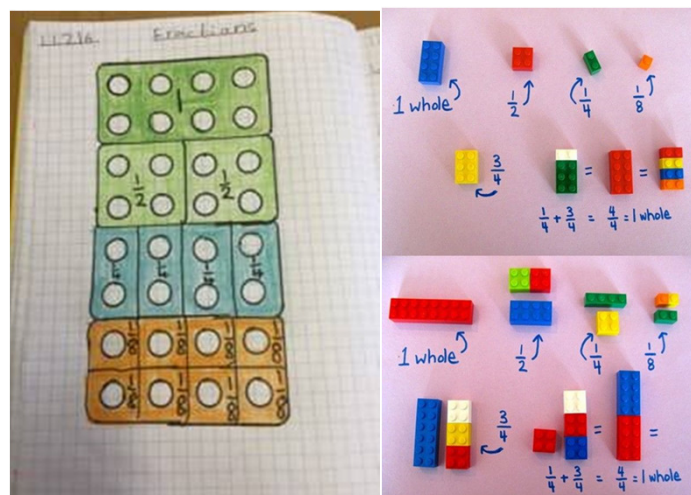


## How we teach fractions

- We use a range of objects, models and images to help the children to grasp the concept of fractions.
- Use a variety of examples – not always pizza and cake!



## Manipulatives and apparatus





## Manipulatives and apparatus

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## Early Years

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ELG 11 Numbers: children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract 2 single-digit numbers and count on or back to find the answer. **They solve problems, including doubling, halving and sharing.**



## Arithmetic – KS1

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$$\frac{1}{4} \text{ of } 20 = \boxed{\phantom{00}}$$

$$\frac{3}{4} \text{ of } 20 = \boxed{\phantom{00}}$$



## Problem Solving - Key Stage One

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Clare has some toy cars.  
He gives half of them to Ben.  
He has four toy cars left.  
How many toy cars did Clare start  
with?





## Problem Solving – Key Stage One

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small bottle  
of water

$\frac{1}{4}$  litre



large bottle

2 litres

How many small bottles of water will fill the large bottle?



## Problem Solving – End of Key Stage Two

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On Saturday Lara read  $\frac{2}{5}$  of her book.



On Sunday she read the **other** 90 pages to finish the book.

How many pages are there in Lara's book?



## Problem Solving – End of Key Stage Two

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Lara had some money.

She spent £1.25 on a drink.

She spent £1.60 on a sandwich.

She has **three-quarters** of her money left.

How much money did Lara have to **start with**?



## Problem Solving – End of Key Stage Two

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**Write the two missing values to make these equivalent fractions correct.**

$$\frac{\square}{3} = \frac{8}{12} = \frac{4}{\square}$$

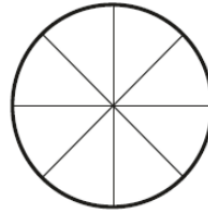
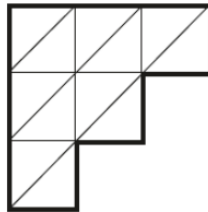
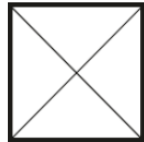




## Problem Solving – End of Key Stage Two

Each diagram below is divided into equal sections.

Shade three-quarters of each diagram.



2 marks



## Finding a Fraction of a Quantity

$\frac{1}{5}$  of 35      35 has been chopped into  
5 equal pieces

$$35 \div 5 = 7$$

So...

$$\frac{1}{5} \text{ of } 35 = 7$$



## Finding a Fraction of a Quantity

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$\frac{3}{5}$  of 35

So...  
 $\frac{3}{5}$  of 35 = 21

Find  $\frac{1}{5}$

$$35 \div 5 = 7$$

$$\frac{1}{5} \text{ of } 35 = 7$$



## Arithmetic– End of Key Stage Two

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$$\frac{4}{7} + \frac{5}{7} =$$

$$\frac{3}{10} - \frac{1}{20} =$$

$$\frac{3}{5} \div 3 =$$

$$\frac{2}{5} \times 140 =$$