Fractions

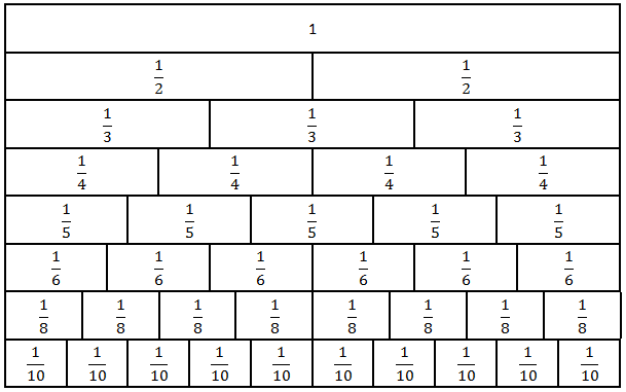
Lots of practical activities and visuals are key to helping to understand fractions. Sharing activities will help learners to make the links between division and finding a fraction of a quantity. Can you share this bar of chocolate equally between 2, 4 and 8 people? How many pieces will each person get? Can you see the links between halves, quarters and eighths?

Can you share this bar of chocolate equally between 3, 6 people? How many pieces will each person get? Can you see the links between thirds and sixths?

Understanding that 2 fractions can have the same overall size is very important. These are called 'equivalent ' fractions.

$$\frac{1}{2} = \frac{2}{4} = \frac{4}{8} \quad \text{and} \quad \frac{1}{3} = \frac{2}{6}$$

One half is the same as two quarters, which is the same as four eighths.
What other equivalent fractions can you find on our fraction wall?



Fraction Notation:

The top number is the numerator.
It tells you how many parts you have.

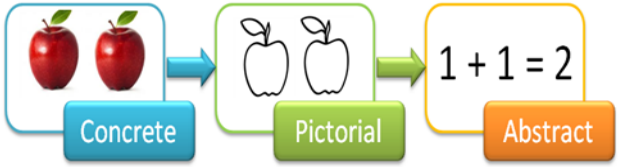
$$\frac{1}{2} = \frac{3}{6}$$

The bottom number is the denominator.
It tells you how many parts are in a whole.
It tells you about the size of each part.

Glasgow Counts
A Framework for Mathematics

Glasgow Counts

Parent Information Leaflet for First Level



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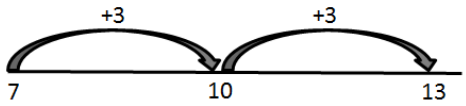
Strategies for addition and subtraction :

Counting on with Number Lines:

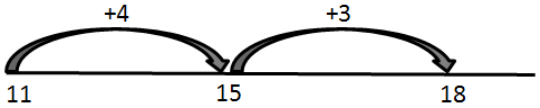
1. 7+6 = 7 + 3 + 3

Partitioning 6 into 3 + 3 helps to bridge to the nearest friendly number 10



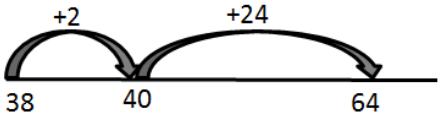
2. 18 - 11 = 18 -10 –1

or...why count back when it might be easier to count on !



When we partition, we break up numbers to make them easier to add or subtract.

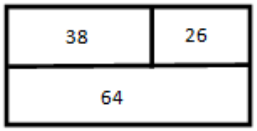
3. 38 + 26 = 38 + 2 + 24 = 64



You can also use a part part whole model to make links with addition and subtraction:

38 + 26 = 64 26 + 38 = 64

64 — 38 = 24 64 — 26 = 38

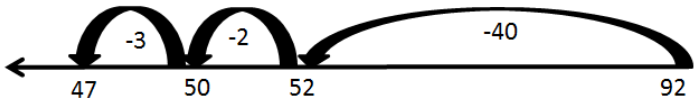


Breaking numbers into tens and ones to add or subtract

4. 92 – 45

= 92 – 40 – 2—3

= 47



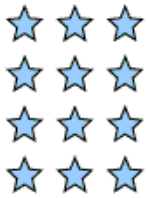
Adjusting the numbers to create an easier problem

Instead of 1000 – 634 → subtract 1 from each number → 999 – 633

The difference between the 2 numbers stays the same, but the numbers are easier to work with.

Links between multiplication & division

Children will be learning about multiplication and division at the same time as the two concepts are related.



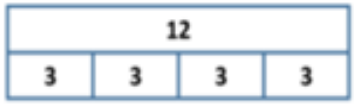
This model is called an array. It helps children to see and understand why 3 x 4 = 12.

Also 4 x 3 = 12

12 ÷ 3 = 4

12 ÷ 4 = 3

This table is called a bar model and helps link division with fractions.



From this children can see that:

12 ÷ 4 = 3 (a quarter of 12 = 3)

12 ÷ 2 = 6 (half of 12 = 6)

and 4 x 3 = 12 (4 groups of 3).

Strategies for multiplication & division

Repeated addition or skip counting

Adding the same number again and again in order to find the answer to a multiplication problem.

6 x 5 is the same as 5 + 5 + 5 + 5 + 5 + 5 or 6 + 6 + 6 + 6 + 6

Making friendly numbers

19 x 2 = ?

20 x 2 = 40 then adjust 40—2 = 38

Doubling and halving (multiplication only)

You can double one factor and half the other to make the problem simpler.

4 x 45 → 2 x 90 = 180

<u>Split strategy (multiplication only)</u>

Break apart the numbers to make them easier to work with.

23 x 5 = ?

(20 x 5) + (3 x 5)

100 + 15 = 115