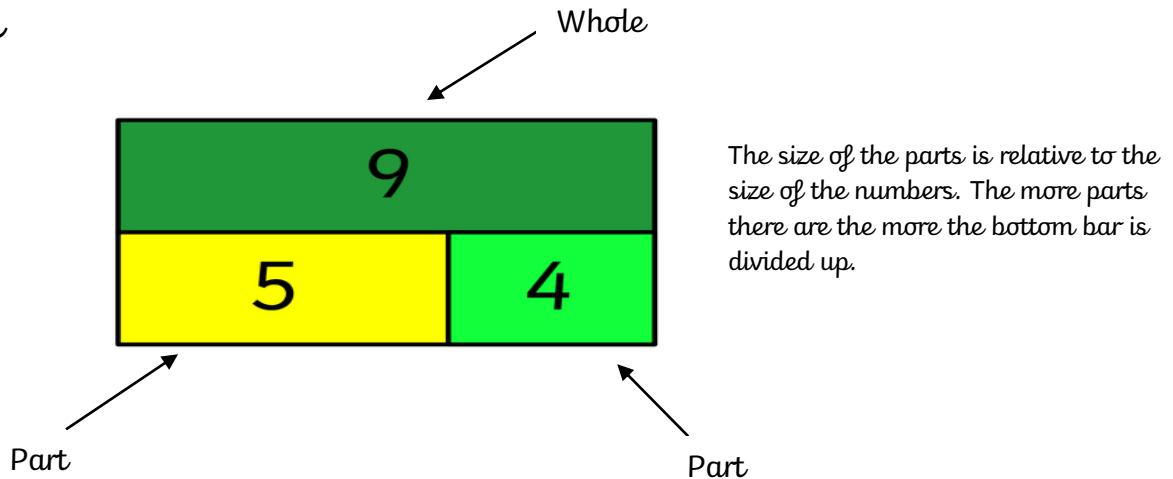


Addition and Subtraction

Bar Model



There are 4 calculations for this number family:

$$5 + 4 = 9$$

$$4 + 5 = 9$$

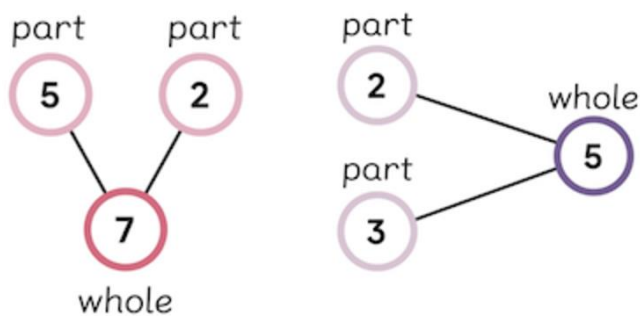
$$9 - 5 = 4$$

$$9 - 4 = 5$$

This related addition fact can sometimes be referred to as the **commutative**. You can add in any order.

The **inverse** is the opposite operation.

Whole / Part Model



$$5 + 2 = 7$$

$$2 + 5 = 7$$

$$7 - 2 = 5$$

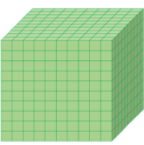
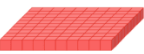


$$7 - 5 = 2$$

When subtracting you always subtract a part from the whole.

To add and subtract begin with the concrete.

Use any objects in your home. In school we use dienes and counters but you can use any object and rename them to suit the calculation.

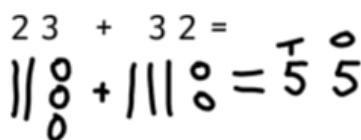
When taking away make the largest number and remove the objects when taking away the second number.

Thousands	Hundreds	Tens	Units/Ones
 1000	 100	 10	 1

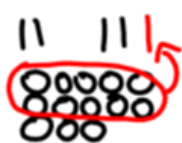


When confident you can use more pictorial methods.

We draw pictures to represent the objects used previously.

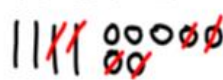
$$23 + 32 = 55$$


$$25 + 28 = 53$$



Rename 10 ones as 1 ten

$$47 - 24 = 23$$



Always subtract the ones before the tens.

$$46 - 28 = 18$$



There are not enough ones to subtract 8 from 6 so you rename 1 ten as 10 ones.

When confident you could move on to using more abstract methods.

$$\begin{array}{r} \text{T O} \\ + 55 \\ 24 \\ \hline 79 \end{array}$$

Add the ones then the tens.

$$\begin{array}{r} \text{T O} \\ + 58 \\ 36 \\ \hline + 14 \\ 80 \\ \hline 94 \end{array}$$

← Total of ones

← Total of tens

$$\begin{array}{r} \text{T O} \\ 47 \\ - 23 \\ \hline 24 \end{array}$$

Subtract the ones then the tens.

$$\begin{array}{r} \text{T O} \\ 47 \\ - 28 \\ \hline 19 \end{array}$$

Rename 1 ten for 10 ones.

Don't forget to write the remaining number of tens.