

# Maths

## Directed Numbers

A positive number e.g. (+5) is a number that has a value greater than 0

A negative number e.g. (-5) is a number that has a value less than 0

Draw out a number line with 0 in the middle and all the positive numbers are to the right and all the negative numbers are to the left up to 20

Starting at 0 on the number line the numbers to the right of 0 are positive numbers e.g. +1 and they don't always need the + sign in front of them

To the left of 0 on the number line the numbers are all negative numbers e.g. -3 and they always need the – sign in front of them

The further to the right on the number line a number is the greater its value and the further to the left on the number line a number is the less its value

**To find the difference** between a negative (-) and a negative number or a positive (+) number and a positive number then you subtract

e.g. find the difference between +15 and +10 answer = +5

e.g. find the difference between  $-7$  and  $-4 = -3$

for both of the above examples we subtracted to find the answer

**To find the difference** between a  $+$  number and a  $-$  number you add

e.g. find the difference between  $-5$  and  $+4 = 9$

for the above example we added  $5$  and  $4 = 9$

### **Addition and Subtraction of Directed Numbers**

When you're adding a positive number to another number, move to the right of the number line e.g.  $-5$  plus  $+7 = +2$

When you're adding a negative number to another number move to the left of the number line e.g.  $4$  and  $-3 = 1$  ( you started on  $4$  and moved  $3$  places to the left and you landed on  $1$ )

Tip: If a positive number is added to a negative number and if the negative number is bigger then the answer will be negative.

If you have to add 3 numbers e.g.  $+3$  plus  $-7$  plus  $+2 =$  add the two positive numbers first which is  $+3$  and  $+2 = 5$  and then take away the  $-7$  the answer is  $-2$

## Length

10 mm ( millimetres) = 1cm

100cm (centimetres) = 1m

1000m (metres) = 1 Kilometre

To change mm to cm divide by 10

e.g. 70mm = 7cm

To change cm to mm multiply by 10

e.g. 8cm = 80mm

To change centimetres to metres then divide by 100

e.g. 400cm = 4m

To change metres to centimetres then multiply by 100

e.g. 6m = 600cm

To change metres to Kilometres then divide by 1000

e.g. 5000m = 5km

To change Kilometres to metres then multiply by 1000

e.g. 4km = 4000m