Positive and Negative Numbers

positive numbers (+ve)   have either a '+ sign' or nothing in front

negative numbers (-ve)   have '– sign' in front

<u>The rules</u>

Where **two signs appear next to a number** <u>or</u> negative and positive numbers are being **multiplied together** or **divided**, the following rules need to be applied:

+ and +   }
- and -   }   *signs are the same*   makes a positive number
                                          makes a positive number

- and +   }
+ and -   }   *signs are different*   makes a negative number
                                          makes a negative number

e.g.   5 – -3 = 8 (may also be written as +5 – -3 = 8)

        -2 x 2   = -4 (may also be written as -2 x +2 = -4)

        -2 x -2 = 4
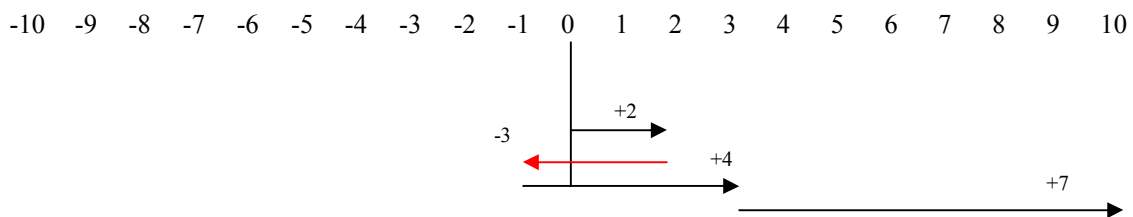
        -2 x -2a = 4a

        -4 / -2   = 2

Using number lines

When **adding** or **subtracting** a number line should be used instead

Calculate: 2 – 3 + 4 + 7

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0   1   2   3   4   5   6   7   8   9   10
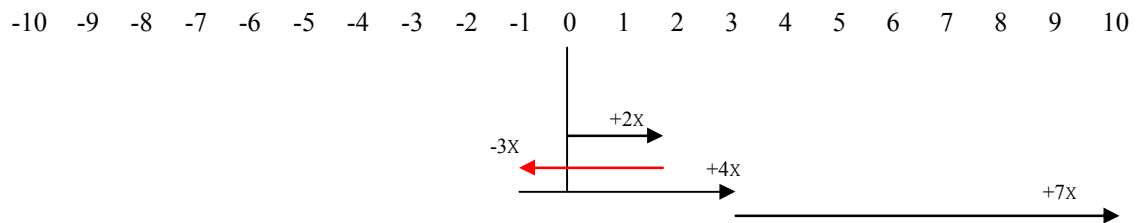

Begin at 0 and move according to the instructions:

		Position on number line
Step 1:	+2	*2*
Step 2:	-3	*-1*
Step 3:	+4	*3*
Step 4:	+7	*10*

Answer = 10

Using a number line to simplify an algebraic equation

Simplify the equation $2X - 3X + 4X + 7X$

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Begin at 0 and move according to the instructions:

Position on number line

Step 1:	+2X	*2*
Step 2:	-3X	*-1*
Step 3:	+4X	*3*
Step 4:	+7X	*10*

The answer is 10X