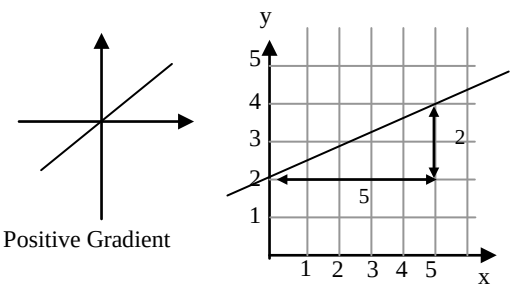
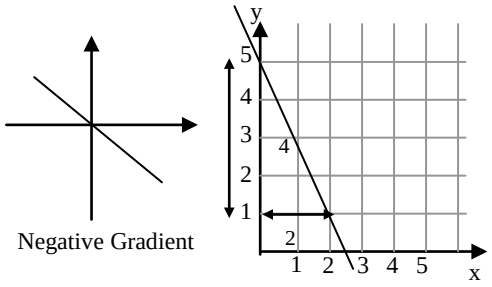
STRAIGHT LINE GRAPHS y = mx + c
Intermediate Revision Sheet

Straight line Graphs $y = mx + c$

m = is the gradient of the Graph
c = the point where the line crosses the y axis





gradient (m**)** = $\frac{2}{5}$ cross **axis the at 2**

formula y = $\frac{2}{5}x + 2$

gradient (m**) = -2** cross **axis the at 2**

formula y = $-2x + 5$

PLOTTING STRAIGHT LINE GRAPHS

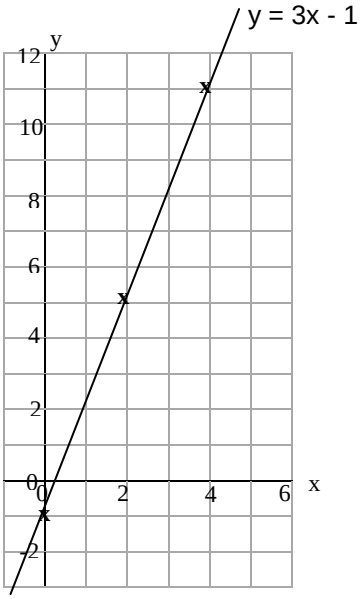
Plot $y = 3x - 1$
Step 1 Draw a table for 3 values of *x*

Find the values of y using the equation given

x	0	2	4
$y = 3x - 1$	-1	5	11

Step 2 Plot the *x* and *y* values of the graph.

Step 3 Join up with a straight line



POLYNOMIAL GRAPHS.

- If formula has a x^2 the curve will be 'U' shaped
- If the formula has a x^3 the curve will be ' $\wedge\!\!\smile$ ' shaped

Step 1 Find the missing value
Step 2 Plot the *x* and *y* values carefully
Step 3 Check that the value you calculated fits the curve
Step 4 Draw a curve carefully

The table shows values of $y = 2x^2 - 4x - 12$ for values of *x* from –3 to 5.

x	-2	-1	0	1	2	3	4	5
$y = 2x^2 - 4x - 12$	4	-6	-12	-14	-12	**-6**	4	18

(a) Complete the table above. **$2 \times (3)^2 - 4 \times (3) - 12 = -6$** [1]

(b) On the graph paper opposite, draw the graph of $y = 2x^2 - 4x - 12$ for the values of *x* between –2 and 5. [2]

(c) Write down the *x*-coordinates of the points where the curve $y = 2x^2 - 4x - 12$ intersects the *x*-axis. [1]

Curve crosses x-axis at **(-1.6 , 0) and (3.6 , 0)**

(d) Draw the line *y* = –2 on your graph paper and write down the *x*-coordinates of the points where this line intersects the curve $y = 2x^2 - 4x - 12$ **(-1.4 , -2) and (3.4 , -2)** [2]