

Straight line graphs have the function  $y = mx + c$ . Notice the x-term has a power of 1. This is how you can quickly tell that the function will be a line or a curve. If the x-term has a power of 2, the graph will be curved. You can use these functions to complete a table of values from which to draw the graph. Simple substitution of the x-values into the function will give your y-values.

1. Answer the question using the blank graph below:

a) Copy and complete the table for the graph of  $y = 2 + \frac{x}{4}$

x	-6	-4	0	3	5	8
y		1		2.75		

b) Using a scale of 1cm to 1 unit for each axis, and values  $-8 \leq x \leq 10$  and  $-8 \leq y \leq 10$ , draw the graph of the function named in a).

c) Calculate the gradient (slope) of the graph in part b)

d) Another graph has the equation  $x = -2$ .

- i) Draw this graph on the same coordinate plane.
- ii) Write down the gradient (slope) of the graph in part (d): \_\_\_\_\_
- iii) Write down the coordinates of the point where the graphs intersect.

