

Equations of straight line graphs

1) Draw axes labelled from -4 to 4 on x and -16 to 16 on y.

For each of the following equations, complete a table as shown and draw a graph

x	-4	-2	0	2	4
y					

(a) $y = 3x + 2$ (b) $y = x + 5$ (c) $y = -3x + 4$ (d) $y = 2x - 4$ (e) $y = -x + 6$

2) Find the gradient of each of the lines you have drawn in question 1.

3) For each graph, look at its gradient and its equation. Write down a rule connecting these.

4) For each graph, look at where it crosses the y-axis and its equation. Write down a rule connecting these.

5) Without drawing the graphs, write down the gradient of the lines with the following equations:

(a) $y = 3x - 5$ (b) $y = 1x + 2$ (c) $y = -5x + 7$ (d) $y = 3 + 7x$ (e) $y = 8 - 4x$

6) State where the graph of each equation in Q5 would cross the y-axis.

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