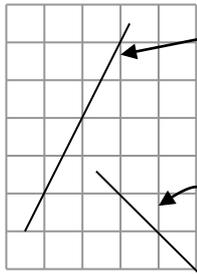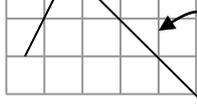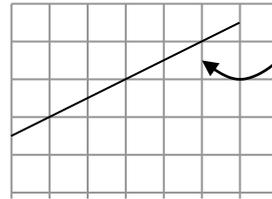GRADIENT    The gradient of a line describes how steep it is. The higher the gradient the steeper the line.

This line has a gradient of 2 as it goes up 2 squares for every one square along.
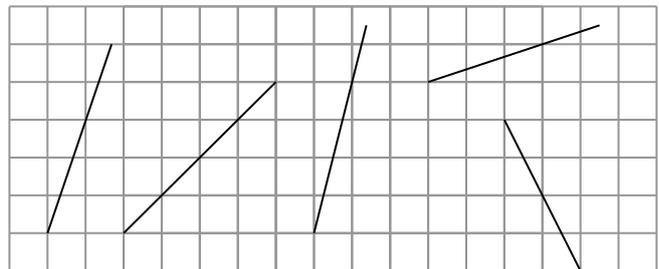
This line has a gradient of ½ as it goes up half a square for every one along.

A line that leans backwards has a negative gradient. This line has gradient –1.
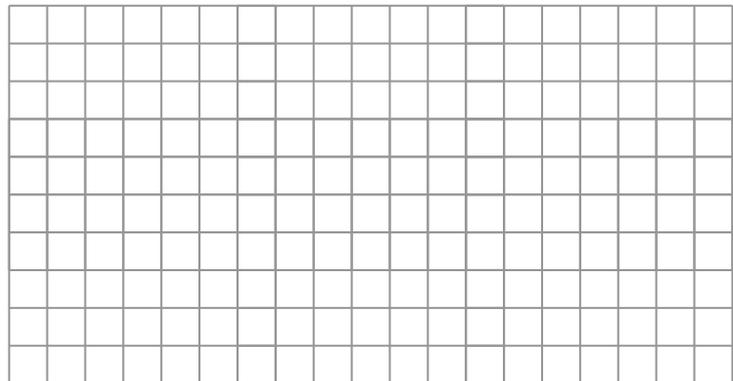
1)    Find the gradients of each of these lines.
Gradient of **a** =
Gradient of **b** =
Gradient of **c** =
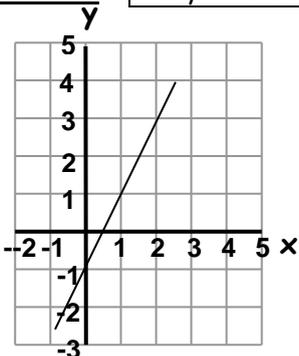Gradient of **d** =
Gradient of **e** =

2)    Draw a line (at least 2 cm long) on the grid that have the following gradients:
Label each line.

a)    gradient of 2

b)    gradient of 4

c)    gradient of ¼

d)    gradient of –3
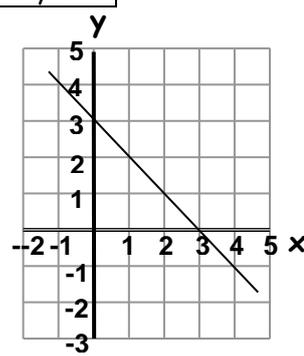
e)    gradient of -½

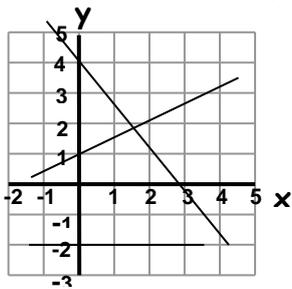Y INTERCEPT    The y intercept of a line is where the line cuts the y axis.

The y intercept of this graph is –1.

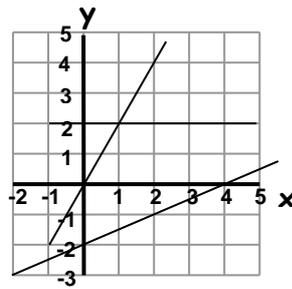The y intercept of this graph is 3.

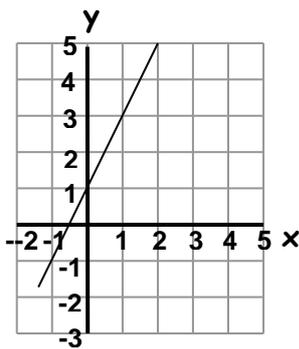3)  Write down the y intercept of the following lines.

y int of **a** =

y int of **b** =

y int of **c** =

y int of **d** =

y int of **e** =

y int of **f** =

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GRADIENT & Y INTERCEPT

This is the graph of   **y = 2x + 1**   you drew this last lesson.
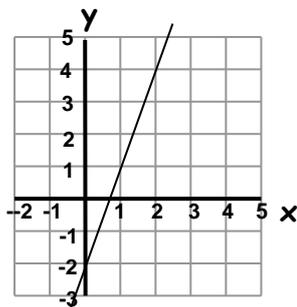
The gradient of this line is 2.
The y intercept of this line is 1.

**So the number in front of the x in the equation tells you the gradient of the line.**
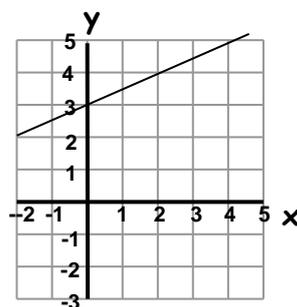**And the number at the end of the equation tells you the y intercept.**

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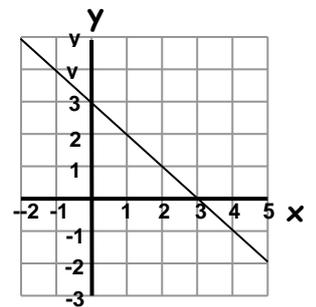4)  Find the gradient and y intercept of the line. Use these to write down the equation of the line.

Gradient =

y int =
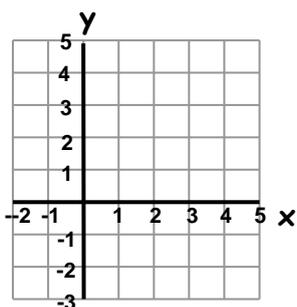
y = ___ x + ____

Gradient =

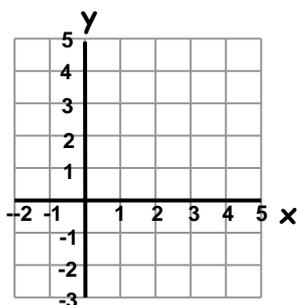y int =

y = ___ x − ___
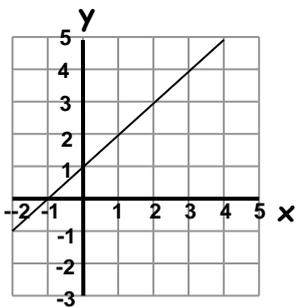
Gradient =

y int =

y = ___ x + ____
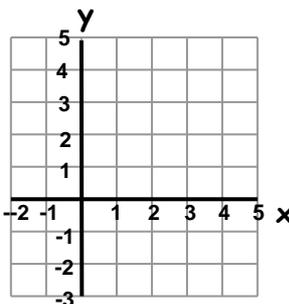
Gradient =

y int =

y = ___ x + ___

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5)  Use the equation of the line to find its gradient and y intercept. Then draw the line.

y = 3x − 1

$y = \frac{1}{2} x + 1$

y = 2x − 3