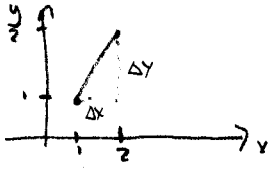
Notes:

GRADIENT

FIND THE GRADIEN OF THE LINE BETWEEN POINTS (1,1) AND (2,3)

1) PICTURE



2) FORMULA

$$\text{GRADIENT} = \frac{\Delta Y}{\Delta X}$$

3) SUB IN VALUES

$$\frac{\Delta Y}{\Delta X} = \frac{3-1}{2-1} = \frac{2}{1} = 2$$

PLOTING $y = mx + c$

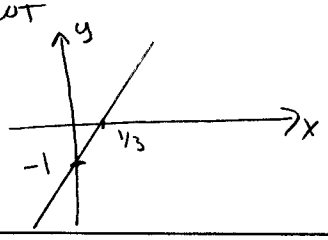
PLOT $y = 3x - 1$

1) $x = 0 \Rightarrow y = 3 \times 0 - 1 = -1$

2) $y = 0 \Rightarrow 0 = 3x - 1$
$1 = 3x$
$1/3 = x$

3) TWO POINTS ON LINE ARE $(0, -1)$ AND $(1/3, 0)$

4) PLOT



FINDING THE EQUATION OF A LINE

FIND THE EQUATION OF A LINE THROUGH (2,5) WITH GRADIEN 5

1) WRITE EQUATION $y = mx + c$

2) m = GRADIENT = 5

3) SUB. IN (2,5) INTO EQUATION

$$5 = 5 \times 2 + c$$
$$5 - 10 = c$$
$$-5 = c$$

4) WRITE EQUATION OF LINE

$$y = 5x - 5$$

FINDING THE EQUATION OF A LINE 2

FIND THE EQUATION OF A LINE THROUGH POINTS (1,1) AND (2,2)

1) FIND GRADIENT OF LINE

2) USE THE ABOVE TO FIND $y = mx + c$

GRADIENT + INTERCEPT OF A LINE

FIND THE GRADIENT + y INTERCEPT OF $y = 3x + 5$

1) INTERCEPT = 5

2) GRADIENT = 3

Comments:

- MUST BE SURE TO FOLLOW ALL THE STEPS ABOVE