

Equation of Lines

(Linear Function)

All straight lines can be written in the form;

$$y = mx + b$$

m = slope

b = y intercept

OR

$$Ax + By + C = 0 \text{ (general form)}$$

Note: A, B, C are integers or surds

e.g. Find the equation of the line perpendicular to $y = 5x - 2$, passing through $(0,6)$ in general form.

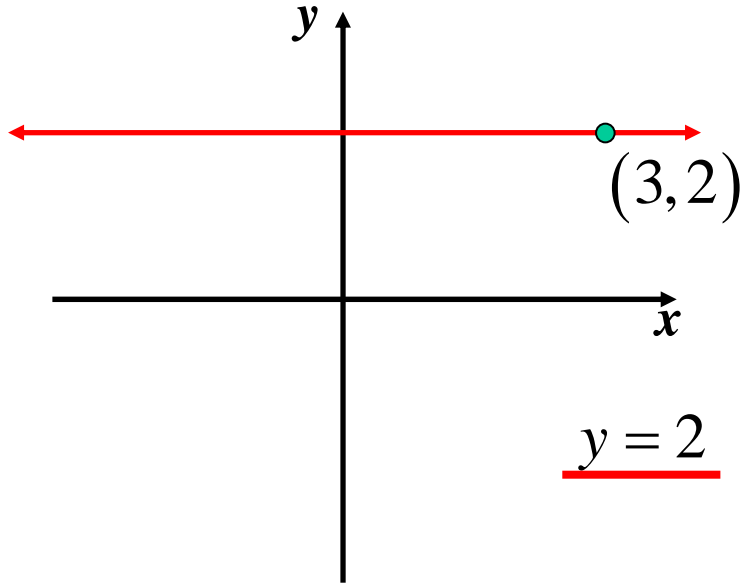
required $m = -\frac{1}{5}$

$$y = -\frac{1}{5}x + 6$$

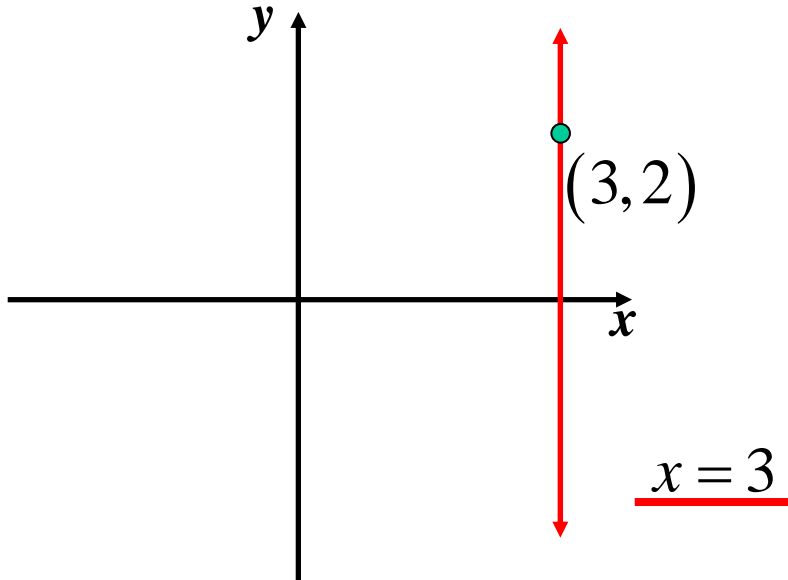
$$5y = -x + 30$$

$$\underline{x + 5y - 30 = 0}$$

Note: lines parallel to the x axis ($y = c$)



lines parallel to the y axis ($x = k$)



**Exercise 5C; 1b, 3cf, 4a,
5d, 6df, 8df, 10b,
11c, 12**