

Equation of Lines

(Linear Function)

All straight lines can be written in the form;

$$y = mx + b$$

$m = \text{slope}$
 $b = y \text{ intercept}$

OR

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

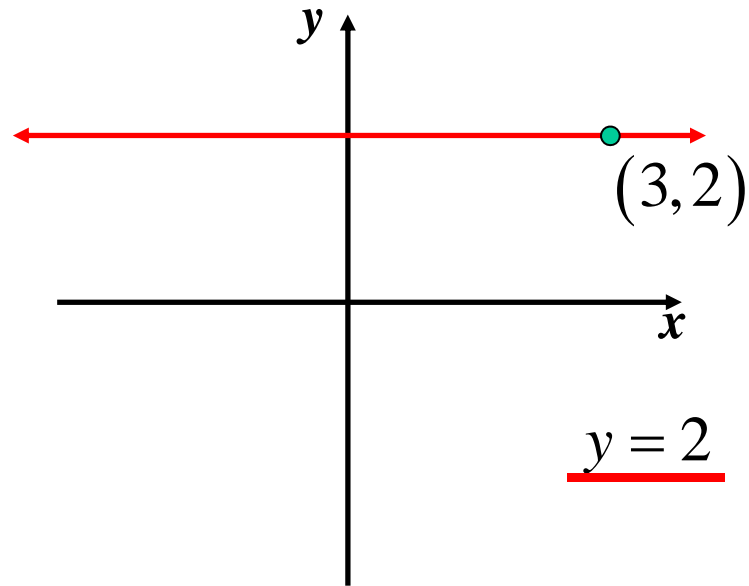
Note: A, B, C are integers or surds

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

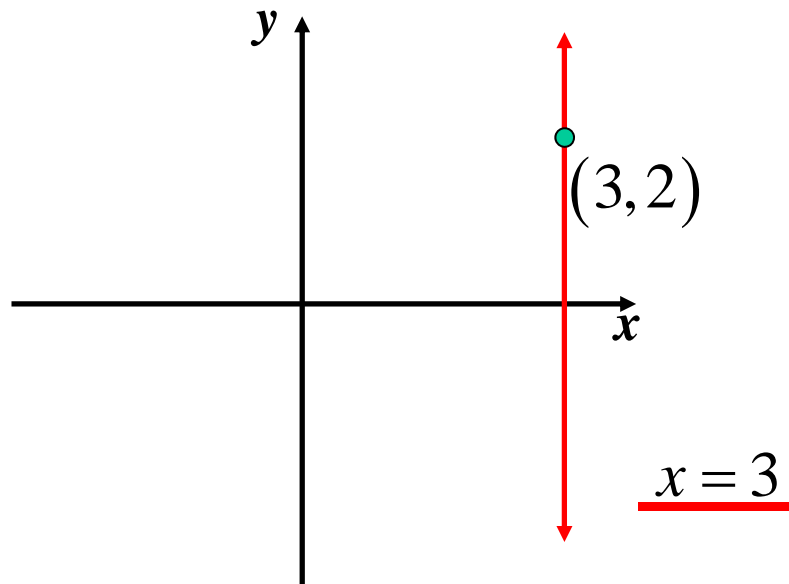
required $m = -\frac{1}{5}$

$$y = -\frac{1}{5}x + 6$$
$$5y = -x + 30$$
$$x + 5y - 30 = 0$$

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



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



**Exercise 7C; 1b, 4a, 5a,
8d, 9d, 10ad, 12c, 13b,
14, 15, 17c, 18, 21**