X- and Y- Intercepts

You can graph a line if you know...

- a point and the slope
- two points.

Definitions:

The **x-intercept** is where a relation crosses the *x*-axis. The co-ordinate looks like (a, 0).

The **y-intercept** is where a relation crosses the *y*-axis. The co-ordinate looks like (0, b).

Example 1: Graph the line 2x + y + 4 =0 by finding two points on the line.

x - intercept (y- coordinate is 0)

$2x + (0) + 4 = 0$

$2x + 4 = 0$

$2x = 0 - 4$

$2x = -4$

$x = \frac{-4}{2}$

$\boxed{x = -2}$

y- intercept (x- coordinate is 0)

$2(0) + y + 4 = 0$

$y + 4 = 0$

$y = 0 - 4$

$\boxed{y = -4}$

Graph: