

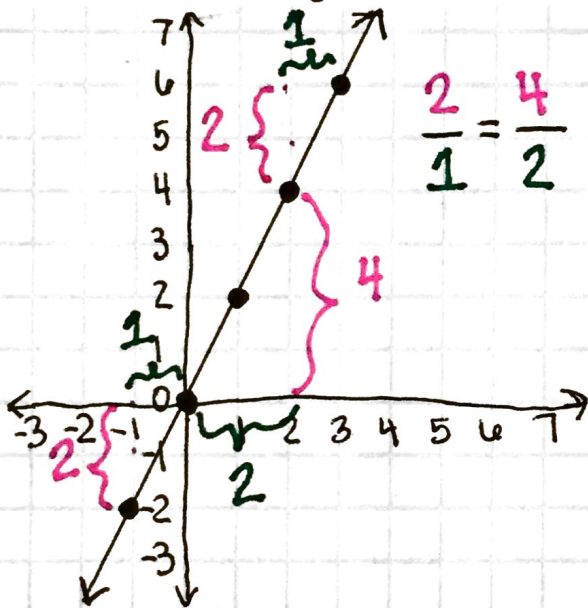
# Slope (m)

Used to describe the measurement of steepness of a straight line. Also referred to as the **rate of change**.

**d + m**

rise	change in y	vertical change	$y_2 - y_1$
run	change in x	horizontal change	$x_2 - x_1$

## Graphically



## Algebraically

Find the slope of a line passing through  $(-2, 3)$  and  $(3, -2)$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{-2 - 3}{3 - (-2)} = \frac{-5}{5} = -1$$

Find the slope of a line going through  $(0, -4)$  and  $(8, -2)$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{-2 - (-4)}{8 - 0} = \frac{2}{8} = \frac{1}{4}$$

# Intercepts

**Y-intercept:** point where a line crosses the y-axis  
written:  $(0, y\text{-value})$

**X-intercept:** point where a line crosses the x-axis  
written:  $(x\text{-value}, 0)$

