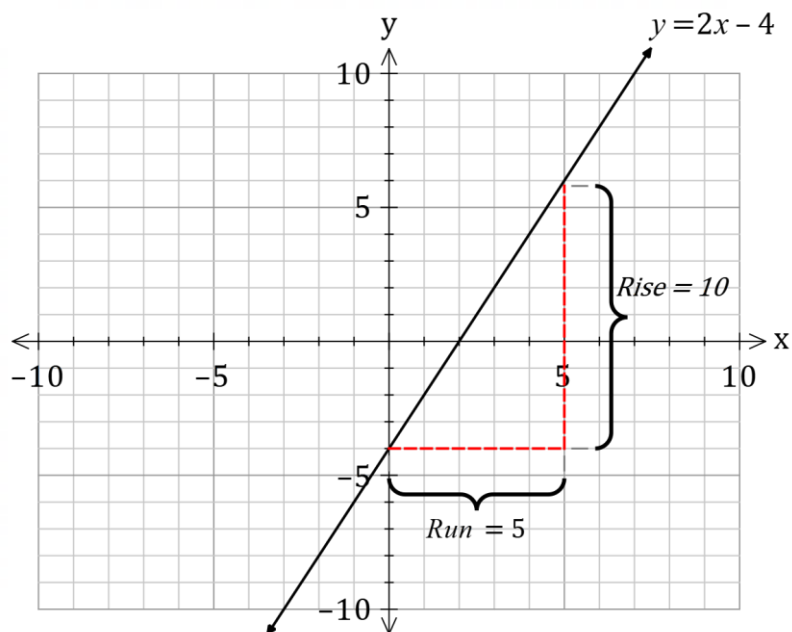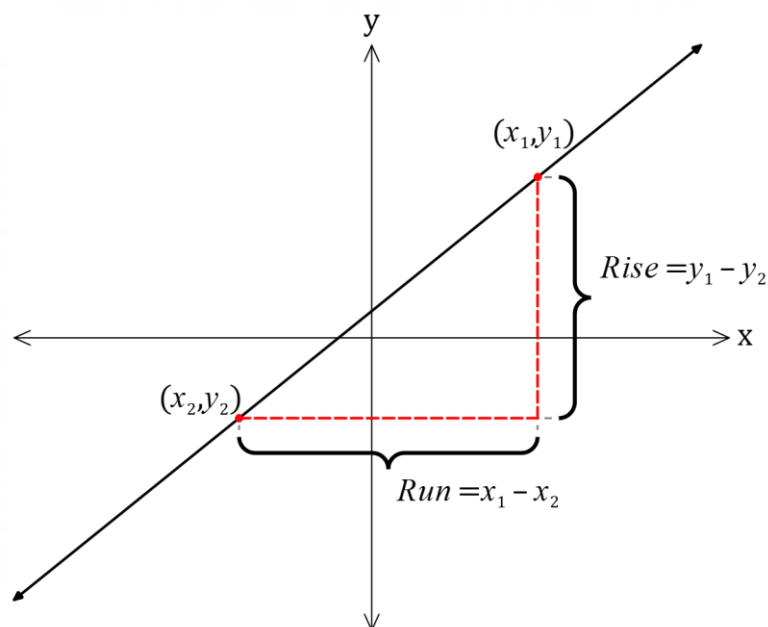# Gradient of Lines

The gradient of a line is the slope of the line (often stated as 'rise over run'). The symbol for the gradient is m.

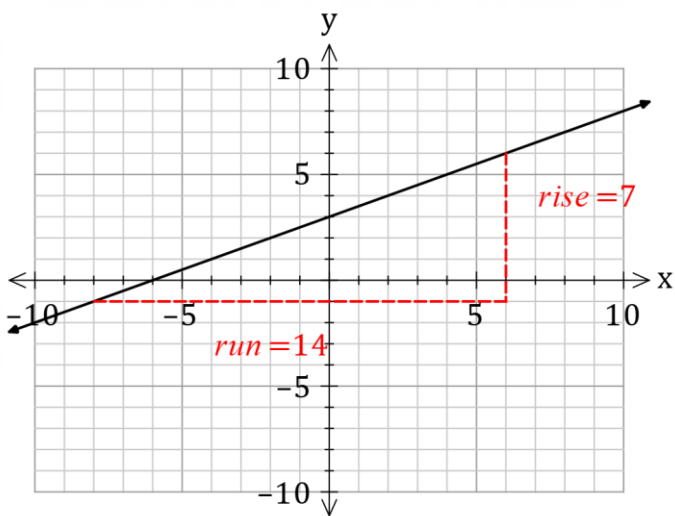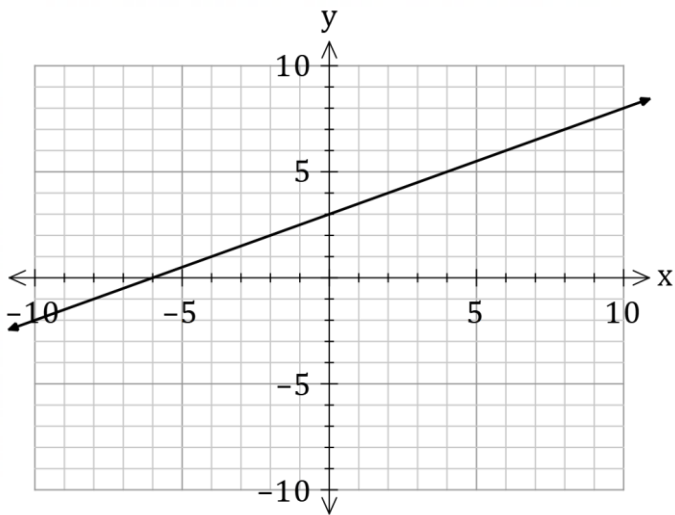$$m = \frac{10}{5}$$
$$m = 2$$

To Generalise

$$m = \frac{y_1 - y_2}{x_1 - x_2}$$

Examples

1. Find the gradient of the line segment joining the points $A\ (-2, 3)$ and $B(4, -3)$.

$$m = \frac{3 - -3}{-2 - 4}$$
$$m = \frac{6}{-6}$$
$$m = -1$$

2. Find the gradient of the line sketched below:

$$m = \frac{7}{14} = \frac{1}{2}$$

Note:

The general equation of a line is

$$y = mx + c$$

| gradient |

| $y -$intercept |