

## Answer on Question #83037 - Math – Analytic Geometry

### Question

Determine the gradient of a straight line passing through the point (1, 6) and (-3, -3).

### Solution

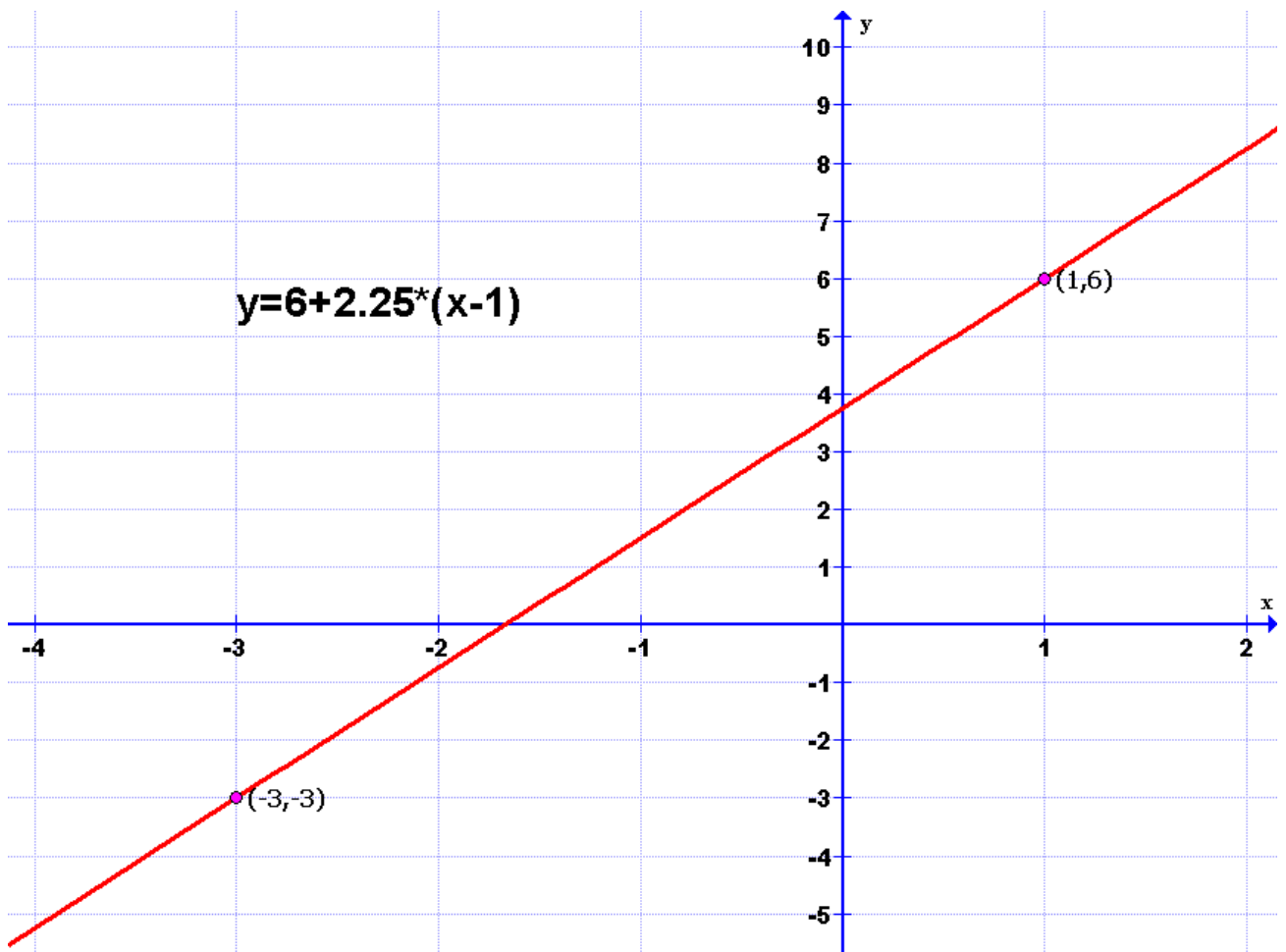
We have to find the straight line passing through the points (1,6) and (-3, -3).

The equation of a line passing through the points  $(x_1, y_1)$  and  $(x_2, y_2)$  is given by

$$\frac{y - y_1}{x - x_1} = \frac{y_2 - y_1}{x_2 - x_1}$$

Here  $k = \frac{y_2 - y_1}{x_2 - x_1}$  is the gradient of the line. Substituting the given values we get

$$k = \frac{-3 - 6}{-3 - 1} = \frac{9}{4} = 2.25$$



**Answer:** the gradient of a straight line is 2.25.