

7-4 Slope

slope - rate of change, m , $\frac{\text{rise}}{\text{run}}$, $\frac{\text{change in } y}{\text{change in } x}$

Slope Formula:

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad \text{Given } (x_1, y_1) \text{ and } (x_2, y_2)$$

Find the slope of the line containing the points

$(2, 1)$ and $(4, 3)$.
 $x_1 \quad y_1 \quad \quad x_2 \quad y_2$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - 1}{4 - 2} = \frac{2}{2} = 1$$

Find the slope of the line containing the points

$(2, 1)$ and $(7, 3)$.

$$m = \frac{3 - 1}{7 - 2} = \frac{2}{5}$$

When $x = \#$

$m = \text{undefined}$

When $y = \#$

$m = 0$

Find the slope of the following:

1.) $y = -2$

$m = 0$

2.) $x = 2$

$m = \text{undefined}$

3.) $y = 723$

$m = 0$

$x = -134$

$m = \text{undef.}$