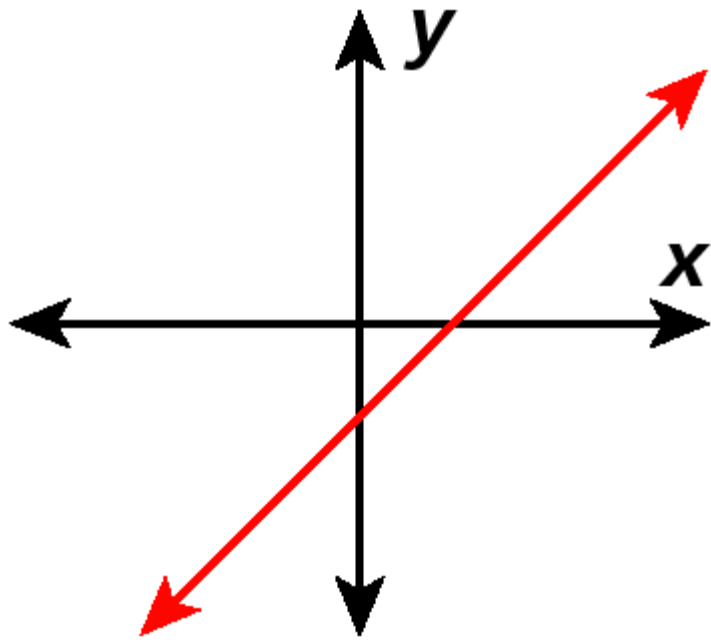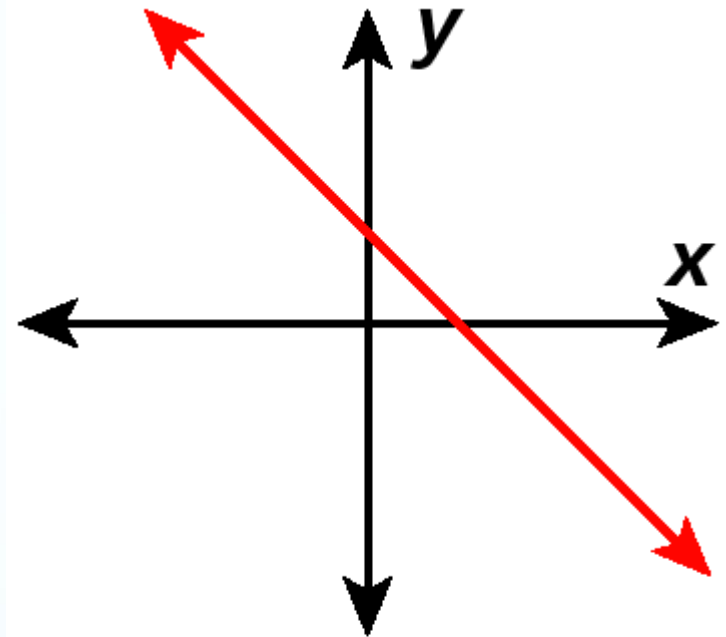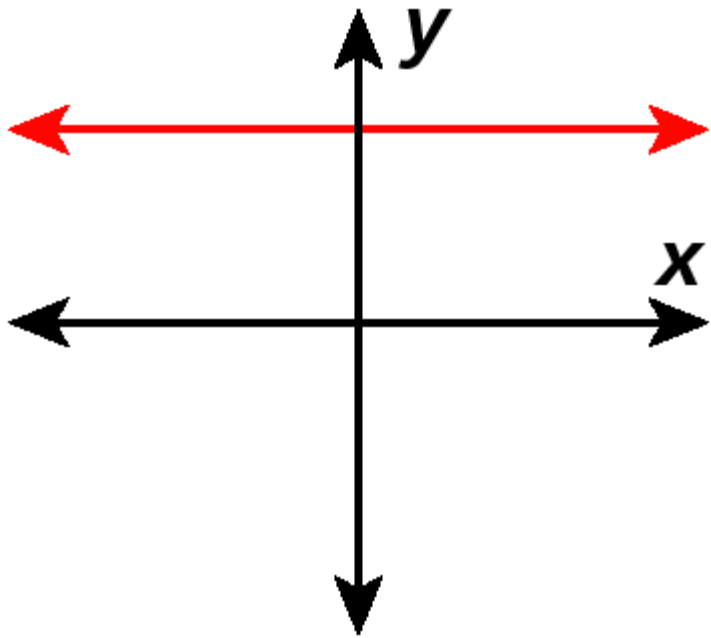# Slope of a Line (graph)
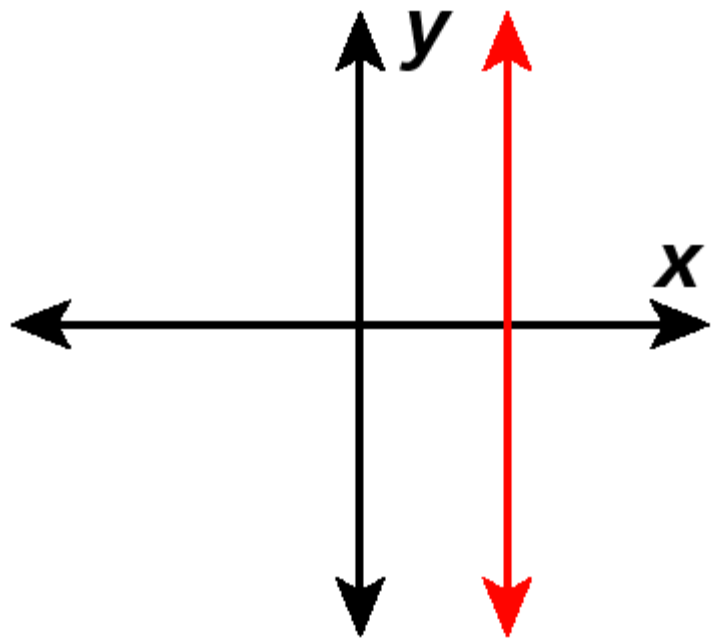
Positive slope

Negative slope

Zero slope

Undefined slope

# SLOPE OF A LINE

The **rise** is the difference in the *y*-values of two points on a line.

The **run** is the difference in the *x*-values of two points on a line.

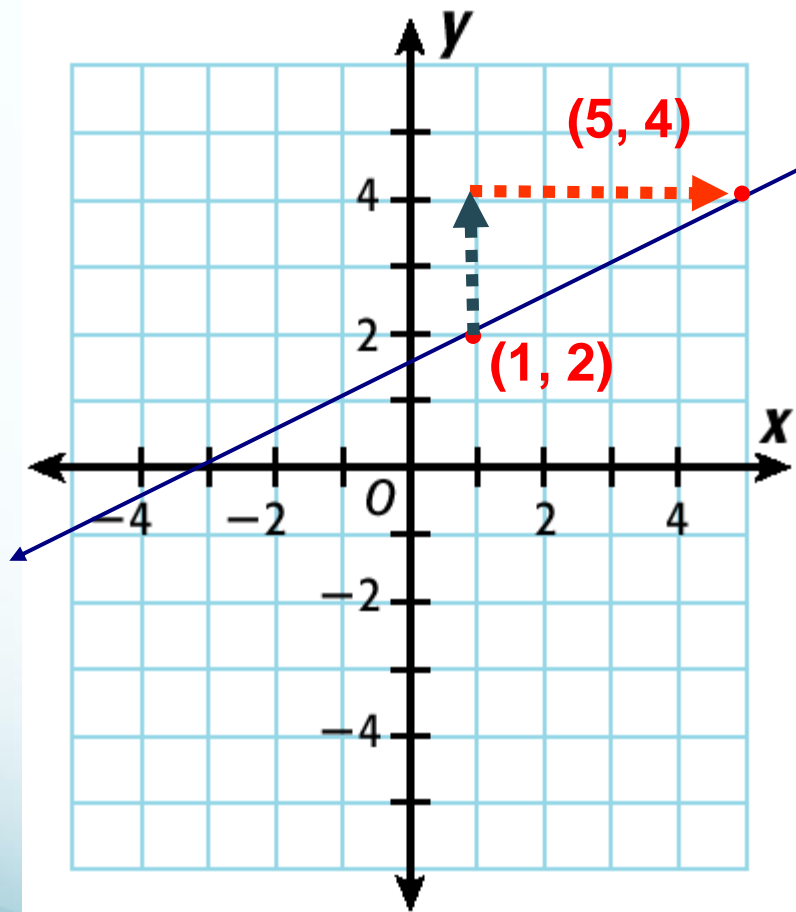The **slope** of a line is the ratio of rise to run for any two points on the line.

$$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x}$$

(Remember that *y* is the **dependent variable** and *x* is the **independent variable**.)
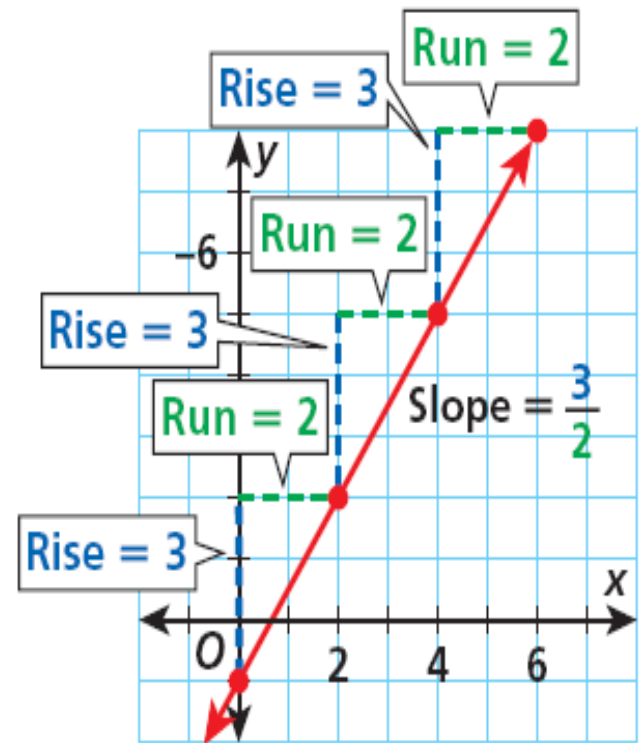
# Example 1

**Find the slope of the line.**



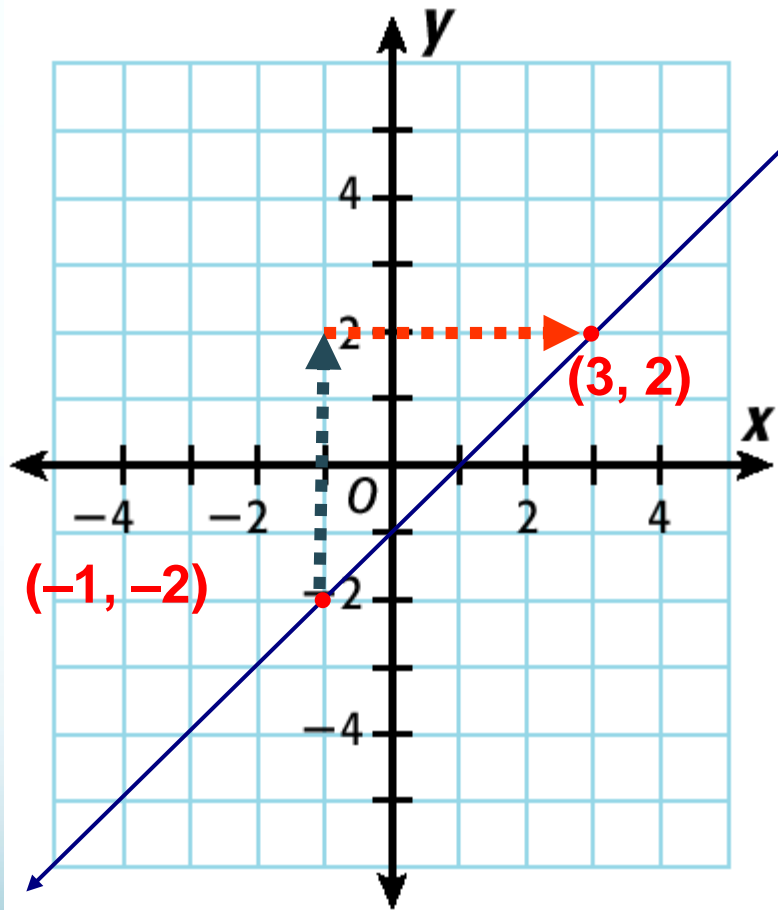*Begin at one point and count vertically to find the rise.*

*Then count horizontally to the second point to find the run.*

slope = $\dfrac{2}{4}$ $\dfrac{1}{2}$

The slope of the line is $\dfrac{1}{2}$.

# Example 2

**Find the slope of the line.**



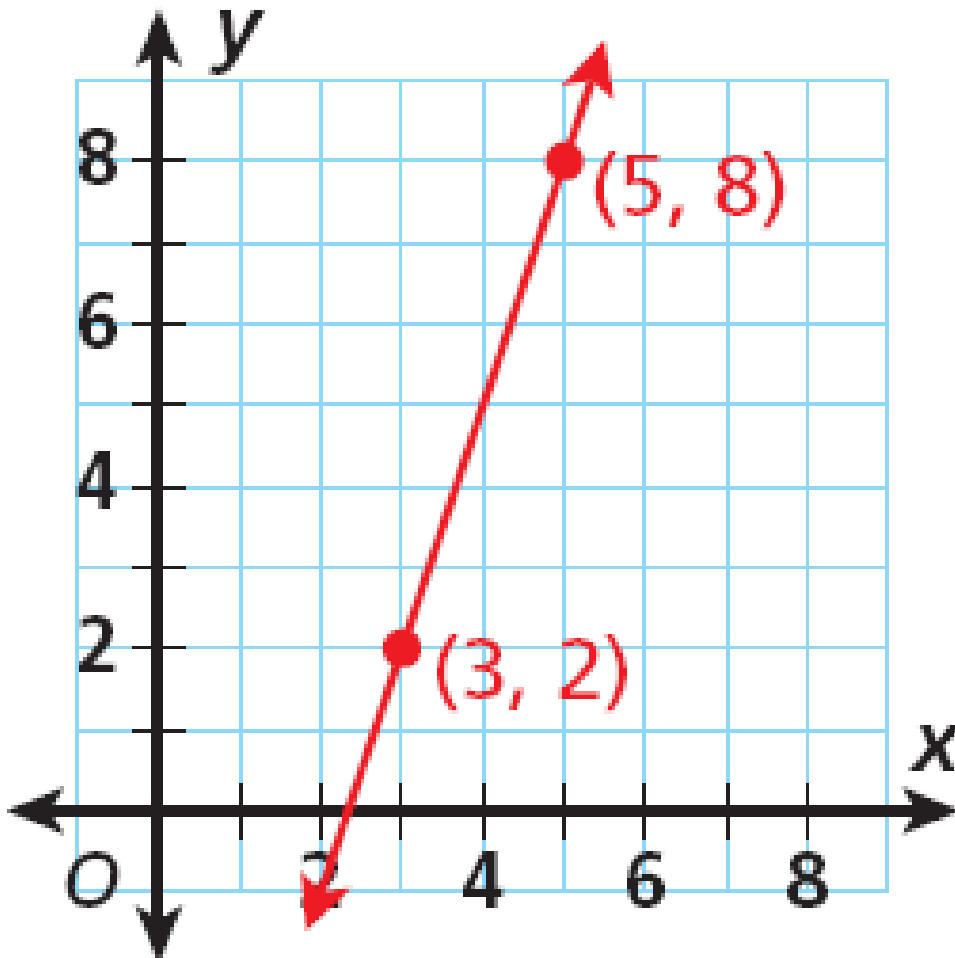*Begin at one point and count vertically to find the rise.*

*Then count horizontally to the second point to find the run.*

slope = $\dfrac{4}{4}$ 1

The slope of the line is 1.

# Practice

Find the slope of the line.

# Slope of a Line

A **rate of change** is a ratio that compares the amount of change in a _____ variable to the amount of change in an in _____ variable.

rate of change = $\dfrac{\text{change in dependent variable}}{\text{change in independent variable}}$