



Business Finance: Graphing Refresher

Graphing profits can become a slippery slope if you don't do the math right.



Lesson Objective

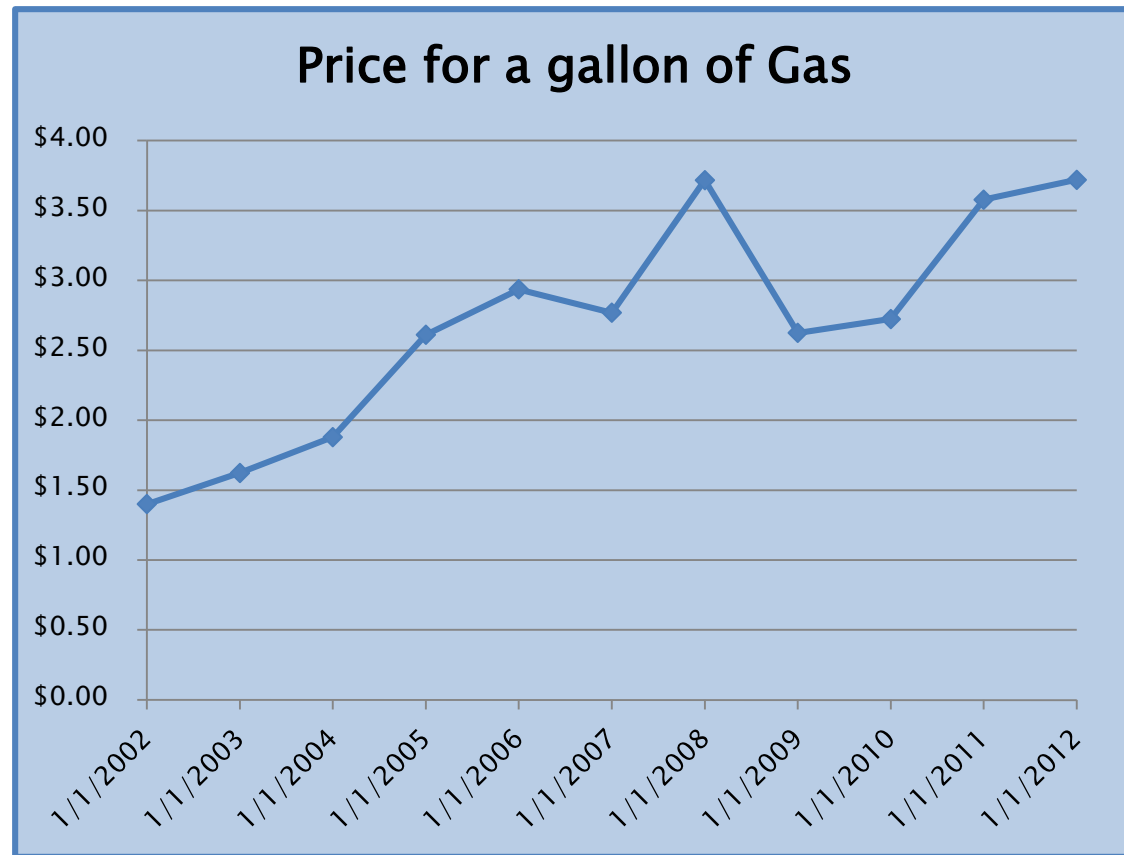
Students will learn the basics
of line graphing.



Charting Your Profits

Both of these images show the same information. How are they the same? How are they different? Which do you like best and why?

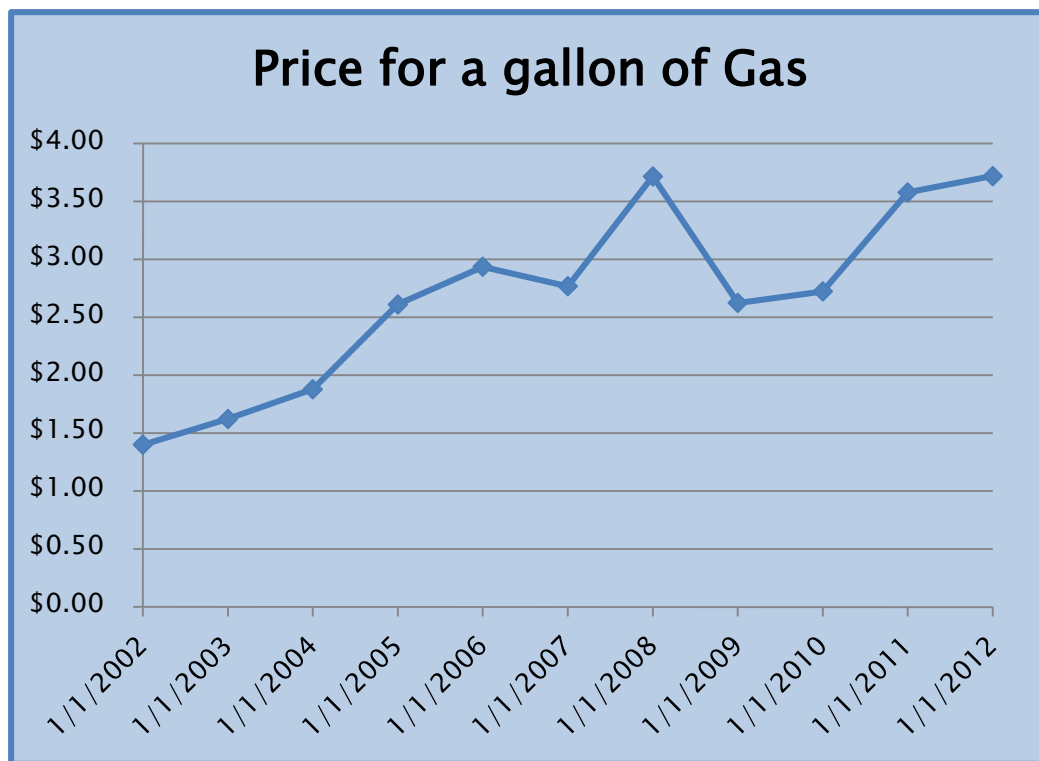
Date	Price per gallon
1 / 1 / 2002	\$1.40
1 / 1 / 2003	\$1.62
1 / 1 / 2004	\$1.88
1 / 1 / 2005	\$2.61
1 / 1 / 2006	\$2.94
1 / 1 / 2007	\$2.77
1 / 1 / 2008	\$3.72
1 / 1 / 2009	\$2.62
1 / 1 / 2010	\$2.72
1 / 1 / 2011	\$3.58
1 / 1 / 2012	\$3.72





Graphs

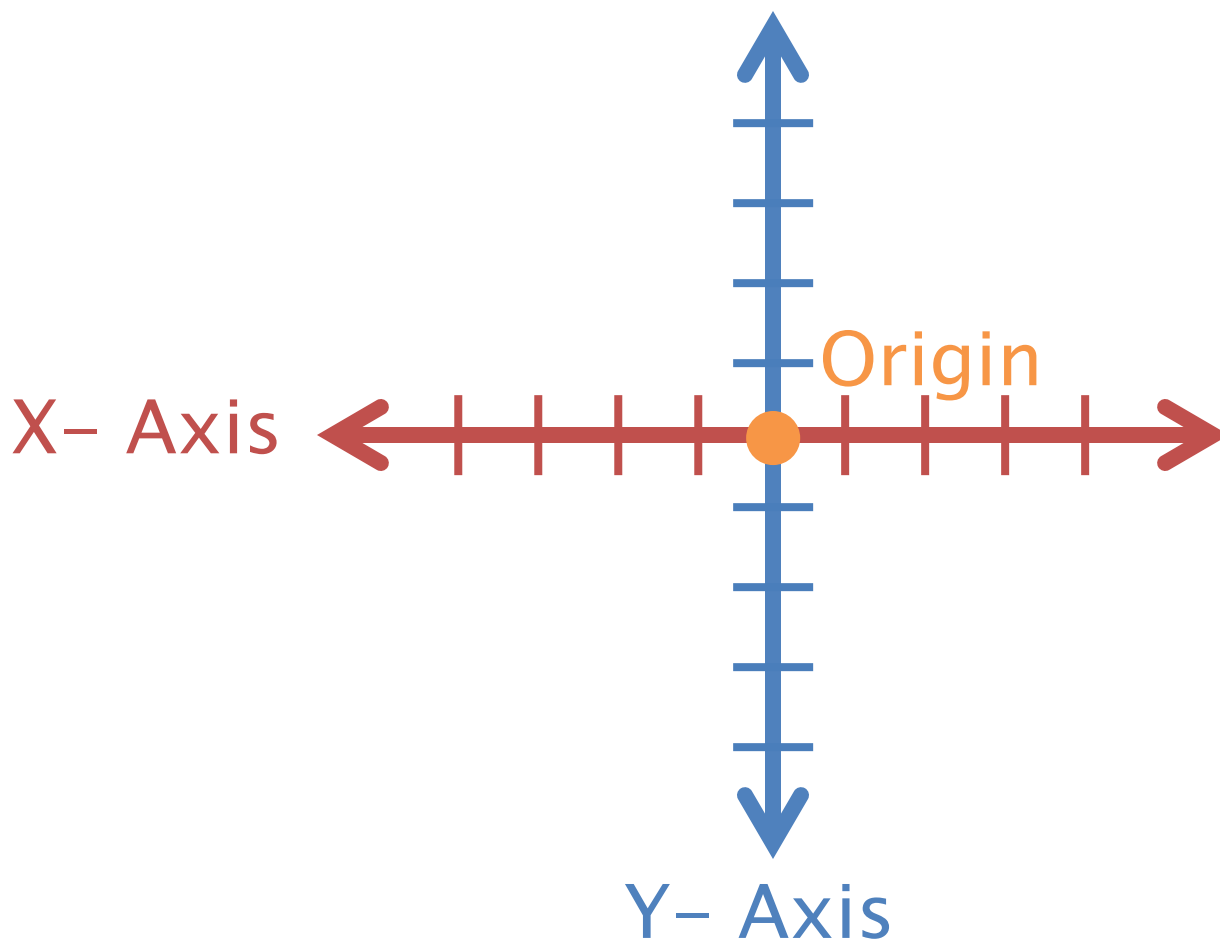
The goal of a good line graph is to present information in a format that can be quickly and easily understood. It gives a visual representation of information.





Graphs

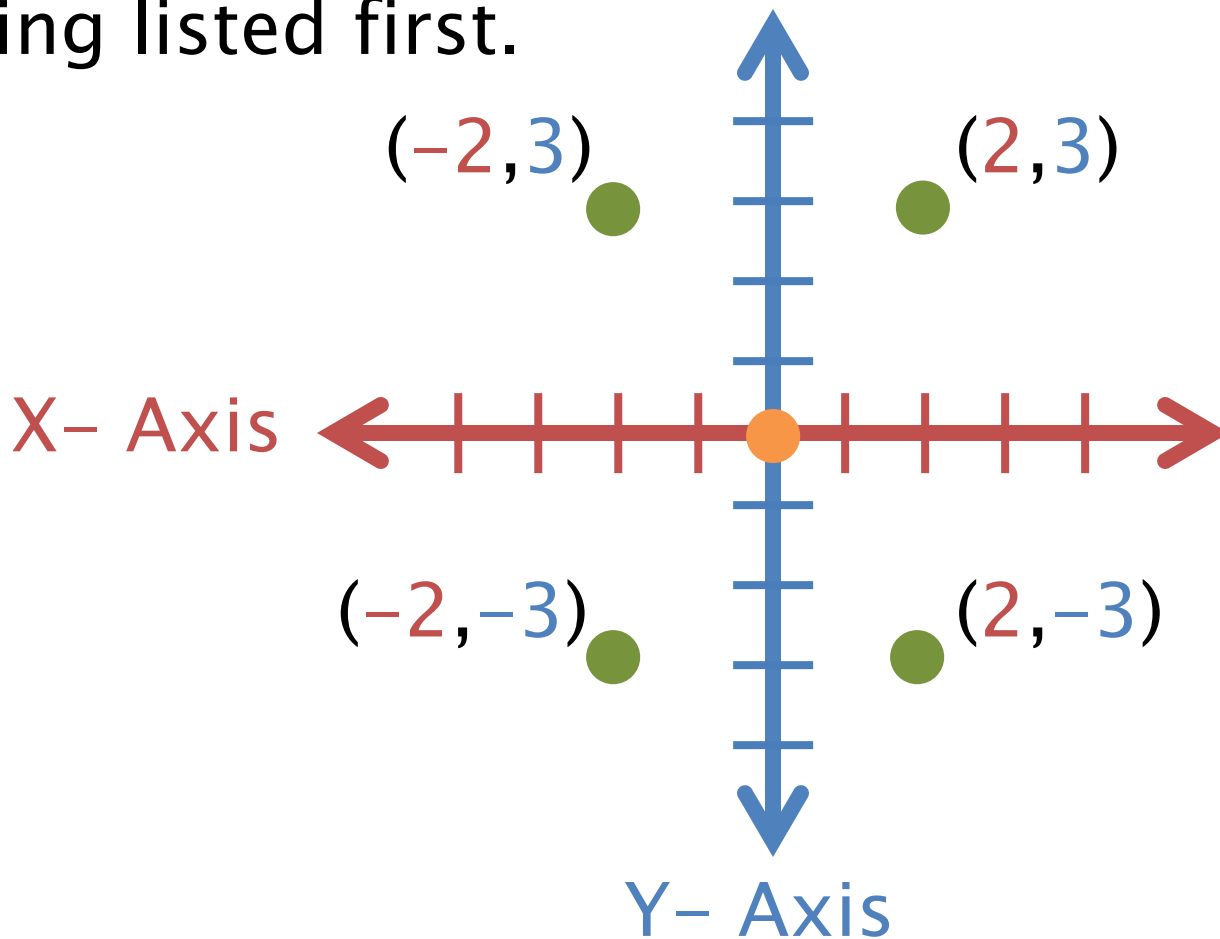
The Graph is made up of 2 base lines and a central point.





Graphs

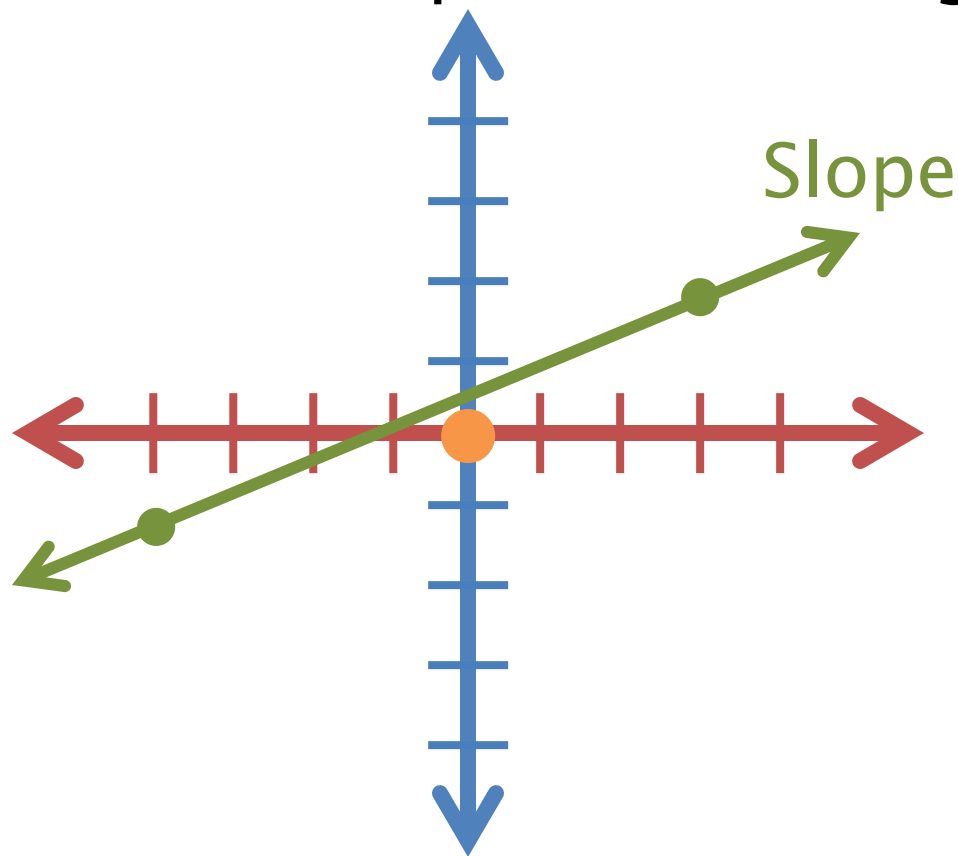
A Point's location is always measured as its distance from the origin with the x-axis count being listed first.





Graphs

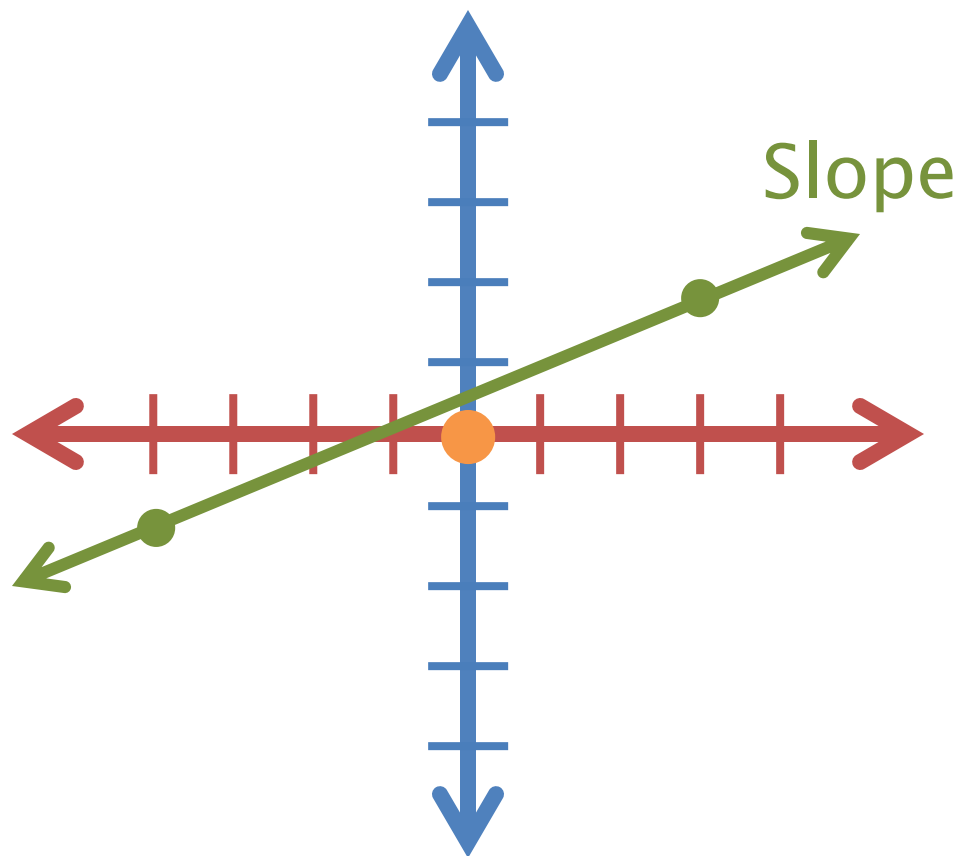
A third line represents the information we are graphing. The **Slope** is the steepness and the direction between two points on the graph.





Graphs

Slope is calculated as: $\frac{\text{Rise}}{\text{Run}}$

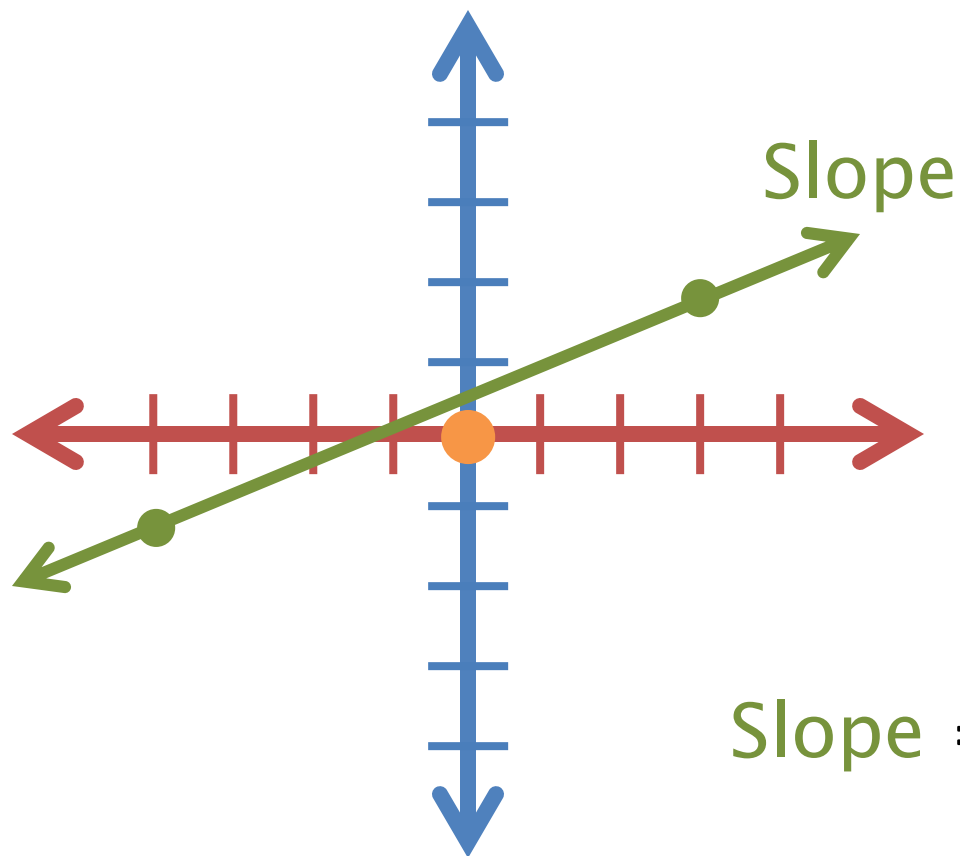




Graphs

Rise can go up or down.

Run is always counted from left to right.



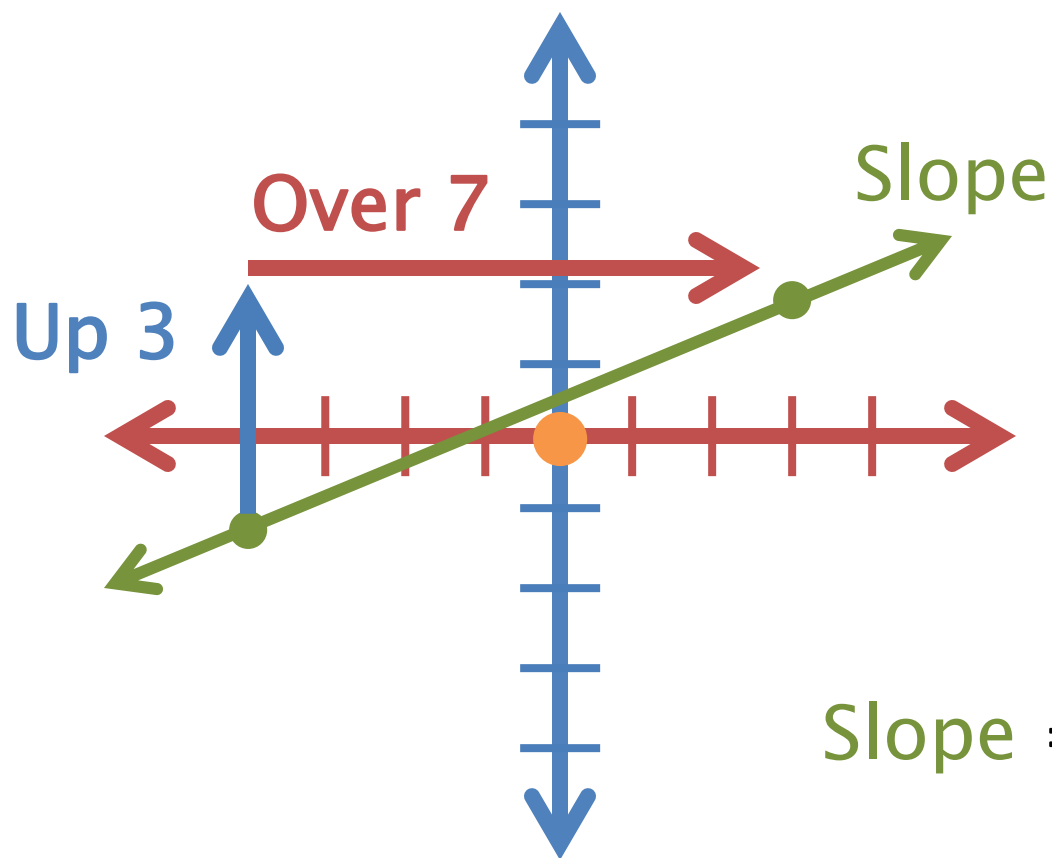
$$\text{Slope} = \frac{\text{Rise}}{\text{Run}}$$



Graphs

Rise can go up or down.

Run is always counted from left to right.



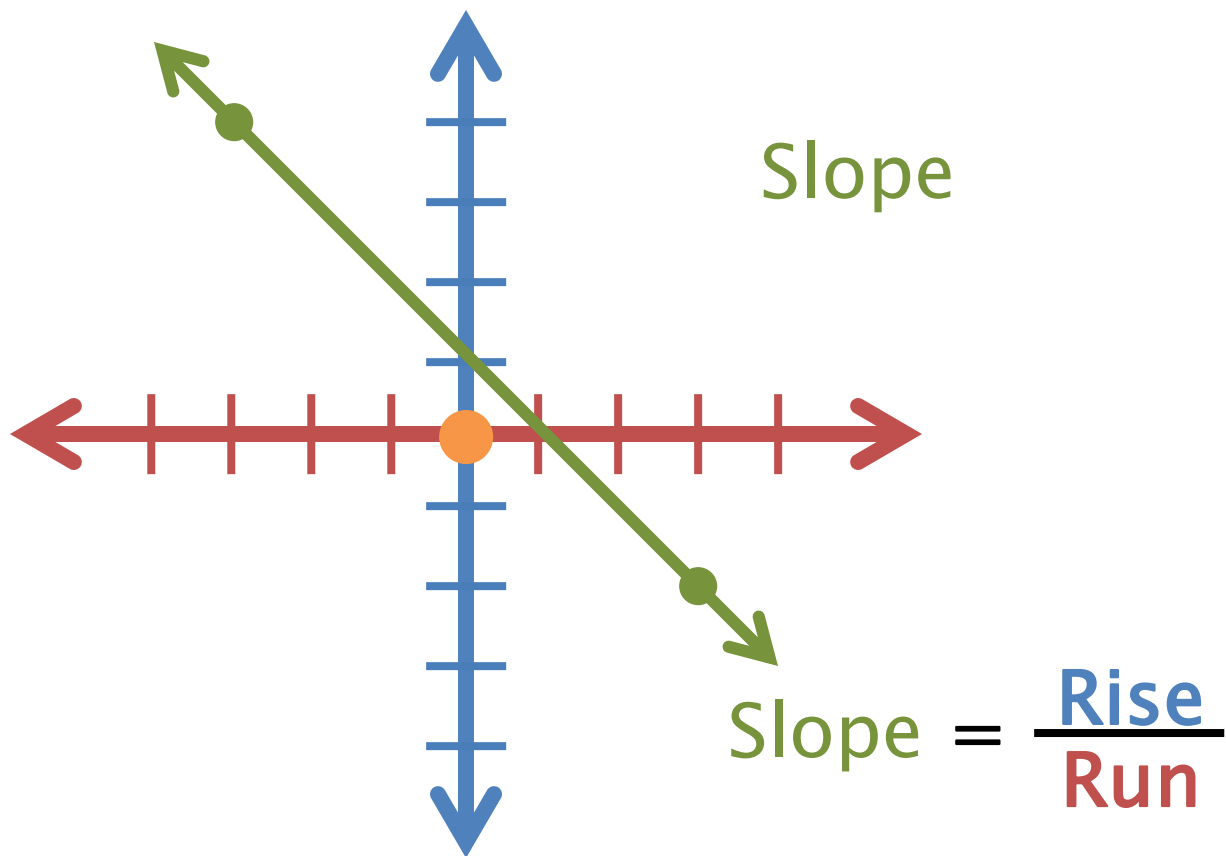
$$\text{Slope} = \frac{3}{7} = .43$$



Graphs

Rise can go up or down.

Run is always counted from left to right.

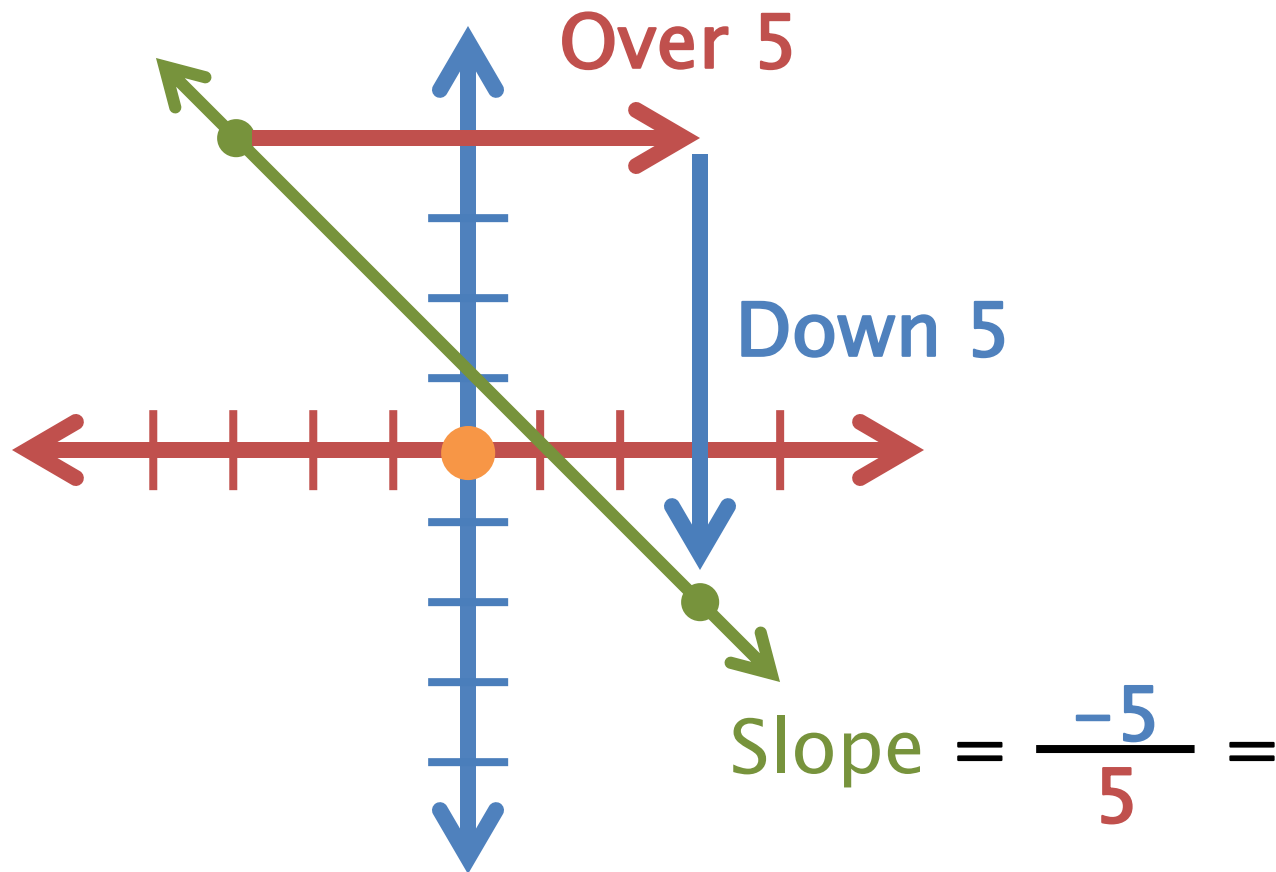




Graphs

Rise can go up or down.

Run is always counted from left to right.

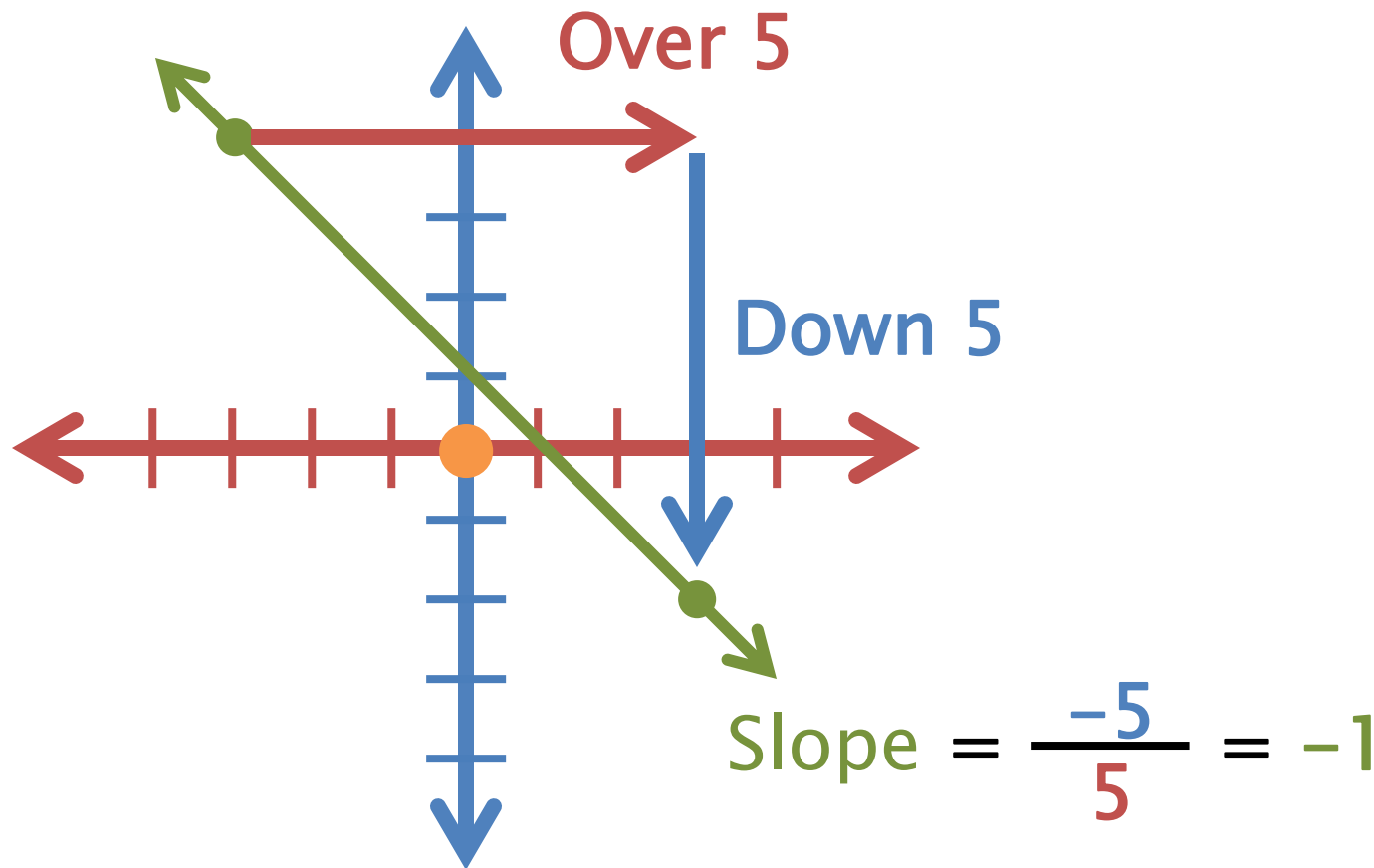




Graphs

Rise can go up or down.

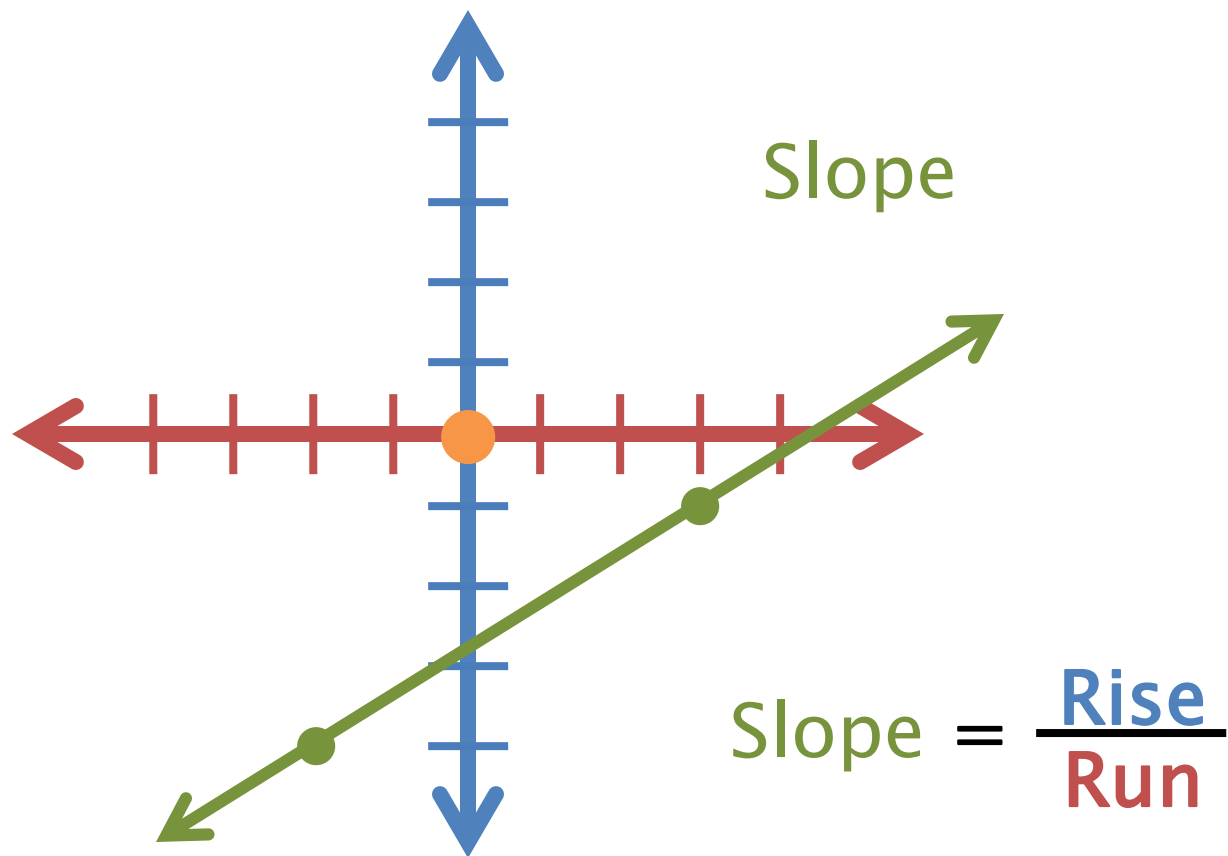
Run is always counted from left to right.





Practice 1

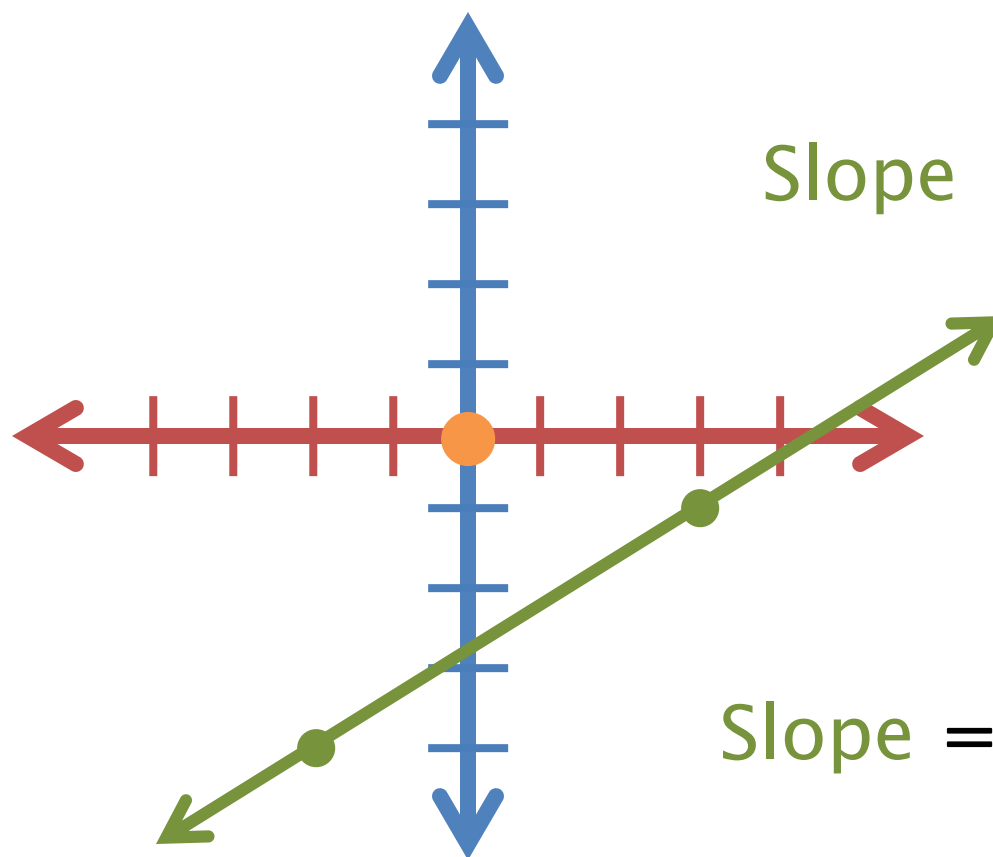
Calculate the Slope.





Practice 1

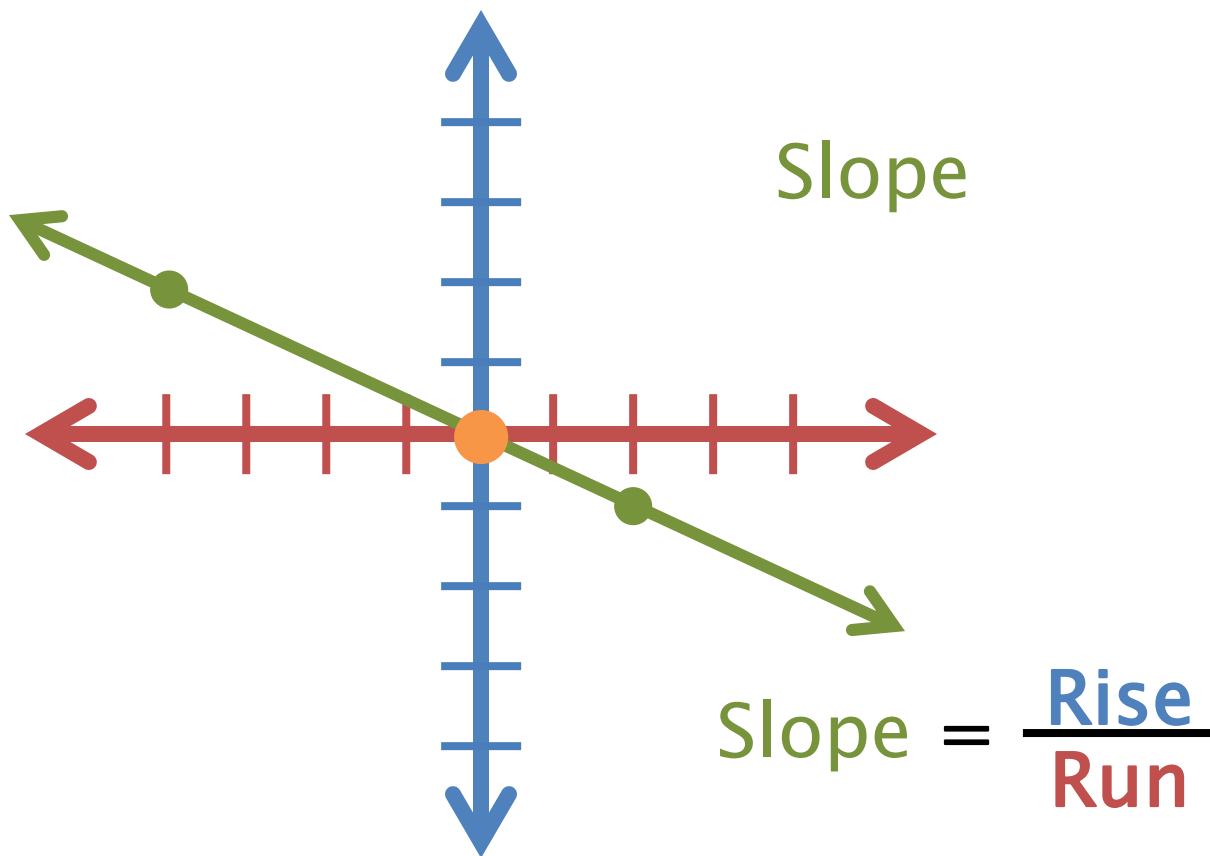
Calculate the Slope.





Practice 2

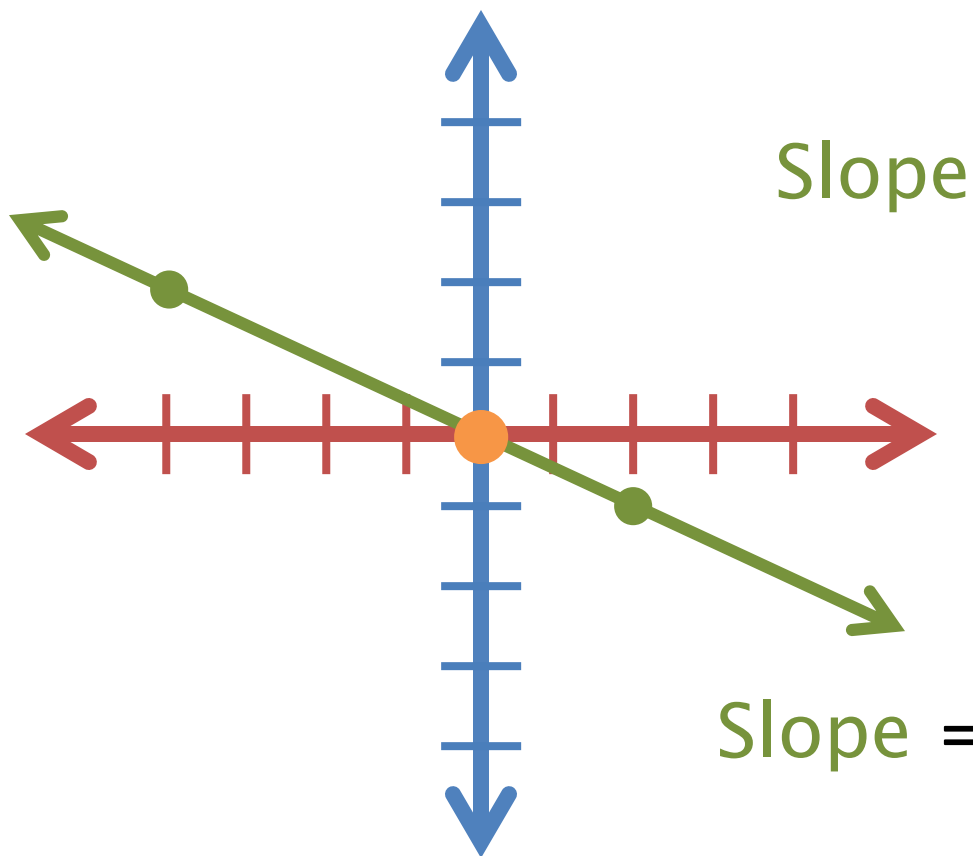
Calculate the Slope.





Practice 2

Calculate the Slope.



$$\text{Slope} = \frac{-3}{6} = -0.5$$



Graphs

A good graph includes four additional elements.

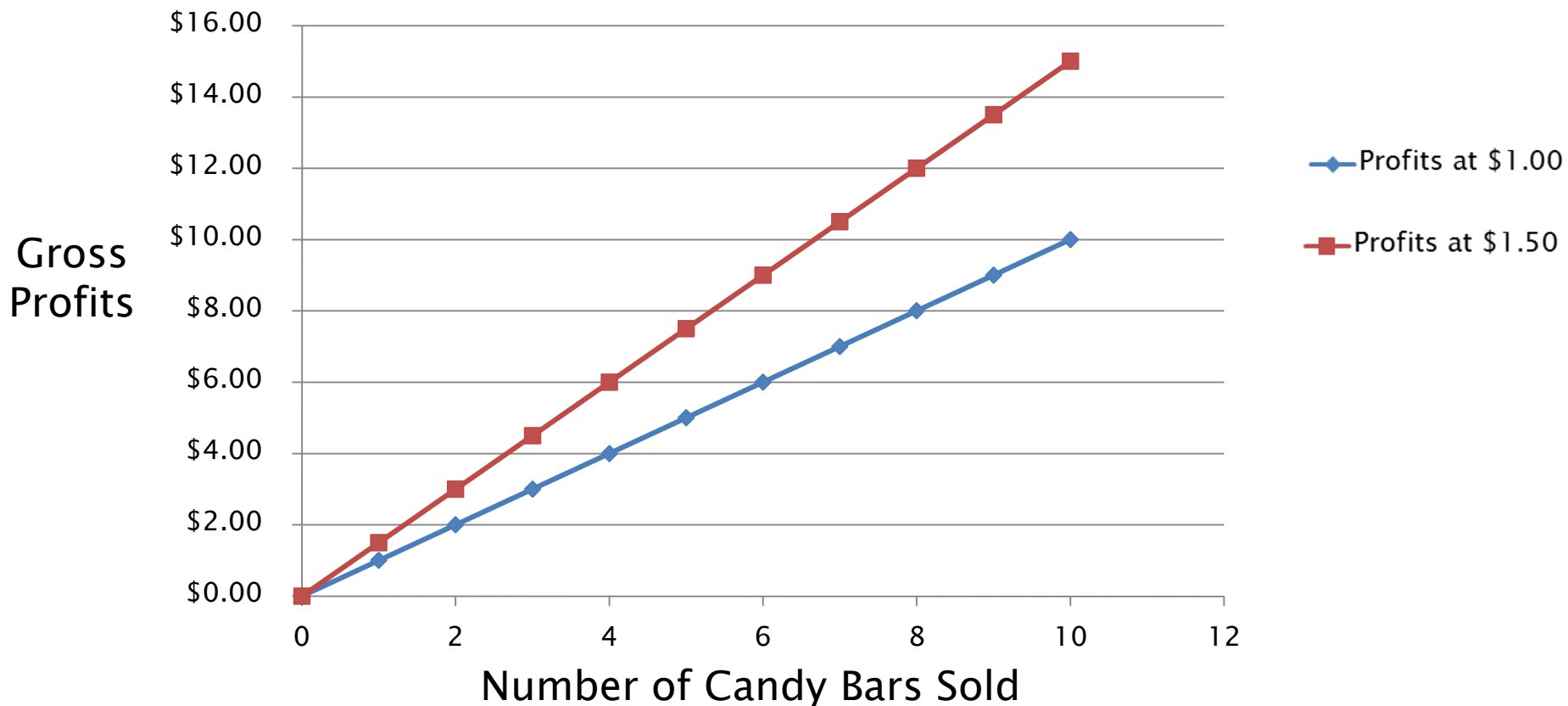




Graphs

The **Title** tells what the graph is showing to you.

Profits Based on Sale Price



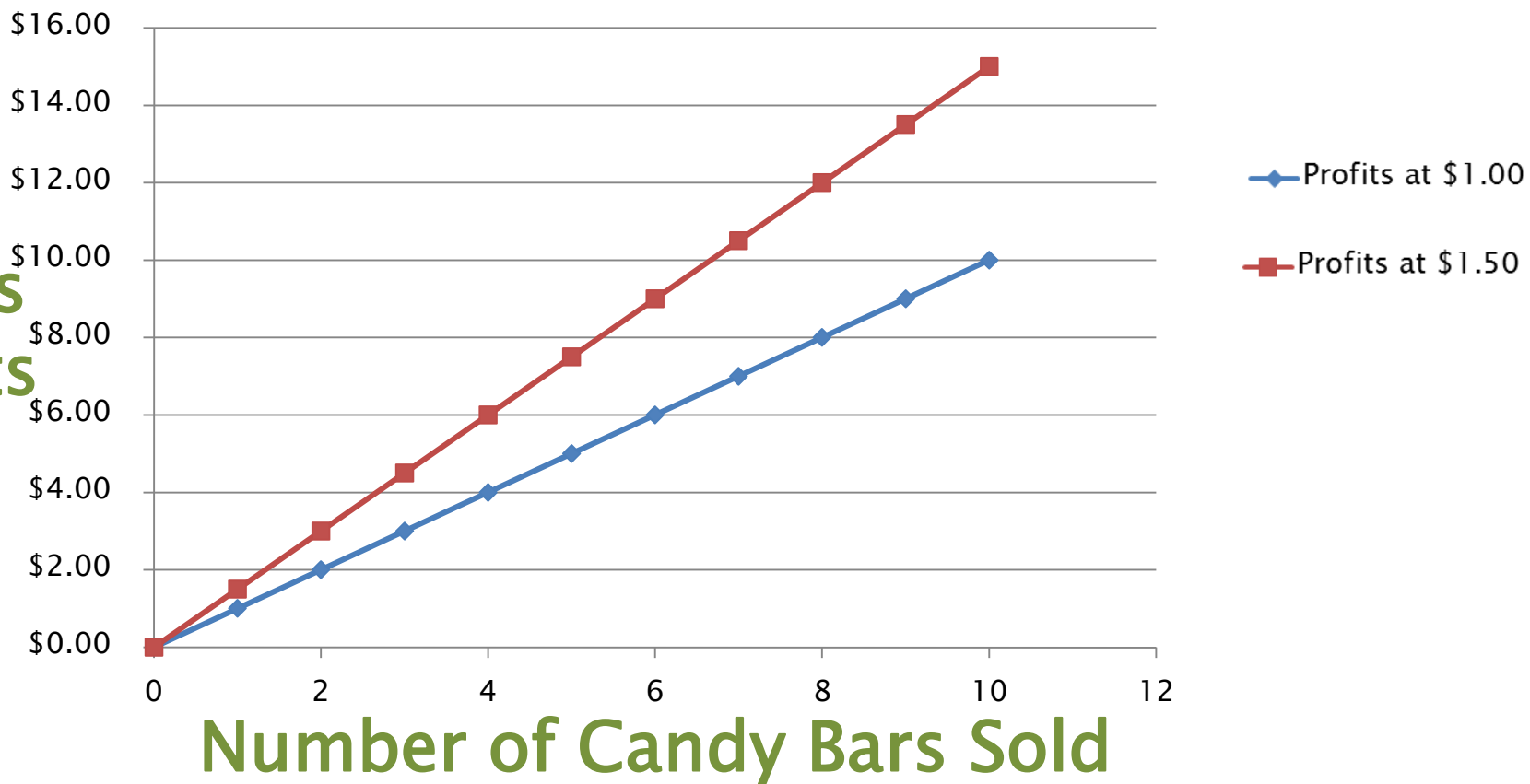


Graphs

Labels tell you what data is being displayed.

Gross Profits

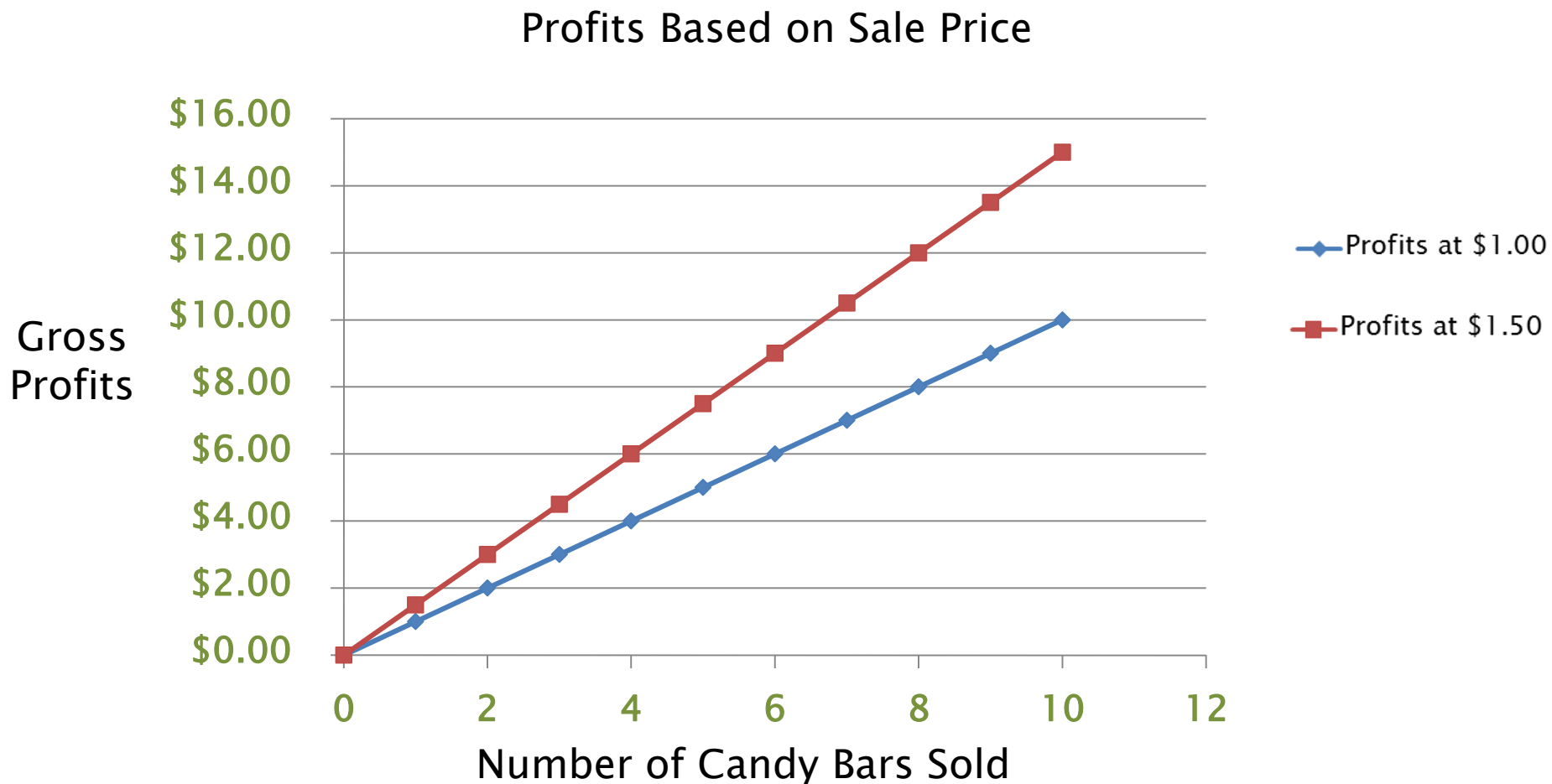
Profits Based on Sale Price





Graphs

The **Scale** tells you what unit of measure is being used.





Graphs

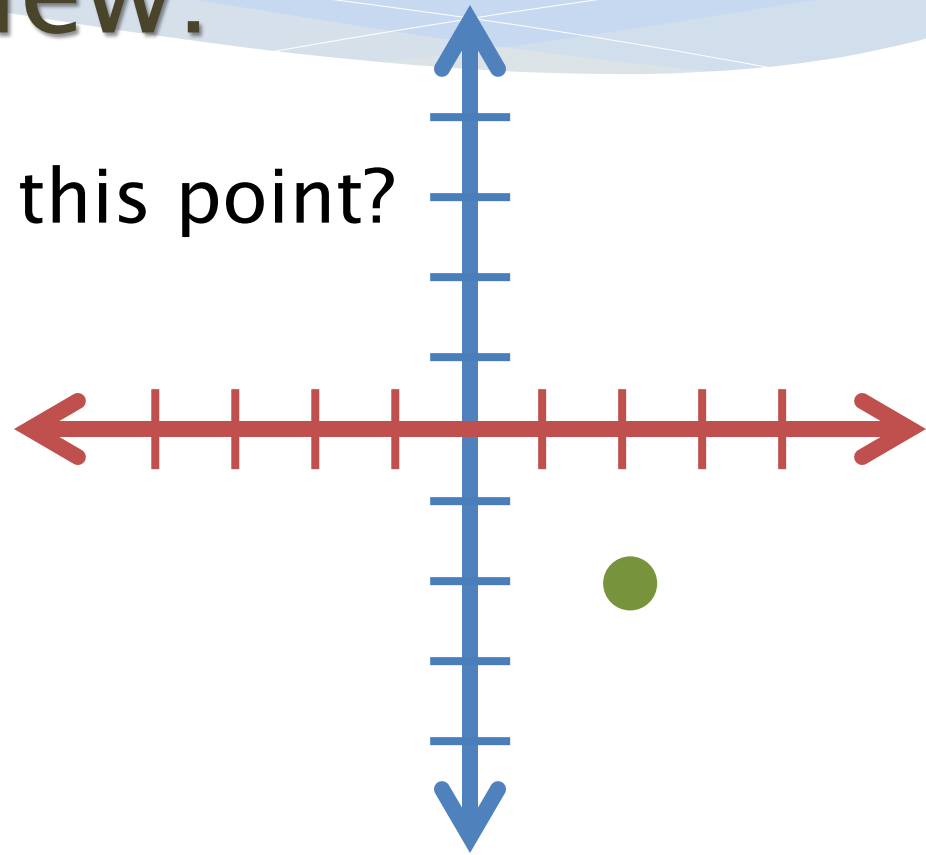
The **Key** tells you what the symbols used in the graph stand for.





Review:

1. What is the location of this point?



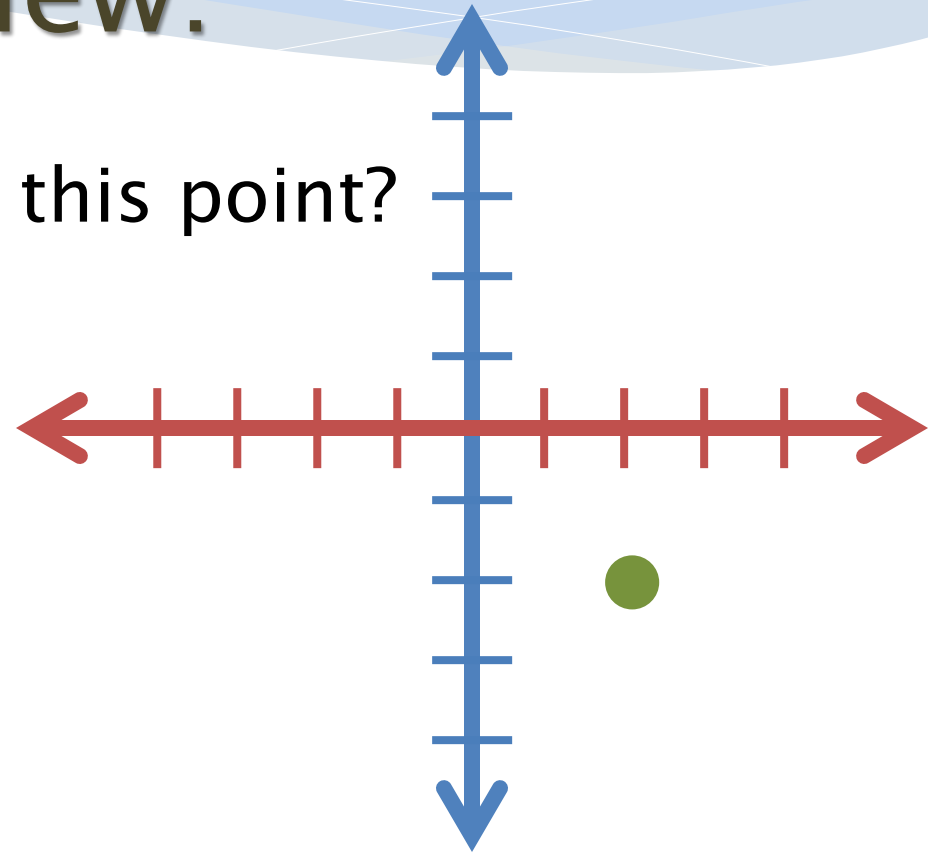
2. What is the equation for the slope of a line?



Review:

1. What is the location of this point?

(2, -2)



2. What is the equation for the slope of a line?

$$\text{Slope} = \frac{\text{Rise}}{\text{Run}}$$