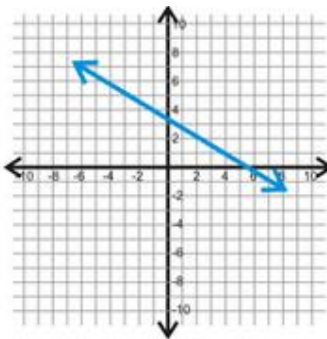
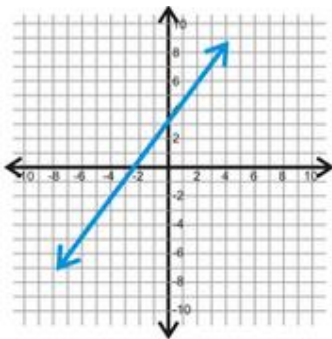


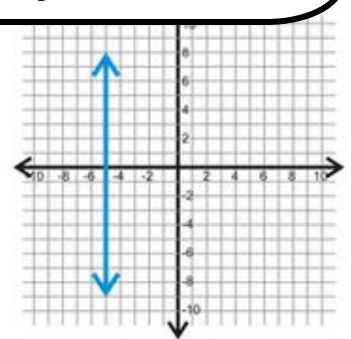
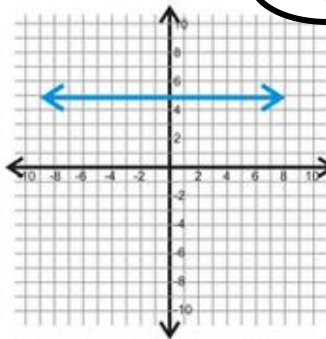
All about Slope

There are four types of slope

Pos:



Zero



Note: Slope and Unit Rate can be different. A unit rate is always over 1, so you may have to divide your slope to get unit rate.

Slope tells us how steep a line is and whether the relationship between the variables is positive or negative. Slope is also called the rate of change. Remember, for a function to be linear, we already know the rate of change is constant. In the slope intercept form of a linear equation, slope is abbreviated with the letter m.

The slope

$$y = mx + b$$



Caution: Slope is often mistaken as the x value. It is the number in front of x, but it does not include x.

$\frac{\text{RISE (vertical change)}}{\text{RUN (horizontal Change)}}$	<p>Example:</p>	<p>Example:</p> <table border="1"> <thead> <tr> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>-2</td> <td>0</td> </tr> <tr> <td>0</td> <td>-4</td> </tr> <tr> <td>4</td> <td>-12</td> </tr> </tbody> </table> $+2 \left\langle \begin{array}{c} -2 \\ 0 \\ 4 \end{array} \right\rangle -4$ $\frac{\text{change in } y}{\text{change in } x} = \frac{-4}{2} + \frac{2}{2} = \frac{-2}{1} = -2$	X	Y	-2	0	0	-4	4	-12	$\frac{\text{Change in } y}{\text{Change in } x}$
X	Y										
-2	0										
0	-4										
4	-12										
<p>Look for key words!</p>	<p><u>Words to look for:</u></p> <p>per for each for every yearly/monthly/daily</p>	<p>Example:</p> <p>(-5, 8) and (3, 12)</p> $\frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{change in } y}{\text{change in } x} = \frac{12 - 8}{3 - (-5)} = \frac{4}{8} = \frac{1}{2}$	$\frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{change in } y}{\text{change in } x}$								