

TAKS Objective 3
TEK A.5C
Tutorial
(Grades 9, 10, and 11)

...use, translate, and make connections among algebraic, tabular, graphical, or verbal descriptions of linear functions.

If given a table and equations, use the $y=$ and table features of the graphing calculator.

If given ordered pairs and equations, use the $y=$ and table features of the graphing calculator.

If you are given equations and graphs,
recall the equation of a line.

$$y = mx + b$$

If m is positive, then the line should be
going in the positive slope direction.

This means that the graph is going up
as you look at the graph from left to
right.

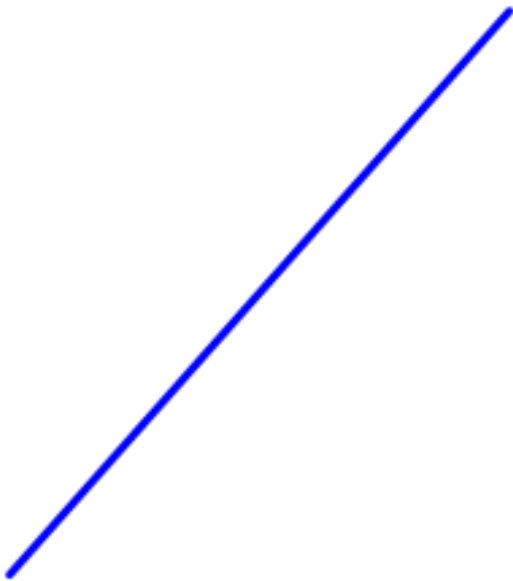
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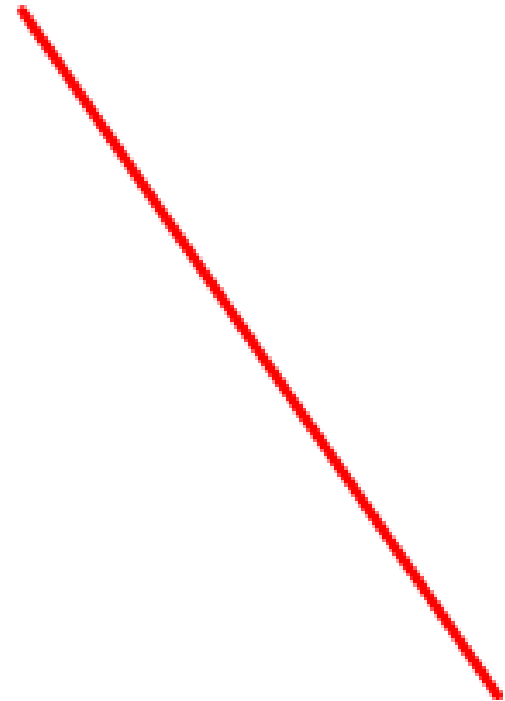
If m is negative, then the line should be
going in the negative slope direction.

This means that the graph is going
down as you look at the graph from left
to right.

Positive slope



Negative slope



Slope is known as
rise.
run

Check to make sure that the graph rises
and runs the correct amount.

b is the y -intercept.

The y -intercept is where the graph meets the y -axis.

Check to make sure the graph has the correct y -intercept.

If you are given points and graphs, graph the points.

Reminder: Points are written in the form (x, y) .

So, when graphing points, be sure to graph the first coordinate on the x-axis and then go up or down according to the y-coordinate.

When given equations in standard form,
solve for y first.

Standard form:

$$ax + by = c$$

Example of an equation in standard
form:

$$2x - 3y = 16$$

Given $5x - 4y = 24$.

First, solve for y .

$$\begin{array}{r} 5x - 4y = 24 \\ -5x \qquad -5x \\ \hline -4y = -5x + 24 \\ \frac{-4y}{-4} = \frac{-5x + 24}{-4} \\ y = \frac{-5}{-4}x + \frac{24}{-4} \\ y = \frac{5}{4}x - 6 \end{array}$$