

Solving Linear Equations - Finding elements of Linear Relations

Learning Goal:

By the end of today, I will be able to use my algebra skills to solve for elements of a linear relationship. (slope, intercepts, table of values, etc.)

Linear Review

$y = mx$ and $y = mx + b$ are equations of lines

Direct Variation Partial Variation

Where "m" is the slope (roc) and "b" is the y intercept.

Slope or rate of change, describes how the x and y variables change. ie. slope = 2 , that is rise of 2, run of 1

X intercepts have y-values of zero. ie. (3,0)

Y intercepts have x-value of zero. ie. (0,5)

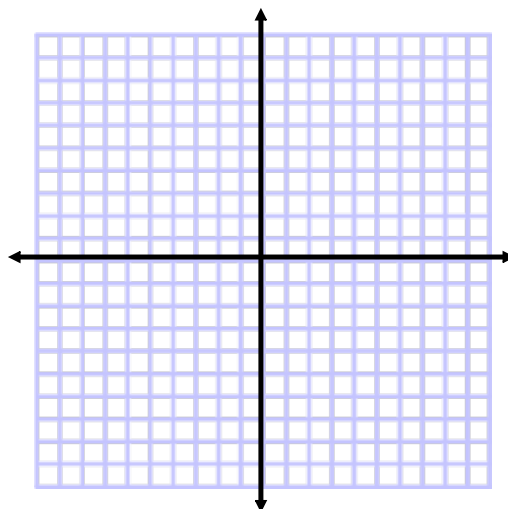
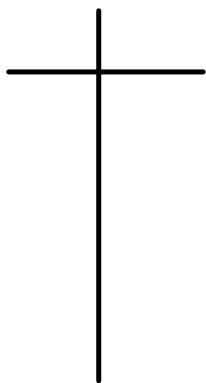
Example

$$y = 5x - 7$$

Find the X intercept, Y intercept and the Slope of the following line:

$$3y - 9x = 12$$

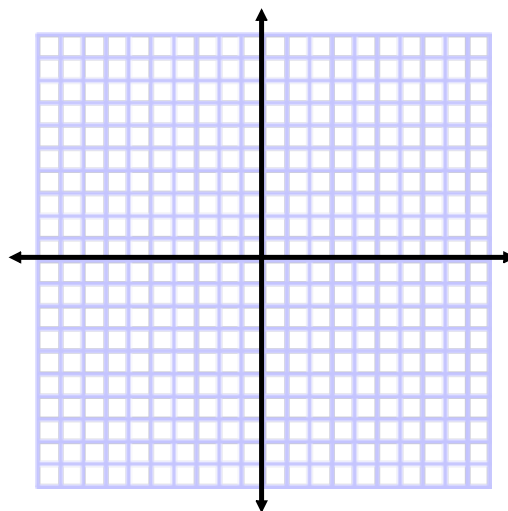
Method One - Table



Find the X intercept, Y intercept and the Slope of the following line:

$$3y - 9x = 12$$

Method Two - Substitutions



Homework

Find the slope, x intercept, y intercept
for the following:

(i) $y = -3x + 9$

(ii) $4x + 2y = -10$

(iii) $6x - 3y + 12 = 0$