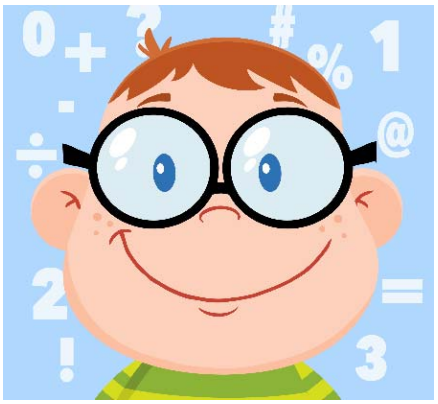
Name _____ Date _____

How to Graph a Linear Equation Step by Step Lesson

You are given the linear equation: $y = 4x - 6$ and asked to plot the line on a graph.

Logic: If you want to creep in on the numbers that are involved within a linear equation, you can graph it by finding any two solutions such as (x_1, y_1) and (x_2, y_2) and just plot them on a graph, so why don't we do that? To set this up so we could do it, just set the opposite variable to zero to solve for the other variable. We could proceed with x or y as 0, but why not start with x since it alphabetically comes first?



Step 1: Set x to 0 in the equation.

$y = 4(0) - 6$

$y = -6$

Step 2: Set y to 0 in the same equation.

$0 = 4x - 6$

$6 = 4x$

$6/4 = x$

$1.5 = x$

Step 3: Review what we know already based on our first two steps.

Reviewing step 1, we know one point on the line is (0, -6).

Reviewing step 2, we know another point on the line is (1.5, 0).

Step 4: Plot the two points and connect them by drawing a line.