Determining Equations Assessment

You can determine the equation of a line given any two points that lie on that line.

Given two points (x_1, y_1) and (x_2, y_2):

1. Find the slope (m) of the line using the equation
$m = \frac{y_2 - y_1}{x_2 - x_1}$.

2. Plug the slope (m) and the coordinates of either point (x, y) into $y = mx + b$.

3. Solve for the y-intercept (b).

4. Write your equation in form $y = mx + b$ with your slope (m) and y-intercept (b) plugged in.

Important: If you already have the slope, you can skip the first step!

1. What does the m stand for in $y = mx + b$?

2. What does the b stand for in $y = mx + b$?

3. Given the equation $y = -x + 2$, fill in the following table:

x	y
-5	
0	
5	

4. Given the equation $y = 3x - 5$, fill in the following table:

x	y
	-5
	1
	7

Determine the Equation of the Lines with the Given Information:

Slope (m): -4, y-intercept: $(0, 25)$	Slope (m): $\frac{2}{3}$, y-intercept: $(0, 0)$
x-intercept: $(4, 0)$ y-intercept: $(0, 4)$	x-intercept: $(10, 0)$ y-intercept: $(0, 5)$
Slope: -6, Point A $(-2, 4)$	Slope: $\frac{1}{4}$, Point B $(12, 3)$
F$(-2, -5)$, G$(6, 11)$	E$(14, 12)$ F$(6, 8)$