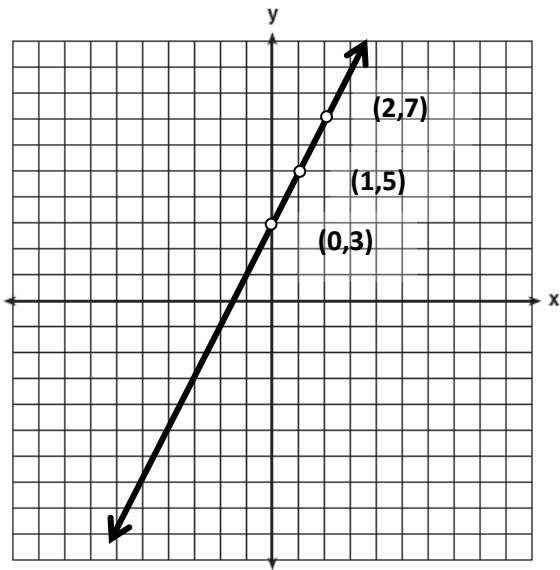y = 2x + 3

Find the slope by using the slope formula:
$$\frac{y_2 - y_1}{x_2 - x_1}$$

Find the y-intercept (where the line crosses the y axis):

All equations must first be converted to
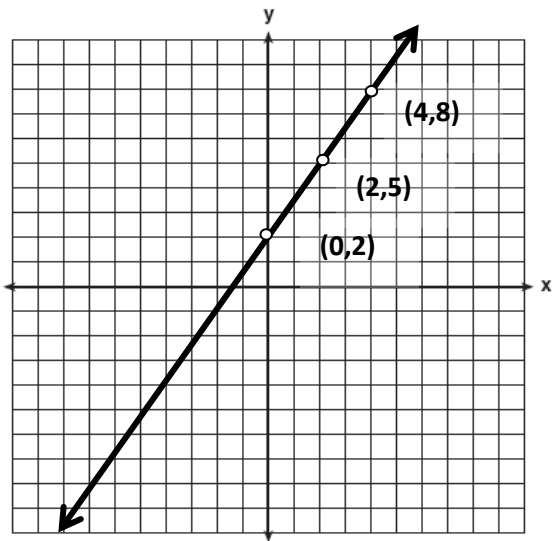
y = mx + b

↑
slope

↑
y-intercept

format before graphing

Convert the equation 4x + 2y = 10 into y = mx + b format.

Step 1: (solve for y):

$$4x + 2y = 10$$
$$\underline{-4x \qquad\quad -4x}$$
$$\frac{2y}{2} = \frac{-4x}{2} + \frac{10}{2}$$
$$y = -2x + 5$$

Step 2: Identify m and b. $m = \frac{-2}{1}$ b = +5

$$y = \frac{3}{2}x + 2$$

Find the slope by making a table and using
$$\frac{change\ in\ y}{change\ in\ x}$$

Find the y-intercept (where the line crosses the y axis):

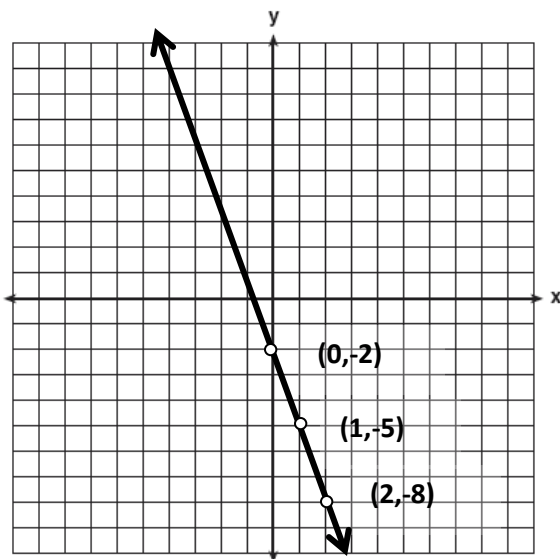Convert each of the following into y = mx + b format and identify m and b.

1. Find the slope and y-intercept of the line 2x + 3y = 9.

m = _____

b = _____

2. Find the slope and y-intercept of the line 8x + y = 5.

m = _____

b = _____

3. Find the slope and y-intercept of the line 4y = -12x.

m = _____

b = _____

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y = -3x − 2

Find the slope by using
$$\frac{rise}{run}$$

Find the y-intercept (where the line crosses the y axis):

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4. Find the slope and y-intercept of the line 8y = 6x + 4.

m = _____

b = _____

5. Find the slope and y-intercept of the line 12x − 3y = 9.

m = _____

b = _____

y=mx + b intro