Comparing Forms Homework

Standard Form	**Slope-Intercept Form**	**Point-Slope Form**
$Ax + By = C$	$y = mx + b$	$y - y_1 = m(x - x_1)$
-Easiest way to graph: • substitute 0 for x, find the y-intercept • substitute 0 for y, find the x-intercept • plot these points and draw the line through them	-Easiest way to graph: • Plot the y-intercept (b) • Write the slope (m) as a fraction. Use "change in y/change in x" to get more points on your line	-Easiest way to graph: • Find the point (x_1, y_1), and plot it • Write the slope (m) as a fraction. Use "change in y/change in x" to get more points on your line

Graph each equation. Use each coordinate plane for two graphs.

1) $y = -\frac{4}{3}x + 2$

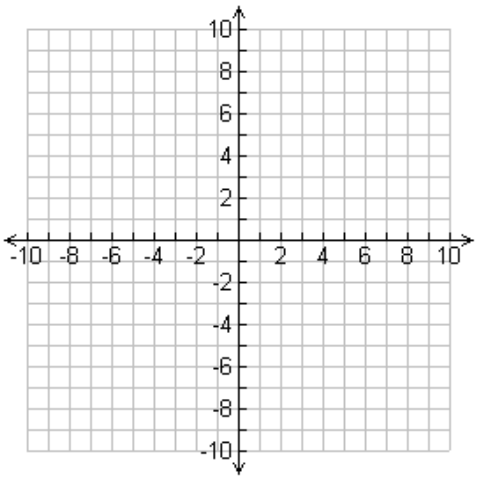
2) $5x - 6y = 30$

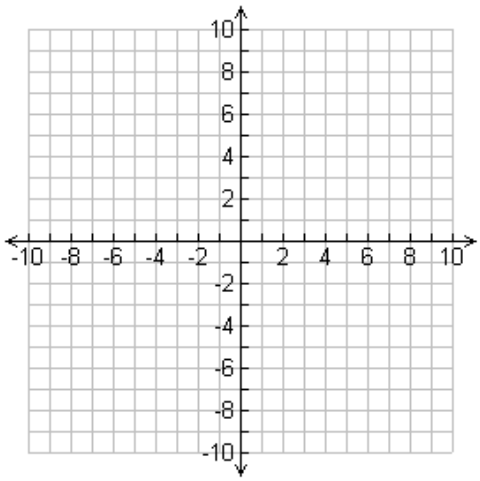
3) $y + 2 = -5(x + 1)$

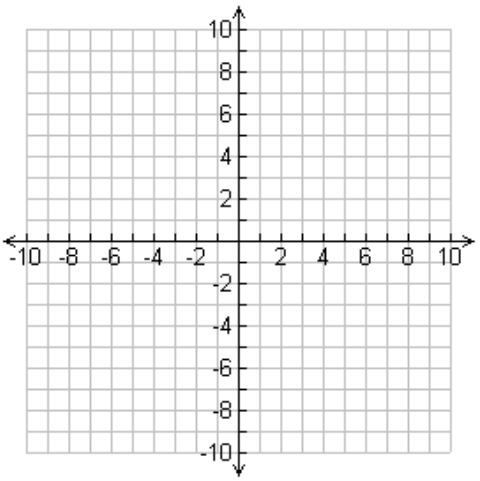
4) $2y + 5 = -x$

5) $y + 7 = \frac{2}{3}(x - 3)$

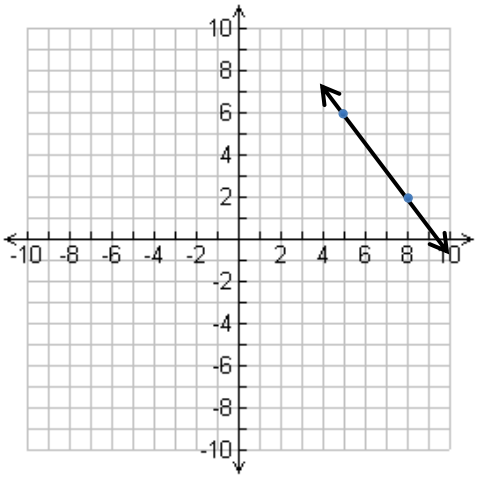
6) $y - 3 = -7(x - 6)$







7. Find the y intercept from the graph:



8. A fishing lake was stocked with 300 bass. Each year, the population decreases by 25 bass.

a. Write a function for the situation.

b. Find the x intercept (the x intercept is where y equals zero). What does it mean in terms of the situation?

9. At higher altitudes, water boils at lower temperatures. This relationship between altitude and boiling point is linear. At an altitude of 1000 feet, water boils at 210° F. At an altitude of 3000 feet, water boils at 206° F.

a. Write an equation in point-slope form to model this situation.

b. Solve for y to change your equation into slope-intercept form.

c. Find the boiling point at 6000 feet.

10. **Rick will participate in a walk–a–thon to raise money for charity. The amount he will raise based on the number of miles he walks is shown in the table, which represents a linear function.**

Miles Walked	Amount Raised ($)
2	220
5	460
8	700
11	940

Which of these statements are correct? Select *two* that apply.

Pick up to 2 answers.

- A If Rick walks 0 miles, he will raise $0.
- B If Rick walks 0 miles, he will raise $60.
- C If Rick walks 0 miles, he will raise $80.
- D For each mile that Rick walks, he will raise an additional $60.
- E For each mile that Rick walks, he will raise an additional $80.
- F For each mile that Rick walks, he will raise an additional $110.

11. Rearrange the equations to solve for y (put each in slope intercept form).

$3x - 2y = 12$ $y - 4 = -\frac{1}{2}(x - 2)$ $3y - 9 = 5x$ $-6x + 3y = 15$