

Slope Formula: Given two points (x_1, y_1) and (x_2, y_2) then the slope (m) is

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Point-Slope Formula: Given a point (x_1, y_1) and slope = m , the equation of the line is

$$y - y_1 = m(x - x_1)$$

Slope-Intercept: Simplify equations of lines to this form: $y = mx + b$

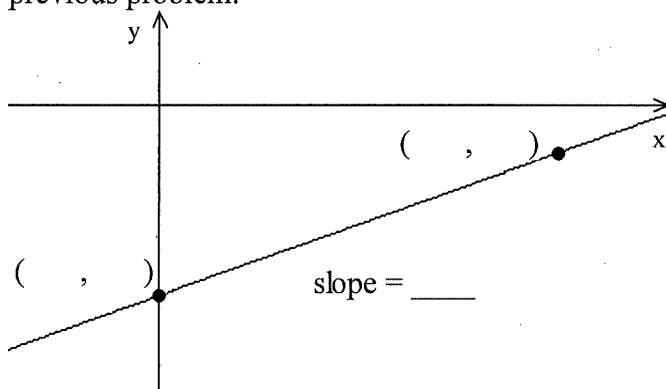
m = slope and the y -intercept is $(0, b)$

1. Find the equation of the line that has a slope, $m = \frac{1}{2}$ and passes through the point $(6, -1)$.

$$y - y_1 = m(x - x_1)$$

$$y - (\quad) = \frac{1}{2} (x - (\quad))$$

2. Label the graph that corresponds to work in the previous problem.



3. Find the equation of the line that passes through the point $(-4, 1)$ and $(-2, 5)$

Step 1: Find slope: $m = \frac{y_2 - y_1}{x_2 - x_1}$

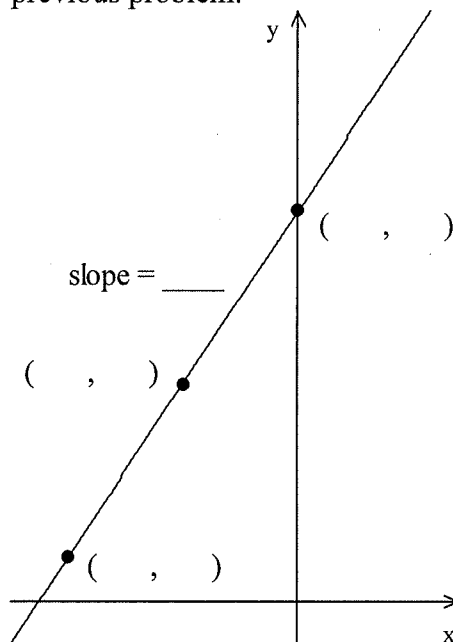
$$m = \frac{(\quad) - (\quad)}{(\quad) - (\quad)}$$

Step 2: Find the equation:

$$y - y_1 = m(x - x_1)$$

$$y - (\quad) = \frac{1}{2} (x - (\quad))$$

4. Label the graph that corresponds to work in the previous problem.

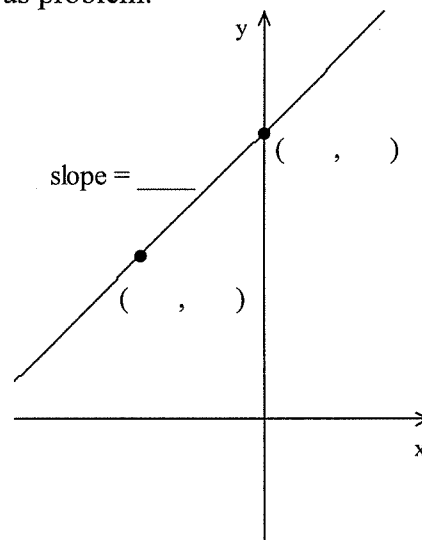


5. Find the equation of the line that has a slope, $m = 1$ and passes through the point $(-3, 4)$.

$$y - y_1 = m(x - x_1)$$

$$y - (\quad) = \underline{\quad} (x - (\quad))$$

6. Label the graph that corresponds to work in the previous problem.



7. Find the equation of the line that passes through the point $(-3, 1)$ and $(6, 4)$

Step 1: Find slope: $m = \frac{y_2 - y_1}{x_2 - x_1}$

$$m = \frac{(\quad) - (\quad)}{(\quad) - (\quad)}$$

Step 2: Find the equation:

$$y - y_1 = m(x - x_1)$$

$$y - (\quad) = \underline{\quad} (x - (\quad))$$

8. Label the graph that corresponds to work in the previous problem.

