

Name: Kay

Date: _____

1. Write the equation of the line given the slope is 2 and the y-intercept is -7.

$$y = 2x - 7$$

2. Find the equation of the line between the points (4, -1) and (12, 3).

$$m = \frac{1}{2}$$

$$b = -3$$

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

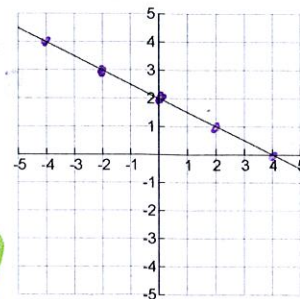
3. Given the slope of a line, -2, and the point (-5, 6), write the equation of the line.

$$y = -2x - 4$$

4. Given the graph, write the equation of the line.

$$m = -\frac{1}{2}$$

$$b = 2$$



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

Write an equation of the line that is parallel to the given line and passes through the given point.

1. $2y = 6x - 4$, (0, 3)

$$y = 3x - 2$$

$$m = 3$$

$$b = 3$$

$$y = 3x + 3$$

2. $3y = x + 5$, (6, 0)

$$y = \frac{1}{3}x + \frac{5}{3}$$

$$m = \frac{1}{3}$$

$$b = -2$$

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

3. $2x - 4y = 8$, (-3, 1)

$$y = \frac{1}{2}x - 2$$

$$m = \frac{1}{2}$$

$$b = 2.5$$

$$y = \frac{1}{2}x + 2.5$$

Write an equation of the line that is perpendicular to the given line and passes through the given point.

4. $y = -7x + 5$; (7, 1)

$$m = \frac{1}{7}$$

$$b = 0$$

$$y = \frac{1}{7}x$$

5. $y = -4$; (4, 3)

$$m = \text{und.}$$

$$b = \text{NONE}$$

$$x = 4$$

6. $3x + 5y = 6$; (-2, -2)

$$y = -\frac{3}{5}x + \frac{6}{5}$$

$$m = \frac{5}{3}$$

$$b = \frac{4}{3}$$

$$y = \frac{5}{3}x + \frac{4}{3}$$

Error Analysis:

7. Keesha claimed the equation of the line through the point (4, -3) with slope 1/12 is $y = 1/12x + 8$. Her work is shown below. Explain her mistake and find the correct equation.

$$y = mx + b$$

$$4 = \frac{1}{12}(-3) + b$$

$$4 = -4 + b$$

$$8 = b$$

$$y = \frac{1}{12}x + 8$$

she switched her x & y when plugging in.

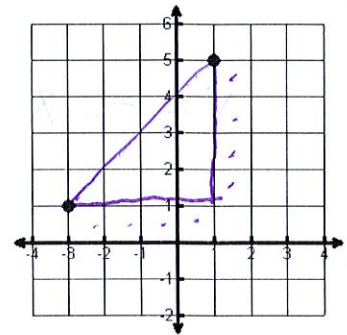
$$y = \frac{1}{12}x - 6$$

Find the length of the missing variable:

8. $a = 3$ $b = 5$ $c = \sqrt{34}$
 5.83

9. $a = 4$ $b = \sqrt{20} = 2\sqrt{5}$ $c = 6$
 4.47

10. $a = 4$ $b = 4$ $c = 4\sqrt{2} = 5.66$



Find the distance between the following points:

11. $(-1, 4)$ $(3, 7)$

$$d = 5$$

12. $(-4, 2)$ $(6, -3)$

$$d = 11.18$$

13. Max's bone was buried 20 miles west and 2 miles north of his dog house. If his dog house is located at the origin, how far away is Max's dog house and his bone?

~~(-20, 2)~~ $(-20, 2)$ $(0, 0)$

$$d = 20.1 \text{ miles}$$