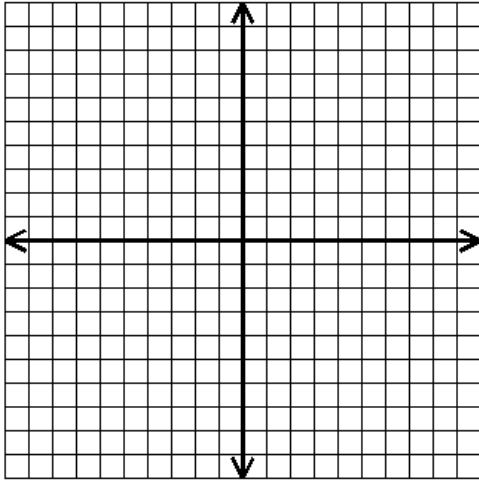# GRAPHING USING A POINT AND A SLOPE

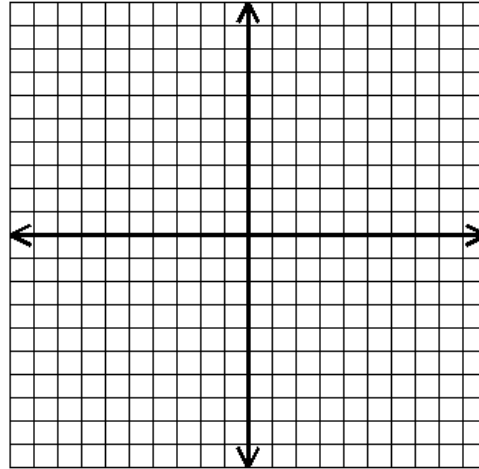1. Graph the line that passes through point A(3, 2) and has a slope of 4

m= _____

b= _____

Equation:_____

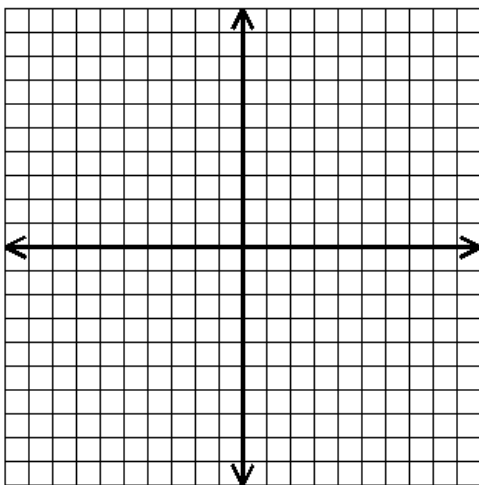2. Graph the line with a slope of $-\dfrac{1}{2}$ that passes through the point K(-5, 1).

m= _____

b= _____

Equation:_____

3. Katie's lost puppy was spotted at the intersection of (-6, -8). If he continues on a straight path traveling at a rate of 1 mile per hour, graph the line that represents the puppy's path.
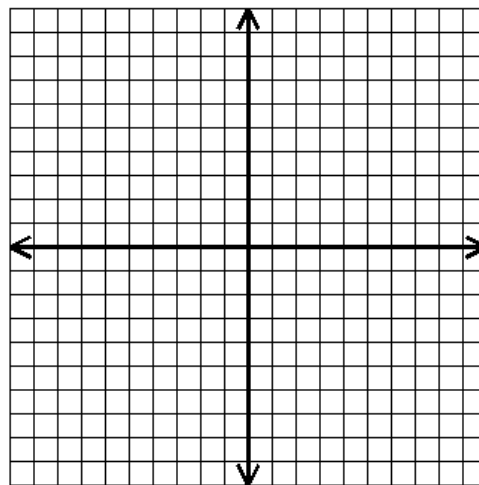
m = _____   b = _____

Equation:_____

If she waits at the intersection of (3, 1) will the puppy pass by?

4. Mark lives at the intersection of (-8, -3) and plans to walk to Ben's house. He is walking at a rate of 1.5 miles per hour. Graph a line to represent Mark's path.

m = _____   b = _____
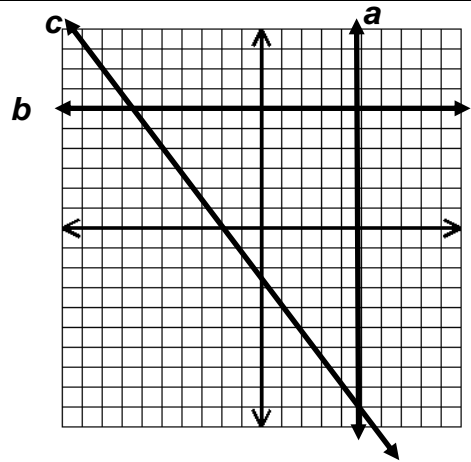
Equation:_____

Will Mark pass the park located at (9, 0)?

Answer each of the following.

5. Find the slope of each line shown.

a:_____

b:_____

c: _____

6. Find the slope of the line that contains the points (4, -2) and (8, 6).

7. If (5, a) and (4, 3) are two points on the graph of a line and the slope is -2, find the value of a.

8. A class consists of 8 freshmen and 22 sophomores. Freshmen had an average of x points on a test, while sophomores had an average of y points. Which expression gives the average test score per student for the entire class?

A. $\dfrac{8x + 22y}{30}$

C. $30\left(\dfrac{8}{x} + \dfrac{y}{22}\right)$

B. $\dfrac{22x + 8y}{30}$

D. $\dfrac{x + y}{2}$

9. Morgan is a making a graph of the function $f(x) = x^2 - 1$. Which value is not in the range of f(x) if the replacement set for x = {0, 1, -2}?

A. 3

C. -5

B. 0

D. -1