Unit 3 Part II - Quest Study Guide

Name:_____

Objective: Slope

1. Calculate the slope between the two points. Determine the type of line.

x_1, y_1 x_2, y_2

(-5,6) and (-4, 3)

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

$= \frac{3-6}{-4-5} = \frac{-3}{1} = -3$

2. Calculate the missing coordinate

x_1, y_1 x_2, y_2

(-10, 2) and (x, -3) given a slope of $\frac{1}{4}$

$\frac{1}{4} = \frac{-5}{x+10}$

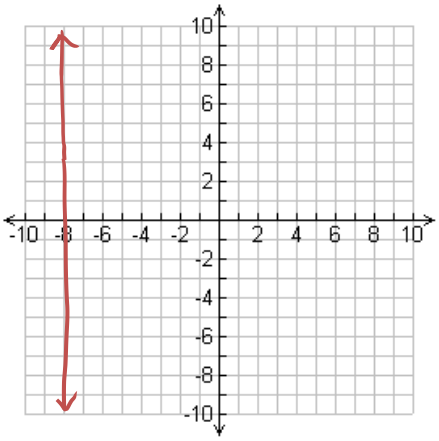
$-20 = 1(x+10)$

$-20 = x + 10$

$-30 = x$

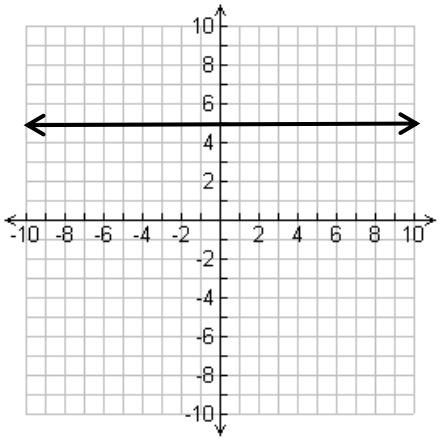
Objective: Vertical and Horizontal Lines

3. Graph the line x = -8



4. What is the equation of the given line?

$y = 5$



Objective: Graphing with Intercepts

State the x- and y-intercepts and Graph.

5. -6x + 4y = 12

$-6x = 12$

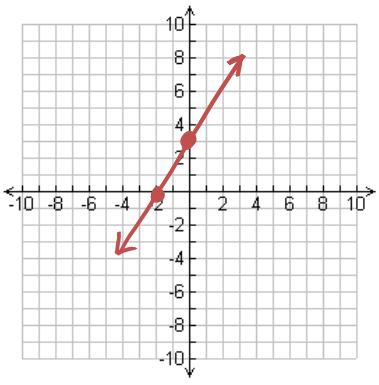
$x = -2$

x-intercept: (-2,0)

y-intercept: (0,3)

$4y = 12$

$y = 3$



6. 4x - y = 8

$4x = 8$

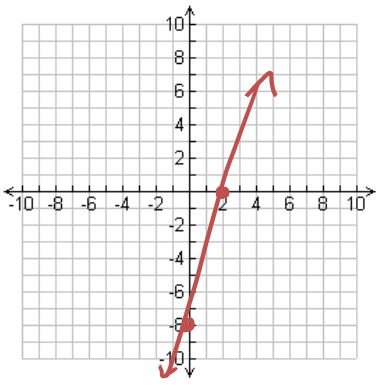
$x = 2$

x-intercept: (2,0)

y-intercept: (0,-8)

$\frac{-y}{-1} = \frac{8}{-1}$

$y = -8$



Objective: Graph Using Slope-Intercept Form:

Identify the slope and y intercept of the following lines and then graph them.

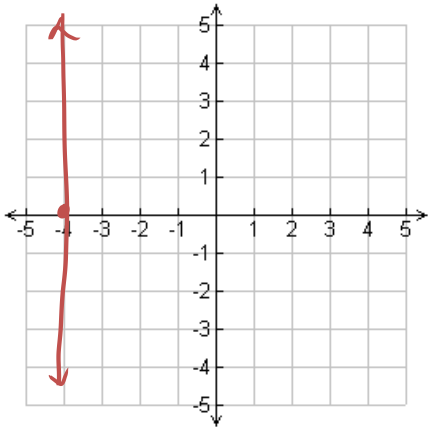
7. $-4x = 16$

$\frac{-4x}{-4} = \frac{16}{-4}$

$x = -4$

m= undefined

b= none



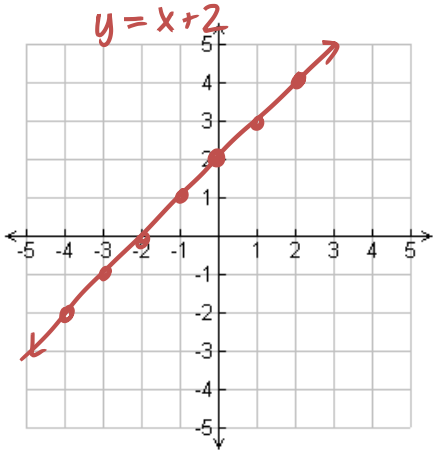
8. $5y - 5x = 10$

$\frac{5y}{5} = \frac{5x}{5} + \frac{10}{5}$

$y = x + 2$

m= 1

b= 2



Objective: Parallel and Perpendicular Lines

Tell whether the following pairs of lines are parallel, perpendicular or neither.

9. Lines with slopes m = 3 and m = 3

Parallel

10. Lines with slopes m = -2 and m = $\frac{1}{2}$

Perpendicular

11. $y = 8x - 3$ and $-8x + y = -3$

$m = 8$ $y = 8x - 3$

Parallel

12. $y = 5 - 2x$ and $-6 + 2y = x$

$m = -2$ $+6 \quad +6$

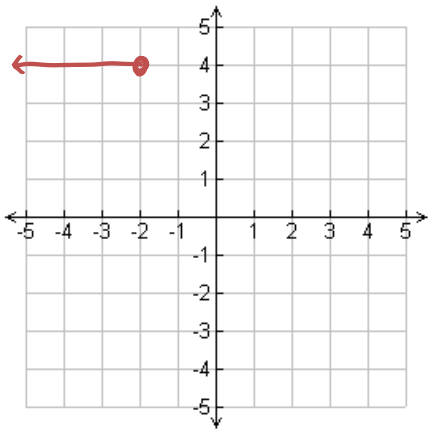
$\frac{2y}{2} = \frac{x}{2} + \frac{6}{2}$

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

perpendicular

Objective: Graphing lines with a restricted Domain/Range

13. $y = 4$ with a restricted domain of $x \leq -2$



14. $x = -3$ with restricted range of $y < 5$