Unit 3 Part ii – Test Study Guide STUDY Name:_____

Objective: Slope

1. Calculate the missing coordinate
x_1, y_1 x_2 y_2
(6,-5) and (x, -4) given a slope $\frac{1}{-3}$

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

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

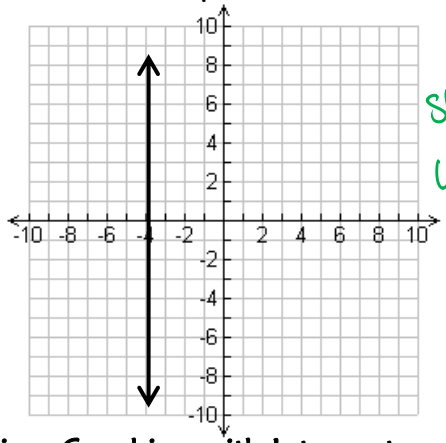
$\frac{1}{-3} = \frac{1}{x-6}$

$1(x-6) = -3$

$x - 6 = -3$

$\boxed{x = 3}$

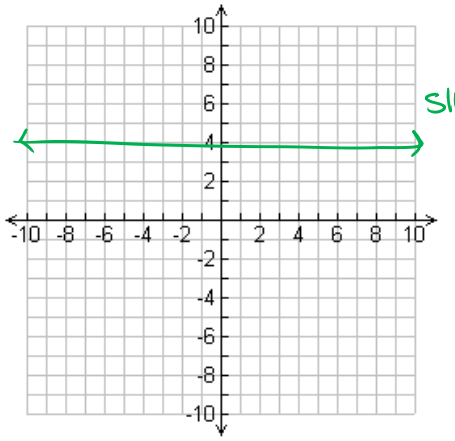
2. Determine the slope of the following line:



slope = undefined

Objective: Vertical and Horizontal Lines

3. Graph the line y = 4 and give the slope.



slope = ZERO

Objective: Graphing with Intercepts

4. State the x- and y-intercepts and Graph.

8x – 6y = 24

$8x = 24$

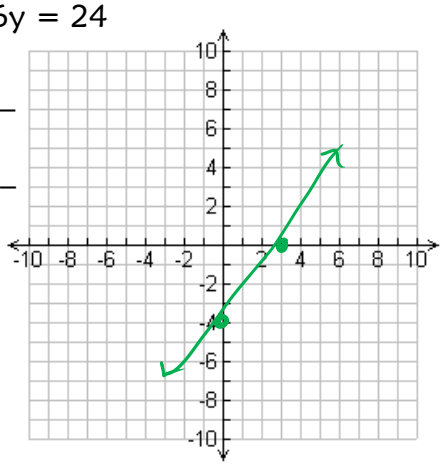
$x = 3$

x-intercept: (3, 0)

y-intercept: (0, -4)

$-6y = 24$

$y = -4$

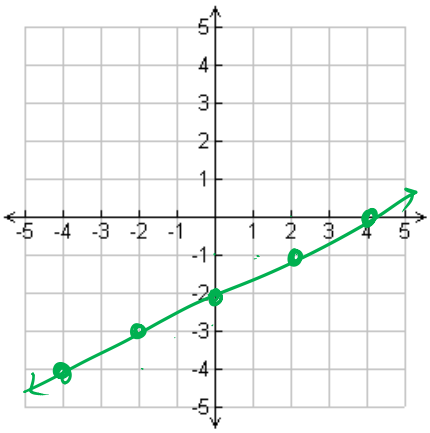


Objective: Graph Using Slope-Intercept Form:

Identify the slope and y intercept of the following lines and then graph them. $y = mx + b$

6. $-x + 2y = -4$ m= 1/2

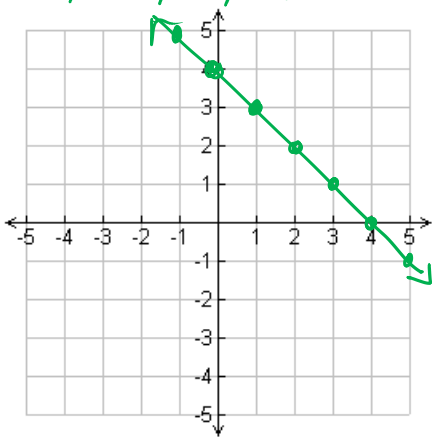
$\frac{2y}{2} = \frac{x}{2} - \frac{4}{2}$ $\boxed{y = \frac{1}{2}x - 2}$ b= (0, -2)



7. $7y + 7x = 28$ m= -1/1

$-7x \quad -7x$

$\frac{7y}{7} = \frac{-7x}{7} + \frac{28}{7}$ $y = -1x + 4$ b=(0, 4)



Objective: Parallel and Perpendicular Lines

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

8. Lines with slopes m = $\frac{2}{3}$ and m = $\frac{-3}{2}$

Opposite reciprocals...

Perpendicular

9. $2x-6y=18$ and $\frac{-2y}{-2}=\frac{-6x}{-2}+\frac{10}{-2}$

$\frac{-6y}{-6}=\frac{-2x}{-6}+\frac{18}{-6}$

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

$m=1/3$

$y=3x-5$

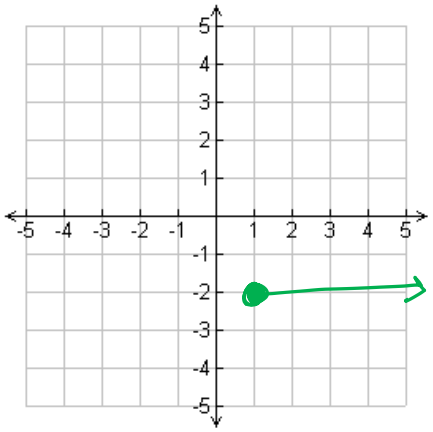
$m=3$

Not same or opp. reciprocals

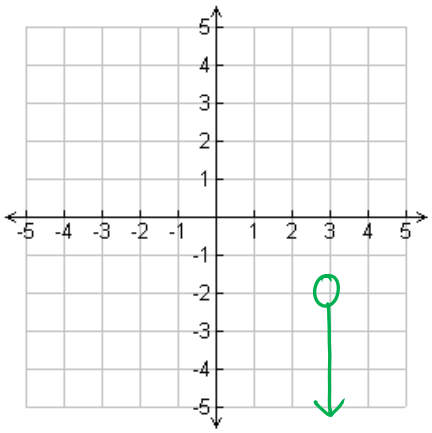
Neither

Objective: Graphing lines with a restricted Domain/Range

10. $y=-2$ Domain of $x \geq 1$

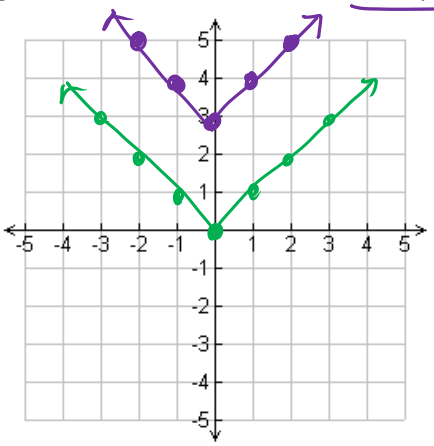


11. $x=3$ Range of $y < -2$



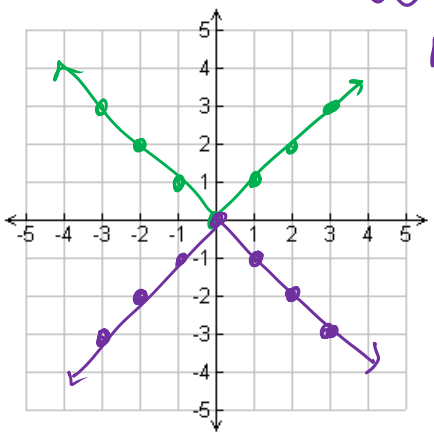
Objective: Graphing Absolute Value Functions and Transformations

12. Graph the parent function $y = |x|$.
Then graph the transformation $y = |x| + 3$.



up 3

13. Graph the parent function $y = |x|$.
Then graph the transformation $y = -|x|$.



reflects over x-axis

14. Identify the transformation of the parent function, $y = |x|$.

a. $y = |x - 13|$

• Right 13

b. $y = |x| - 22$

• Down 22

c. $y = |-x|$

• Reflects over y-axis

d. $y = |x + 4| - 24$

• Right 4
• Down 24