DAY 27 HOMEWORK (UNIT 3 REVIEW) NAME:

1. Calculate the slope between the two points.

Then determine what type of line it is.

(4, 6) and (4, 3)

$m = \frac{y_2 - y_1}{x_2 - x_1}$ $m = \frac{3-6}{4-4} = \frac{-3}{0}$ uhoh!

undefined slope ... vertical line

2. Calculate the missing coordinate

(0, 2) and (2, y) with $m = -\frac{3}{2}$

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

$-6 = 2(y-2)$

$-6 = 2y - 4$

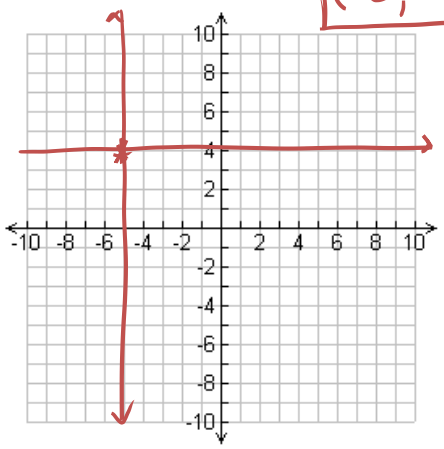
$\frac{-2}{2} = \frac{2y}{2}$

$-1 = y$

3. What is the intersection point of the lines

y = 4 and x = -5

(-5, 4)



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

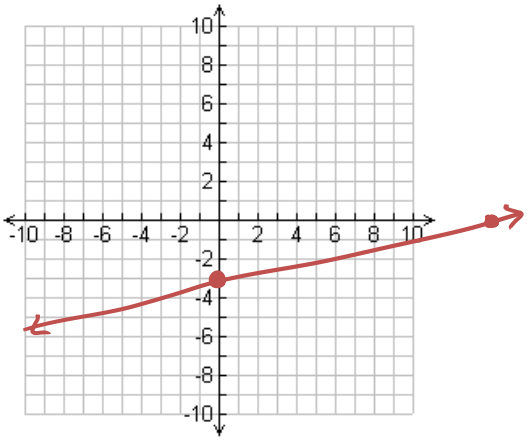
x – 5 y = 15

x-intercept: (15, 0)

y-intercept: (0, -3)

$\frac{-5y}{-5} = \frac{15}{-5}$

$y = -3$



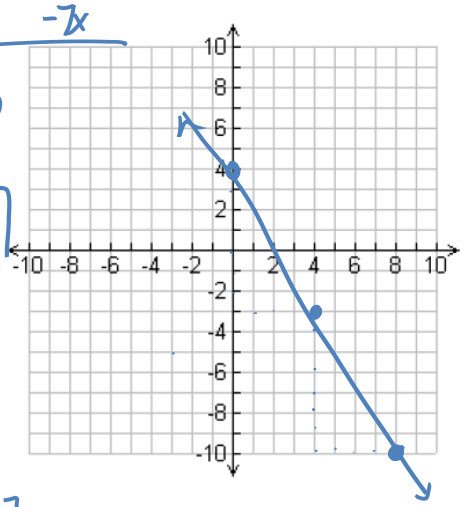
#5-6) Identify the slope and y-intercept. Then graph the following equations.

5) $7x + 4y = 16$

$-7x \quad -7x$

$\frac{4y}{4} = \frac{-7x}{4} + \frac{16}{4}$

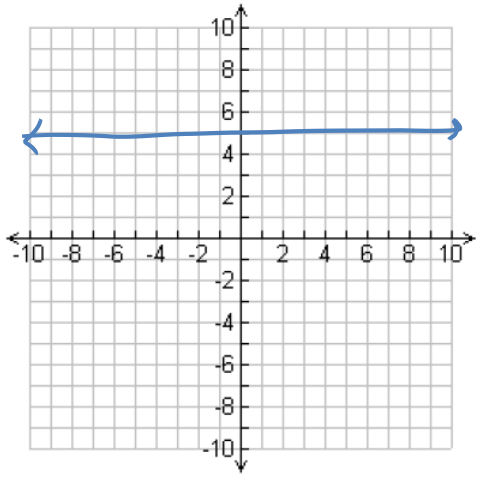
$y = \frac{-7}{4}x + 4$



m = $\frac{-7}{4}$ b = (0, 4)

6) $\frac{2y}{2} = \frac{10}{2}$

$y = 5$



m = 0 b = (0, 5)

#7-8) Determine if the lines are parallel, perpendicular or neither.

7. Are the lines parallel, perpendicular or Neither? Explain /Show why!

$5x + 3y = -8$

$5x \quad -5x$

$\frac{3y}{3} = \frac{-5x}{3} - \frac{8}{3}$

$y = \frac{-5}{3}x - \frac{8}{3}$

$m = -5/3$

$y = \frac{5}{3}x + 9$

$m = 5/3$

Lines are neither parallel/perp.

Since not the same & not reciprocals

8. Are the lines parallel, perpendicular or Neither? Explain /Show why!

$-x + 4y = 6$

$+x \quad +x$

$\frac{4y}{4} = \frac{x}{4} + \frac{6}{4}$

$y = \frac{1}{4}x + \frac{3}{2}$

$m = 1/4$

$\frac{-y}{-1} = \frac{-\frac{1}{4}}{-1} + \frac{5}{-1}$

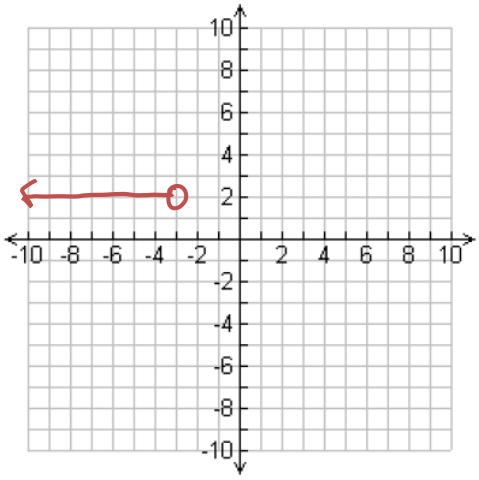
$y = \frac{1}{4}x - 5$

$m = 1/4$

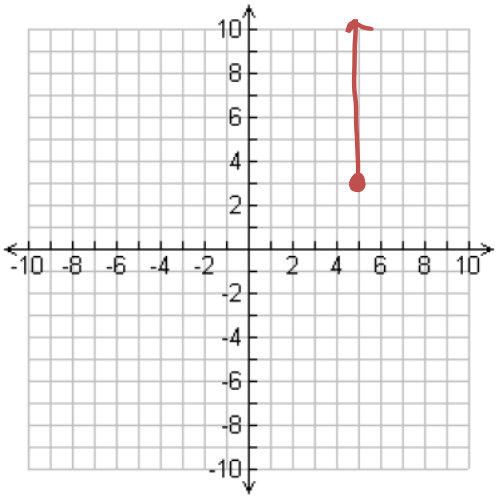
Since slopes are the same... Lines are parallel.

#9-10) Graph the function over the specified domain/range.

9. Graph $y = 2$ with domain $x < -3$



10. Graph $x = 5$ with range $y \geq 3$



11. Draw a picture of something that makes you happy ☺