

Chapter 3 Review

Class/Period: _____

Date: _____

Given the equation $5x + 4y = -16$,

- a. Find the x and y intercepts.

$$\frac{5x}{5} = \frac{-16}{5}$$

$$x = -3\frac{1}{5}$$

$$(0, -4)$$

$$(-3\frac{1}{5}, 0)$$

- b. Write the equation in slope-intercept form.

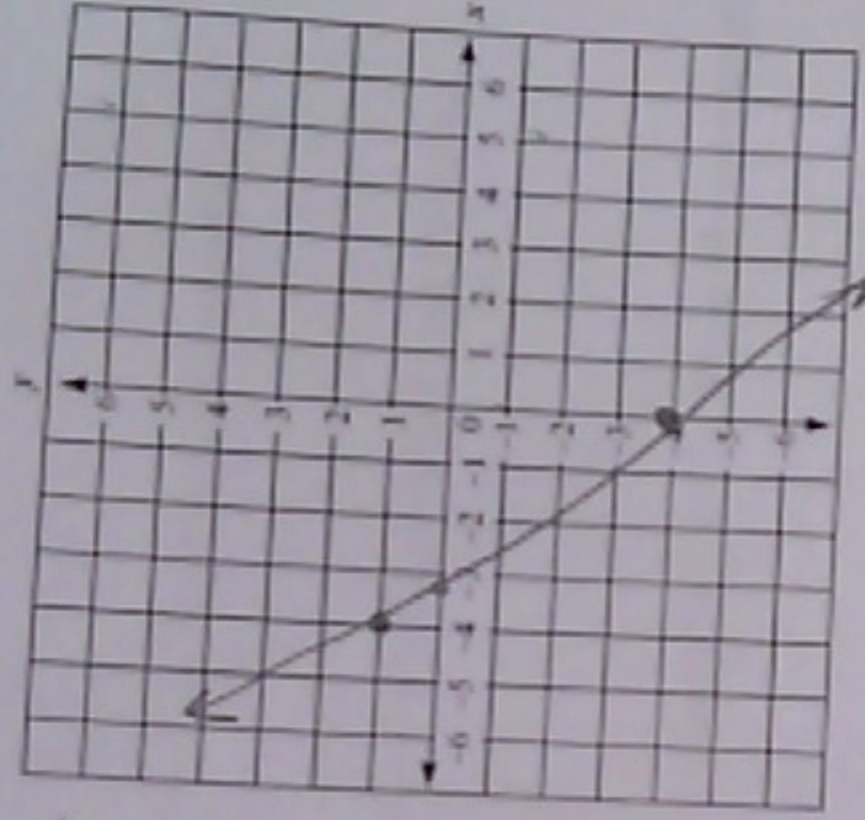
$$\frac{5x + 4y = -16}{-5x} \quad \frac{-5x}{-5x}$$

$$\frac{4y = -5x - 16}{4} \quad y = \frac{-5}{4}x - 4$$

- c. What is the slope of the equation?

$$-\frac{5}{4}$$

- d. Graph the equation.



In order to determine their total profit $p(x)$, a company subtract their costs $c(x)$ from the revenue $r(x)$.

- a. Write the profit $p(x)$ in terms of $c(x)$ and $r(x)$.

$$p(x) = r(x) - c(x)$$

- b. Write a simplified linear function that can be used to calculate the profit if $r(x) = 6x - 100$ and $c(x) = x + 2000$.

$$= 6x - 100 - (x + 2000)$$

$$= 6x - 100 - x - 2000$$

$$= 5x - 2100$$

$$5(3000) - 2100$$

$$15,000 - 2100$$

$$= 12,900$$

$$12,900$$

$$17,900 - 5,$$

$$12,900$$

- c. Calculate the profit if $x = 3000$.

You have \$125 to spend at the mall and want to buy video games which are \$28 and movies which are \$15 each.

- a. Write an equation to represent the situation using v for video games and m for movies.

$$28v + 15m = 125$$

- b. If you buy 2 video games how many movies can you buy? Explain your reasoning.

$$28(2) + 15m = 125$$

$$56 + 15m = 125$$

$$-56 \quad \underline{\hspace{1cm}}$$

$$\frac{15m = 69}{15} \quad m = 4 \text{ movies}$$

- c. If you don't buy any movies how many video games can you buy? Explain your reasoning.

$$28v + 15(0) = 125$$

$$\frac{28v}{28} = \frac{125}{28} \quad v = 4.46 \text{ 4 movies}$$

The table below shows the number of miles driven on a road trip to Canada.

Time (hrs)	0	2	4	6	8	10	12	14	16
Distance (miles)	0	130	230	365	590	695	840	1005	1050