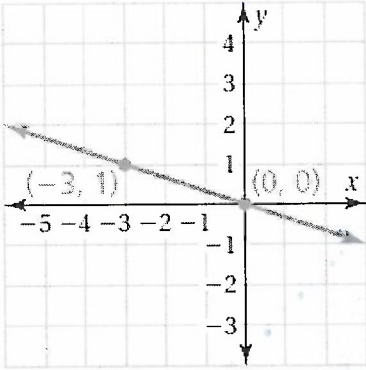# Chapter 3 Review Worksheet
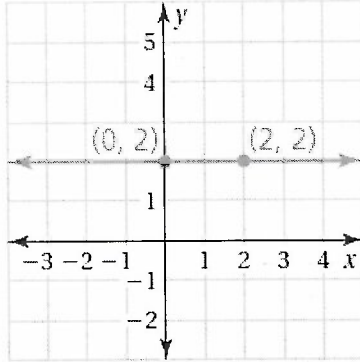
ame: **Key**

Write an equation for the line in slope-intercept form.
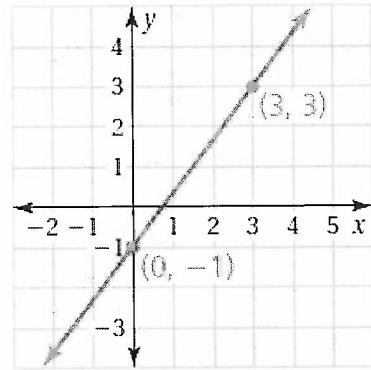
1. $y = \frac{-1}{3}x + 0$

2. $y = 0x + 2$ or $y = 2$
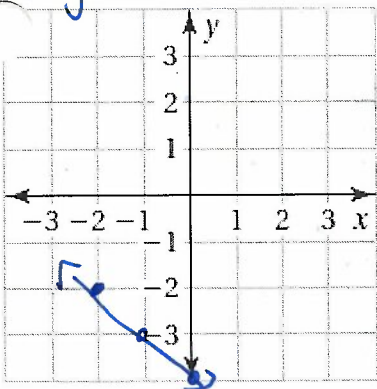
3. $y = \frac{4}{3}x - 1$

Graph 1: line through $(-3, 1)$ and $(0, 0)$

Graph 2: horizontal line through $(0, 2)$ and $(2, 2)$

Graph 3: line through $(3, 3)$ and $(0, -1)$

Write an equation of the line with the given slope that passes through the given point.
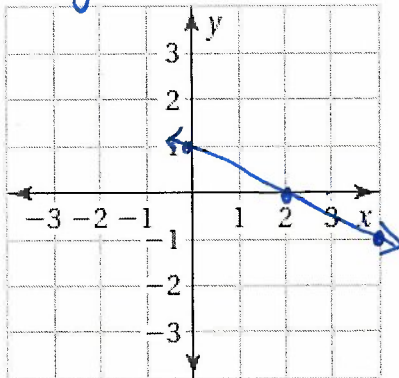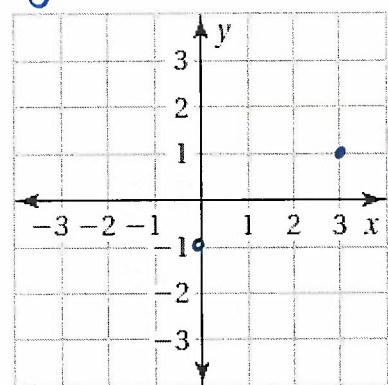
4. m = -1   point: (-2,-2)

$y = -1x - 4$

5. $m = -\frac{1}{2}$ point: (4, -1)

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

6. m = 2/3   point: (3, 1)
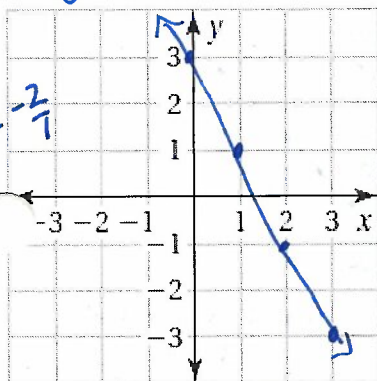
$y = \frac{2}{3}x - 1$

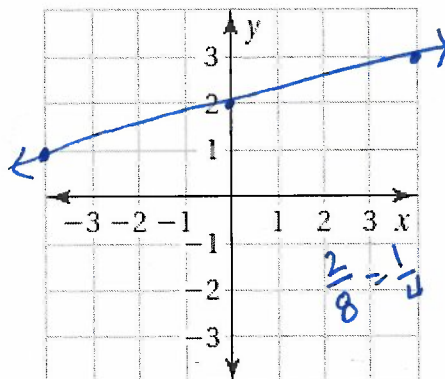**Write an equation of the line that passes through the two points.**
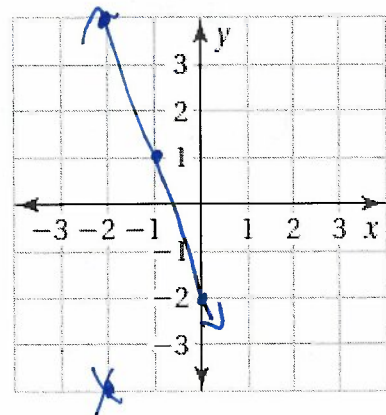
7. (1, 1) & (3, -3)

$y = -2x + 3$

$\frac{-4}{2} = \frac{-2}{1}$

8. (-4, 1) & (4, 3)

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

$\frac{2}{8} = \frac{1}{4}$

9. (-2, 4) & (-1, 1)

$y = -3x - 2$

10. You are saving money for a mountain bike. You have already saved $40 and earn $20 per lawn that you mow.

a) Write an equation that represents the amount of money you have y (in dollars) after x lawns mowed.

$$y = 20x + 40$$

b) The mountain bike you want is $160. How many lawns do you need to mow to earn enough money to buy the bike?

6 lawns

11. You are planning to go to a carnival. There is a $5 admission fee and each ride costs $2.

a) Write an equation that represents the amount of money you spend y (in dollars) after going on x rides.

$$y = 2x + 5$$

b) How much would it cost to go on 12 rides?

$29

12. You are draining an aquarium. It drains at a rate of 6 liters per minute. After 2 minutes, there are 36 liters remaining.

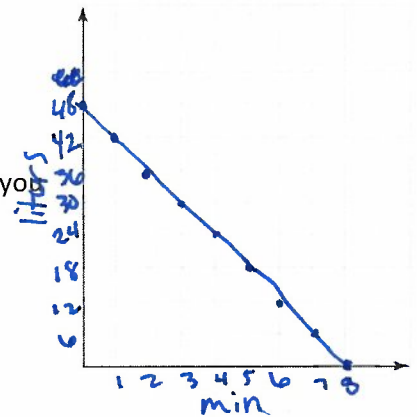a) How many liters were in the aquarium at the beginning?

48 liters

b) Write an equation that represents the amount y (in liters) of water x minutes after you begin draining it.

$$y = -6x + 48$$

b) How long does it take to drain the aquarium?

8 minutes

13. You buy a savings bond. It increases the same value every year. After 2 years, the savings bond is worth $70. After 5 years, the savings bond is worth $100.
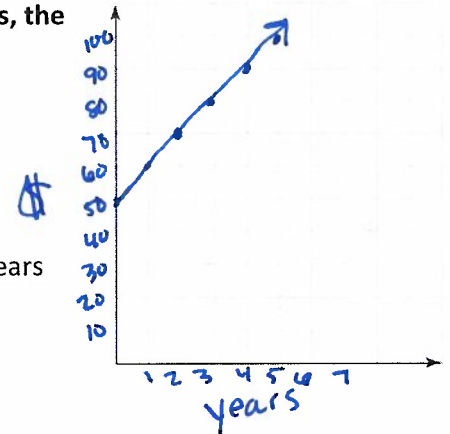
a) How much is the savings bond increasing each year?

$10

b) What was the original value of the savings bond?

$50

c) Write an equation that represents the value y (in dollars) of the savings bond x years after you bought it.

$$y = 10x + 50$$

14. To rent a pontoon you are charged a flat fee plus a daily rate of $100. After 4 days the total cost is $700.

a) What was the flat fee?

$300

b) Write an equation that represents the total cost y after x days.

$$y = 100x + 300$$