

### 5-1 Lesson Quiz

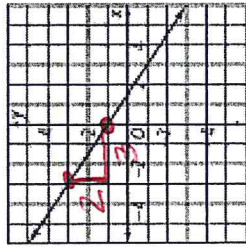
1. Do you UNDERSTAND? The table shows the distance a cyclist rides her bicycle over time. Is the rate of change in distance with respect to time constant? What does the rate of change represent?

Bike Riding Distance

Time (minutes)	Distance Traveled (feet)
1	1120
2	2240
3	3360
4	4480

Rate of change =  $\frac{1120}{1}$

represents distance traveled in feet each minute

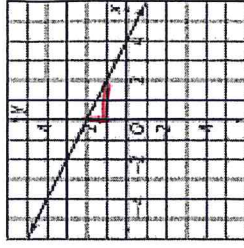


$$m = -\frac{2}{3}$$

### 5-3 Lesson Quiz

$$y = mx + b$$

1. What are the slope and y-intercept of the graph of  $y = -\frac{1}{3}x + 1$ ?  $m = -\frac{1}{3}$   $b = 1$
2. What is an equation of a line with slope  $-\frac{2}{3}$  and a y-intercept of  $-4$ ?  $y = -\frac{2}{3}x - 4$
3. What equation represents the line shown?  $b = 2$   $m = -\frac{1}{2}$



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

4. Do you UNDERSTAND? What is an equation in slope-intercept form of the line that passes through the points  $(-2, -2)$  and  $(1, 7)$ ?

$$m = \frac{7 - (-2)}{1 - (-2)} = \frac{9}{3} = 3$$

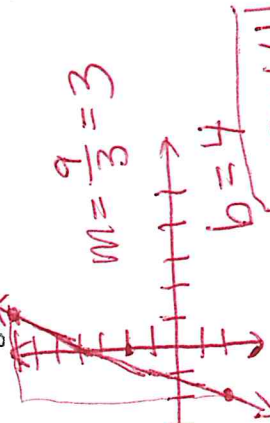
OR

$$(1, 7) \rightarrow y = mx + b$$

$$7 = 3(1) + b$$

$$7 = 3 + b$$

$$b = 4$$



### 5-2 Lesson Quiz

1. Suppose  $y$  varies directly with  $x$  and  $y = 72$  when  $x = 6$ . What direct variation equation relates  $x$  and  $y$ ? What is the value of  $y$  when  $x = 10$ ?

$$\frac{72}{6} = \frac{m \cdot 6}{6}$$

$$12 = m$$

2. Do you UNDERSTAND? Suppose the cost of renting a scooter varies directly with the number of hours. It costs \$37.50 to rent a scooter for 5 hours.

$$y = mx$$

- a. What is an equation that relates the number of hours  $x$  to the rental cost  $y$ ?  $37.50 = \frac{m \cdot 5}{5}$   $7.50 = m$   $y = 7.50x$

- b. What is the graph of the equation in part (a)?

3. For the data in the table, does  $y$  vary directly with  $x$ ? If it does, write an equation for the direct variation.

x	y
3	5
5	10
7	14

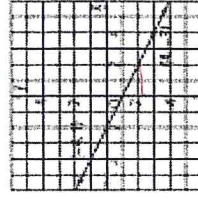
$\frac{5}{3} = \frac{10}{5} = \frac{14}{7} = 2$   
all the same, so yes

### 5-4 Lesson Quiz

1. Do you UNDERSTAND? A line passes through  $(-2, 5)$  and has slope  $\frac{1}{3}$ . What is an equation of the line in point-slope form?

$$y - 5 = \frac{1}{3}(x + 2)$$

2. What is the graph of the equation  $y + 3 = 2(x + 3)$ ?



3. What is an equation in point-slope form of the line shown below?

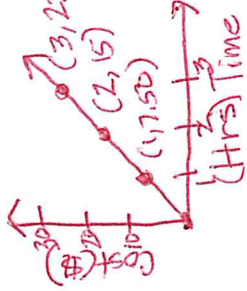
$$y - y_1 = m(x - x_1)$$

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

(3, 22.50)

(2, 15)

(1, 7.50)



2.  $(x_1, y_1) \rightarrow (-3, -3)$

$m = 2$

