

1. Miguel is riding his bike to lacrosse practice at a rate of 7 miles per hour.

	Independent Quantity	Dependent Quantity
Quantity	Time	Distance
Units	hours	miles
Expression	$t$	$7t$
	0	0
	0.5	3.5
	1	7
	1.5	10.5
	2	14

$(0.5, 3.5)$  and  $(1, 7)$

$$\frac{7 - 3.5}{1 - 0.5} = \frac{3.5}{0.5}$$

$$= \frac{7}{1}$$

The unit rate of change is 7.

- a. What are the independent and dependent quantities in this problem?

I = \_\_\_\_\_

D = \_\_\_\_\_

- b. What is the unit rate of change?

- c. Use function notation to determine the distance at 4 seconds.

$D(4) =$  \_\_\_\_\_

2. Noah is stuffing envelopes with invitations to the school's Harvest Festival. He stuffs 4 envelopes each minute.

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		
	5	
	10	
	15	
	20	
	25	

- a. Complete the table.
- b. What are the independent and dependent quantities in this problem?
- I = \_\_\_\_\_
- D = \_\_\_\_\_
- c. What is the unit rate of change?
- d. Use function notation to determine the number of envelopes stuffed after 35 minutes.

3. Terrell plays on the varsity basketball team. He averages 12 points per game.

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		
	1	
	3	
	5	
	7	
	9	

- a. Complete the table.
- b. What are the independent and dependent quantities in this problem?
- I = \_\_\_\_\_
- D = \_\_\_\_\_
- c. What is the unit rate of change?
- d. Use function notation to determine the number of points scored after 13 games.