

### Homework Lesson 2.5.1

Name: \_\_\_\_\_

#### Two Equations for Each Relationship

1. The table represents the relationship between a length measured in meters and the same length measured in kilometers.
  - a. Complete the table.
  - b. Write an equation for converting the number of meters to kilometers. Use  $x$  for number of meters and  $y$  for number of kilometers.

meters	kilometers
1,000	1
3,500	
500	
75	
1	
$x$	

2. Concrete building blocks weigh 28 pounds each.
  - a. Fill in the missing values in the table.

Number of blocks	Weight
4	
7	
	35
1	
	1
$b$	
	$w$

- b. Using  $b$  for the number of concrete blocks and  $w$  for the weight, write two equations that relate the two variables. One equation should begin with  $w =$  and the other should begin with  $b =$ .

3. It costs \$75 to rent a kayak for 5 hours.
- How much does it cost to rent a kayak for 2 hours? Show your work.
  - Using  $c$  for the total cost and  $h$  for the number of hours, write two equations that relate the two.
4. A store sells rope by the meter. The equation  $p = 0.8L$  represents the price  $p$  (in dollars) of a piece of nylon rope that is  $L$  meters long.
- How much does the nylon rope cost per meter?
  - How long is a piece of nylon rope that costs \$1.00?
  - What does 0.8 represent? Include the units. Your answer should be written as a rate.
5. The tables represent a proportional relationship. Find the constant of proportionality and write an equation to represent the relationship.

$a$	$y$
2	$\frac{2}{3}$
3	1
10	$\frac{10}{3}$
12	4

$m$	$n$
$\frac{5}{6}$	5
$\frac{1}{2}$	3
12	72
4	24

Constant of proportionality: \_\_\_\_\_

Constant of proportionality: \_\_\_\_\_

Equation:  $y =$

Equation:  $n =$