## Unit 2 Lesson 5 Cumulative Practice Problems

1. The table represents the relationship between a length measured in meters and the same length measured in kilometers.
	1. Complete the table.
	2. 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
 |  |
| * $x$
 |  |

1. Concrete building blocks weigh 28 pounds each. 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 $b=$.
2. 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.
	1. How much does the nylon rope cost per meter?
	2. How long is a piece of nylon rope that costs $1.00?
3. The table represents 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
 |

* Constant of proportionality: \_\_\_\_\_\_\_\_\_\_
* Equation: $y=$
* (From Unit 2, Lesson 4.)
1. On a map of Chicago, 1 cm represents 100 m.Select **all** statements that express the same scale.
	1. 5 cm on the map represents 50 m in Chicago.
	2. 1 mm on the map represents 10 m in Chicago.
	3. 1 km in Chicago is represented by 10 cm the map.
	4. 100 cm in Chicago is represented by 1 m on the map.
* (From Unit 1, Lesson 8.)



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