

Name \_\_\_\_\_

Date \_\_\_\_\_

Mr. Tallman

**Homework #26 - Identifying Proportional Relationships and Intro to Constant of Proportionality**

**Directions:** In each table determine if  $y$  is proportional to  $x$ . Explain why or why not.

1)

$x$	$y$
3	12
5	20
2	8
8	32

2)

$x$	$y$
3	15
4	17
5	19
6	21

3)

$x$	$y$
6	4
9	6
12	8
3	2

4) Kayla made observations about the selling price of a new brand of coffee that sold in three different sized bags. She recorded those observations in the following table:

Ounces of Coffee	6	8	16
Price in Dollars	\$2.10	\$2.80	\$5.60

Is the price proportional to the amount of coffee? Why or why not? If this is proportional, state the constant of proportionality ( $k$ ).

5) You and your friends go to the movies. It costs \$9.50 for one person, \$19 if two people go and it costs \$28 if three people go. Is the number of people who go to the movies proportional to the cost? Explain. If it is a proportional relationship, state the constant of proportionality.

Proportional or Not proportional (circle one).

$k =$  \_\_\_\_\_

6) The table below shows the relationship between the number of cars sold and money earned for a car salesperson. Is the money earned proportional to the number of cars sold? Explain why or why not. If this is a proportional relationship, state the constant of proportionality ( $k$ ).

Number of Cars Sold	Money Earned
1	250
2	600
3	950
4	1076
5	1555

**Review:** Which is the better buy: a 24 pack of water for \$4.99 or a 36 pack of water for \$7.25? Show all work and explain.