Name _____ Date _____

Constant of Proportionality: Finding k in Tables, Equations and Descriptions

Directions: Answer each question. Type number answers with digits, and use a decimal point when needed.

Apple prices by weight

Weight (pounds)	Cost (dollars)
2	3.50
3	5.25
5	8.75

1. Cost is proportional to the weight of the apples in the table. What is the constant of proportionality, in dollars per pound?

_____ dollars per pound

2. The cost of a prepaid phone plan is $C = 0.05t$, where C is the cost in dollars and t is the number of text messages sent. What is the constant of proportionality?

_____ dollars per text

3. On a school track, every 5 laps add up to 2 kilometers. Distance d, in kilometers, is proportional to the number of laps n. What is k in the equation $d = kn$? Type your answer as a decimal.

_____ kilometers per lap

4. The graph of a proportional relationship between hours worked h and pay p, in dollars, is a straight line. Its points are written as (h, p), and it passes through (0, 0) and (6, 81). What is the constant of proportionality, in dollars per hour?

_____ dollars per hour

Pancake recipe amounts

Pancake mix (cups)	Milk (cups)
3	2
6	4
9	6

5. In a pancake recipe, the amount of milk is proportional to the amount of pancake mix. What is the constant of proportionality for cups of milk per cup of mix?

A. 3/2 B. 1 C. 2 D. 2/3

Rice and servings

Rice (cups)	Servings
3	4
4.5	6
7.5	10

6. The table shows cups of rice r and the servings s they make. Rice is proportional to servings. What is k in the equation $r = ks$? Type your answer as a decimal.

_____ cups per serving

7. Each choice describes a proportional relationship between x and y. In which ones is the constant of proportionality, $y \div x$, equal to 1.5? Select the 3 that apply.

☐ A. $x = 1.5y$
☐ B. y is 9 when x is 6.
☐ C. The graph passes through (4, 6).
☐ D. y is 6 when x is 9.
☐ E. $y = 1.5x$
☐ F. When x goes up by 2, y goes up by 1.5.

8. Hana's printer prints 45 pages in 3 minutes at a steady rate. She wants k in the equation $p = km$, where p is pages and m is minutes. Her work is shown.

1. $p = km$
2. $45 = k \times 3$
3. $k = 3 \div 45$
4. $k = 1/15$

Which step has the first mistake?

A. $k = 3 \div 45$ B. There is no mistake. C. $p = km$
D. $45 = k \times 3$ E. $k = 1/15$