

Name \_\_\_\_\_

Date \_\_\_\_\_

Mr. Tallman

**Review for Test 3 – Ratios and Proportions (Lessons 21 – 30)**

**# 1-4: Determine if the following is a rate or a unit rate.**

1) \$120 for 3 hours \_\_\_\_\_

2) 10 students per class \_\_\_\_\_

3) \$25 per package \_\_\_\_\_

4) 35 miles per  $\frac{1}{2}$  hour \_\_\_\_\_

5) A grocery store sells a 9-pack of bottled water for \$4.50 and a 12 pack of water for \$6.89. Find the unit price of each and determine which is the better buy.

6) Mrs. Jones can read 18 books in 8 days. If she continues to read at this rate how many books can she read in 20 days?

7) Jim ran  $5\frac{1}{2}$  miles in  $\frac{3}{4}$  of an hour. What is his unit rate in miles per hour?

8) Maggie rides her bike at a constant rate. The constant of proportionality that shows the rate at which Maggie rides her bike is  $k = 5$ . What does that mean in the context of the situation?

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9) True or False: The point (0, 0) will be on the graph of any proportional relationship.

10) The point (1, k) represents the \_\_\_\_\_ on the graph of any proportional relationship.

11) Write an equation ( $y = kx$ ) to represent the table below.

<b>x</b>	16	12	4
<b>y</b>	4	3	1

Equation: \_\_\_\_\_

12) Determine whether or not the following graphs represent two quantities that are proportional to each other. Explain.

<p>a)</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>b)</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>c)</p> <p>_____</p> <p>_____</p> <p>_____</p>
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13) The fee for ride tickets at a carnival is shown in the table below.

<b>Tickets</b>	5	10	15	20
<b>Fee (\$)</b>	4.75	9.50	14.25	19.00

A) Determine if this is a proportional relationship. Explain why or why not.

B) If proportional, write what the constant of proportionality means in the context of the situation.

\_\_\_\_\_

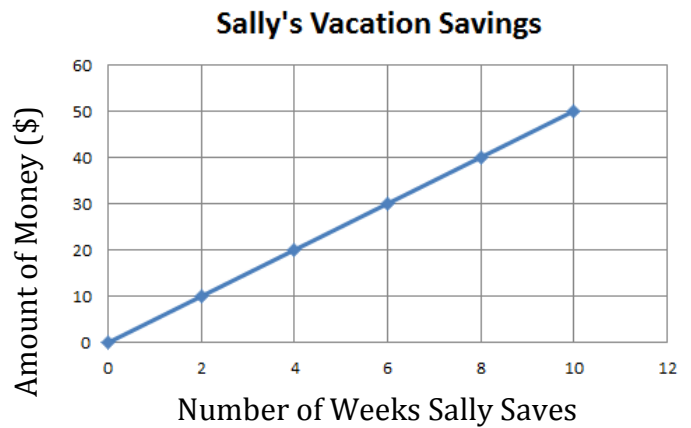
C) Write an equation to represent the situation. \_\_\_\_\_

D) Using the equation, determine how many tickets you can buy for \$33.25. Show all work.

14) Sally got a job after school and put what she earned into a savings account for summer vacation.

A) Find the constant of proportionality.

Show all work.



B) Write an equation to represent this proportional relationship. \_\_\_\_\_

C) Explain what the point (6, 30) means in the context of the problem.

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15) John runs 2.6 miles every half hour. What is her unit rate?

16) It takes Sean 2 hours to drive 100 miles and 3 hours to drive 150 miles. Write an equation to show the proportional relationship between miles and hours. Show all work.

17) In a baseball game, Dan has 30 hits in 105-at bats and James has 10 hits in 35 at-bats. Do these ratios form a proportion? Show all work and explain.