Name: _____ Date: _____ Period: _____

Comparing and Scaling Unit Test REVIEW

Standards

	7.RP.1: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.
	7.RP.2: Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. Represent proportional relationships by equations. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.
	7.RP.3: Use proportional relationships to solve multistep ratio and percent problems.

7.RP.1

1. David uses ¼ cup of apple juice for every ½ cup of carrot juice to make a fruit drink. Enter the number of cups of apple juice David uses for 1 cup of carrot juice.

2. This table shows a proportional relationship between the number of cups of sugar and flour used for a recipe.

Cups of Sugar	Cups of Flour
$2\frac{1}{2}$	$7\frac{1}{2}$
$3\frac{3}{4}$	$11\frac{1}{4}$

Find a unit rate. How many cups of sugar are used for 1 cup of flour?

3. For a drink recipe, the amount of papaya juice is proportional to the amount of carrot juice. This equation represents the proportional relationship between the number of quarts of papaya juice (p) and carrot juice (c) in a recipe.

$$1\frac{1}{3}p = 3\frac{1}{3}c$$

Enter the number of quarts of papaya juice used for 1 quart of carrot juice.

7.RP.2

4. How do you know if a table represents a proportional relationship? Explain.

5. For **EACH** table below, explain whether or not it represents a proportional relationship between x and y. If it does, state the constant of proportionality and write the equation.

A.

x	0	1	2	3
y	0	2	4	6

B.

x	0	2	4	6
y	0	4	16	36

C.

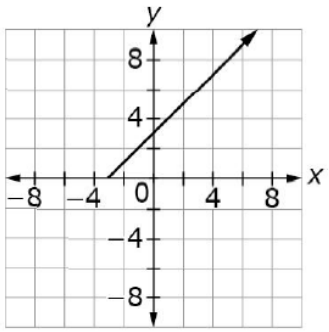
x	0	3	6	9
y	0	15	30	45

D.

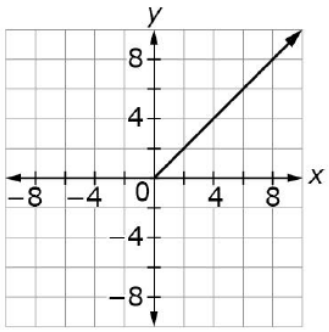
x	0	4	6	8
y	0	16	36	64

6. Select all the graphs that show a **proportional** relationship. For the graphs you select, state the constant of proportionality and write the equation.

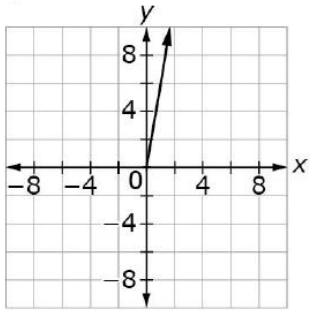
A)



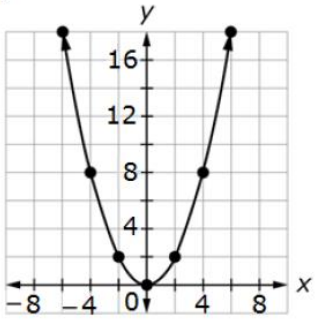
B)



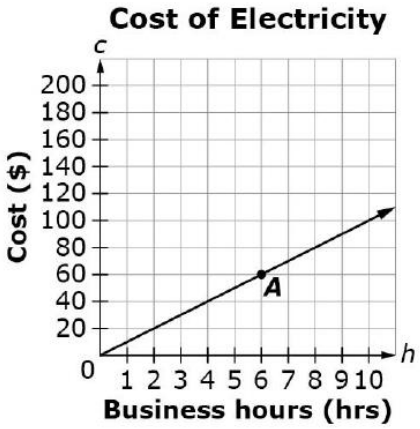
C)



D)



7. This graph shows a proportional relationship between the number of hours (h) a business operates and the total cost (c) of electricity.



Select True or False for each statement about the graph.

Statement	True	False
Point A represents the total cost of electricity when operating the business for 6 hours.		
The total cost of electricity is $8 when operating the business for 80 hours.		
The total cost of electricity is $10 when operating the business for 1 hour.		

8. Using the graph above, what is the unit rate?

7.RP.3 - Solve each problem below by writing and solving a proportion.

9. Dave buys a baseball for $15 plus an 8% tax. Mel buys a football for $20 plus an 8% tax. Enter the difference in the amount Dave and Mel paid, including tax. Round your answer to the nearest cent.

10. A bicycle is originally priced at $80. The store owner gives a discount and the bicycle is now priced at $60. Enter the percentage discount for the cost of the bicycle.

11. Dave has a 32 ounce energy drink. He drinks 10 ounces. Enter the percentage of ounces Dave has left from his energy drink. Round your answer to the nearest hundredth.

12. Mr. Glover has made 13 out of 19 free throws so far this basketball season. He estimates that he will shoot 124 free throws (total) by the end of the season. How many will he make, assuming he continues at the same rate.