Course 2 Benchmark Test – First Quarter (Chapters 1-2)

1. The table shows the costs of different size jars of peanut butter. Which of the jars has the lowest unit rate?

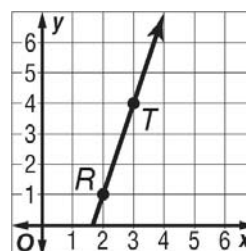| Comparison Shopping ||
Size	Cost
12-oz	$3.00
18-oz	$4.40
25-oz	$6.75
32-oz	$8.25

2. The enrollment at a community college this year is 115% of last year's enrollment. If there were 1,240 students enrolled at the college last year, how many students are there this year?

3. Vicky jogged $2\frac{3}{4}$ miles in $\frac{1}{2}$ hour. What was her average rate of speed in miles per hour?

4. In a recent survey, 55% of pet owners have more than one pet. If there were 620 pet owners surveyed, which proportion can be used to find the number who own more than one pet?

5. SHORT ANSWER A pair of jeans that normally sells for $35 is on sale for 20% off. Find the sale price of the jeans. Then find the total cost of the jeans if the sales tax rate is 6%.

6. How much simple interest is earned on an investment of $1,250 if the money is invested for 5 years at an annual interest rate of 4.5%?

7. SHORT ANSWER Determine whether the relationship between the two quantities in the table is proportional. Explain your reasoning.

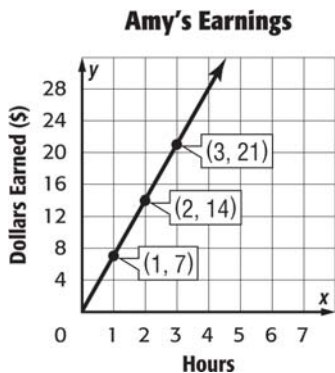| Bicycle Rental ||
Hours	Cost ($)
0	12.50
1	17.50
2	22.50
3	27.50

8. What is the slope of the line that passes through points *R* and *T*?

9. The weight of an object on the moon varies directly as the weight of the object on Earth. A 90-pound object on Earth weighs 15 pounds on the moon. If an object weighs 156 pounds on Earth, how much does it weigh on the moon?

10. A muffin recipe calls for 4 cups of sugar and yields 36 muffins. If Amelia only wants to make 24 muffins, how much sugar will she need?

11. A sprinter runs 100 meters in 11.5 seconds. What is the runner's average running rate in meters per second? Round to the nearest tenth.

Course 2 Benchmark Test – First Quarter   *(continued)*

12. Amy earns $7 per hour for babysitting. Which of the following statements is true about the relationship between the number of hours Amy works and her earnings?

Amy's Earnings

F. The relationship is proportional because the graph of the line passes through the origin and has a constant rate of change.

G. The relationship is proportional because there is not a constant rate of change between the points.

H. The relationship is nonproportional because the points do not form a straight line.

I. The relationship is nonproportional because the line through the points does not intersect the origin.

13. A video game that normally sells for $80 is on sale for $68. What is the percent of discount for the sale price?

14. What is the constant rate of change of the ordered pairs shown in the table?

x	y
2	3
4	7
6	11
8	15

15. SHORT ANSWER Estimate 58% of 121 by using 10%. Show your work.

16. Last year there were 43 science projects submitted by students at a science fair. This year there are 52 science projects. To the nearest tenth, what is the percent of change in the number of science projects submitted?

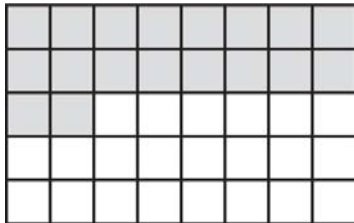**17.** Simplify the complex fraction.

$$\frac{\frac{4}{3}}{\frac{2}{5}}$$

F. $\frac{3}{10}$

G. $\frac{8}{15}$

H. $\frac{15}{8}$

I. $\frac{10}{3}$

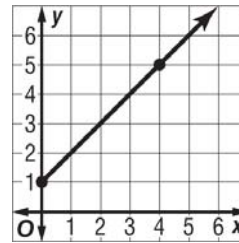**18.** What percent of the figure below is shaded?

A. 45%

B. 40%

C. 20%

D. 18%

20. SHORT ANSWER Use the percent equation to solve the following problem. Show your work. 98 is 35% of what number?

21. What is the slope of the line shown on the coordinate plane?

A. 1

B. $\frac{3}{5}$

C. $-\frac{3}{5}$

D. -1

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23. The bookstore normally sells mechanical pencils for $6.50. This week the pencils are discounted by 25%. To the nearest cent, what is the amount of discount?

24. Christy drove 135 miles in 2.5 hours. What was her average speed in miles per hour?

F. 50 miles per hour

G. 52 miles per hour

H. 54 miles per hour

I 55 miles per hour

25. SHORT ANSWER An electrician charges a $50 fee to make a service call plus $25 per hour he works. Complete the table. Then determine whether the relationship between the two variables is proportional. Explain your reasoning.

Cost of Hiring an Electrician	
Hours	**Cost ($)**
1	75
2	
3	
4	