Summative 3 Review

WARM-UP

Complete # 1 and #2 on your Review Sheet.

Summative 3 Review

1. Write a unit rate to represent a car traveling 316 km in 7 1/2 hours.

2. The equation y = 13.25x represents the total amount, y, that Michael gets paid based on the number of hours he works each week, x. What is the constant of proportionality.

3. The amount a person weighs on Earth is proportional to the amount that the person weighs on the moon. An astronaut who weighs 135 pounds on Earth weighs only 27 pounds on the moon. Which of the following can be used to justify this proportional relationship? Show how you determined your answer.

a. 210 pounds on Earth; 33 pounds on the moon

b. 145 pounds on Earth; 28 pounds on the moon

c. 160 pounds on Earth; 18 pounds on the moon

d. 90 pounds on Earth; 18 pounds on the moon

4. **Which equation shows a proportional relationship?**

   A. $\frac{1}{4}x = y$ B. y = 2.5 + x   C. $\frac{x}{y}$ D. x - 35 = y

5. **What is the constant of proportionality in the following equation: y= 1.5x?**

6. **If a car travels 95 miles in two hours, what is the unit rate? Show your work.**

7. **What is the time it would take to travel 450 miles at a rate of 65 mph?**

8. **What is the constant of proportionality in the equation y = 12x?**

9. **If 5 bottles of juice can be filled in 30 seconds, how many bottles can be filled in 5 minutes? Show how you obtained your answer.**

10. Write an equation that shows the relationship between x and y.

x	y
1	-2
2	-4
3	-6
4	-8
5	-10

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11. Henry is shopping for food for his new puppy.

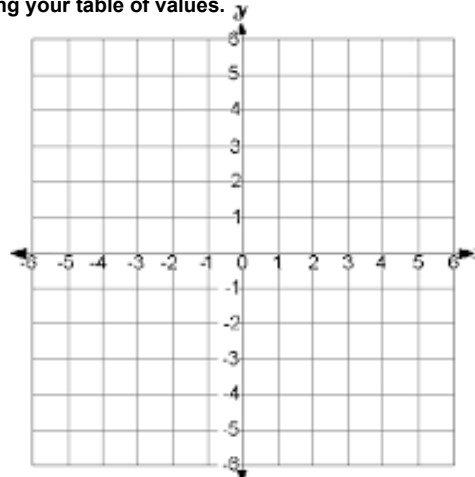Part A: Which size dog food shown in the table below has the lowest unit price?

Size (oz)	Cost ($)	Unit Price
24	8.49	
40	12.00	
64	16.99	

Part B: Use what you know about unit rates to justify why this is the best buy. Use words and/or numbers to support your justification.

_____
_____
_____
_____

12. Complete the table using the rule $y = \dfrac{1}{2} x$

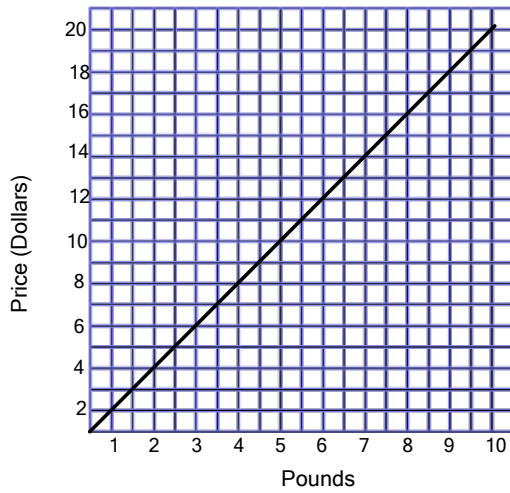| x	y
-4	
-2	
0	
2	
4	

13. Graph the linear equation $y = \dfrac{1}{2} x$ **using your table of values.**

14. What is the constant of proportionality for the graph and the equation in questions 12 and 13?

15. In order for teachers to survive, they must consume large quantities of coffee. So, they keep a very close eye on the cost of coffee beans which is represented in the graph below.

Cost of Coffee Beans

Part A. What is the unit rate?

_____

Part B. Use words, symbols, or both to explain how you determined your answer.

Part C. Using the graph from Part A and Part B., what does the point (9, 18) mean in the context of the situation?

_____

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_____

_____

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Attachments

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