**Operations Quiz Review**

**Directions:** Be sure to show all work, communicate your thought process, and justify your reasoning. Remember to check that your answers are complete, correct, and reasonable. If you complete work on scrap paper, please attach it. This quiz is worth 30 points.

Simplify each expression.

1. -3 + 14 2. -3 ÷ -¾ 3. -4 \* -8

4. -20 – 12 5. -3 \* 12 + 1 6. 1¼ \* - ½

7.  8.  9. 

10. The price of a car depreciates (goes down) $300 per month. What is the change in value of the car over the course of six months?

11. A recipe for 15 cupcakes requires 1¾ cups of milk. If you only want to make 5 cupcakes, how much milk will you need?

12. The temperature this morning was -11 degrees Fahrenheit, but the temperature rose 25 degrees by noon. What was the temperature at noon?

13. You plan on running 2/3 of a mile every day for five consecutive days. At the end of the five days, how far will you have ran in total?

14. Today Jenny had 1½ teaspoon of almond butter on celery, ¾ of a teaspoon of peanut butter with a banana, and one and one-eighth teaspoon of cashew butter on a slice of bread. In total, how many teaspoons of nut butter did Jenny consume today?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **a + b** | **ab** | **b2** | **b + b** |
| **Always Negative** |  |  |  |  |
| **Sometimes Negative** |  |  |  |  |
| **Never Negative** |  |  |  |  |

15. Let a be any real positive number and b be any real negative number. Check the appropriate box in the table to state whether each value will always be negative, sometimes be negative, or never be negative.

16. Given g = -½, h = ¼, j = -1, and k = ¾. Simplify each expression.

a. gh + jk b. g + jh ÷ k c. k/g

d. k – gj ÷ h e. h ÷ j \* k f. j ÷ g \* h