

Unit One Test Review: Long Division, Exponents, and Order of Operations

Remember: Partial credit is granted only when work is shown and comprehensible

Section One: Problem Solving.

1. There are a total of 400 sixth graders. If there are 45 lunch tables in the cafeteria, how many students can sit at each lunch table?

2. Lee was packing brownies into bags that contained a half-dozen brownies each. He had to package 25 brownies. How many bags did he use to pack all of the brownies? _____

3. Bethany wants a new iPad that cost \$725. She can save \$22 each week. She already has \$65 saved. How many more weeks of saving does she have left until she will be able to purchase the headphones?

Section Two: Exponential Notation

4. Find the value of five cubed. _____

5. What is the value of 9^0 ? _____

6. Write $(0.5)(0.5)(0.5)(0.5)(0.5)$ in exponential notation. _____

7. How would I express 49 using exponential notation and a base of 7? _____

8. Carla's home, valued at \$230,000, will increase in value according to this formula:

$$230,000 \times 2.2 \times 2.2 \times 2.2 \times 2.2$$

How would you express this formula using exponential notation? _____

9. What is the value of $(\frac{1}{4})^3$? _____

10. Find the value of 2^5 . _____

11. Simplify: $6 \cdot w \cdot 3 \cdot w^2 \cdot 2 \cdot x \cdot x^2 \cdot w^3$ _____

12. Simplify: $\frac{24d^3 \cdot e^5}{4d^2 \cdot e^2}$ _____

Section Three: Order of Operations

13. What is the value of the following expression? _____

$$45 + (3^2 - 1)^2 - 6 \cdot 4 + 12$$

14. Evaluate the following expression when $x = 2$ and $y = 5$ _____

$$x(4y - 2^3)$$

15. Using the correct order of operations, what should you do first? _____

$$(15 + 5) \div 5 \cdot 6 - 2^2$$

16. What is the value of the following expression? _____

$$[3(24 - 6) + 16] \div 5$$

17. Where would I place parenthesis in the following problem to make it true?

$$15 - 3 + 7 + 5 = 24$$

18. Using the correct order of operations, what should you do first? _____

$$5(3 + 4^3) + (2 + 5)^2 + 8$$