

Algebra I
Order of Operations

Name _____

1. For any given algebraic expression, what is the order of operations you follow?

Simplify the following expressions. SHOW ALL WORK, AND DO NOT USE A CALCULATOR!

2. $3 \cdot 5 - 4^2 + 10 \div 2 =$ _____

3. $50 - (8 - 1)^2 + 12 \div 4 =$ _____

4. $\frac{6+10}{2} - 2 \cdot 3 + 5 =$ _____

5. $2(5+5)^2 - 10 \cdot 5 =$ _____

6. $[6(15-8)-40] - (1+2)^3 =$ _____

7. $\frac{60-9 \cdot 5}{(5+1)^2 - 11 \cdot 3} =$ _____

8. $25 - 4 \cdot 5 + 3^2 - (14 - 5) =$ _____

9. $8^2 - 2^3 \cdot 7 + 1 =$ _____

10. Using only the numbers 1, 2, 3 and 4, and the four operations, write an expression that will give you the following answers. You may only use each number once, and you must use all four numbers. You may also use any of the numbers as an exponent (example: $2^4 + 3 - 1 = 18$).

a. 4

b. 5

c. 24

d. 12

Evaluate each expression.

11. $2l + 2w$ when $l = 10$ and $w = 8$

12. $\frac{d}{t} + 4dt$ when $d = 6$ and $t = 3$

13. $(m + n)^2 - 3m^3$ when $m = -1$ and $n = 6$

14. $\frac{b - ab}{4(a - 5)}$ when $a = 8$ and $b = 1$