

1.8b EXPONENTIAL NOTATION AND ORDER OF OPERATIONS

Simplify: [Note: $(-5y)^2 = (-5y)(-5y) = (-5)(-5)yy = 25y^2$]

1. $(3x)^2 =$ _____

2. $(-2a)^3 =$ _____

3. $-3(x)^4 =$ _____

Find the absolute value of the following.

4. $|2| =$

5. $|-2| =$

6. $-|3| =$

7. $-|-6| =$

Simplify using the order of operations:

8. $3 \cdot 2^2 =$

9. $20 \div 2(-5)$

10. $6 - 2[(3-6) \cdot 2]^2$

11. $|3(-5)| - 5^2$

12. $-14 - 2(6) + 4$

13. $\frac{4(5-2)}{4^2 - 2^2}$

Evaluate:

14. $40 \div 5x$, for $x = 4$

15. $5 - 2a^3$, for $a = -2$

16. $3y \div 2y^2$, for $y = 4$

17. $8 - x^3$, for $x = -1$

18. $24 \div a(3)$, for $a = -2$

Simplify: Multiply using the Distributive Law then combine like terms.

19. $-(5y + 6)$

20. $-(3x - y + 8)$

21. $7m - (4m - 3)$

22. $5m + m - 2(3m + 4)$

23. $-(4x - 3y)$

24. $10w - (5 + w)$

25. $3x - 4x - 3(2x - 4)$