Name: _____ Unit 1

Date: _____ **WS #3 Exponents Worksheet**

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Simplify. Calculate powers with numerical bases. Express all powers with natural exponents.

1. $(-2^4)^2$

=

2. $(-3^2)^2$

=

3. $((-2)^3)^1$

=

4. $x^5 \cdot x^2$

=

5. $x^{-7}\, x^{10}\, x^4$

=

6. $x^5y^3 \cdot x^2y^3$

=

7. $(4x^3)(x^5)$

=

8. $(3x^2)(4x^7)$

=

9. $\frac{x^8}{x^3}$

=

10. $\frac{x^8}{x^{13}}$

=

11. $\frac{2^3x^8}{4^2x^8}$

=

12. $\frac{8a^2b}{12a^2b^4}$

=

13. $\frac{6x^4}{4x}$

=

14. $\frac{3a^2}{4}\frac{2a^4}{12b^5}\frac{b^8}{a^{10}}$

=

15. $(-2x^2)^3$

=

16. $(2a^2b)^3$

=

17. $(x^{-2})^4)^{-5}$

=

18. $\frac{(xy^2)^2}{2x^4y}$

=

19. $(3p)^3\,(-p)^3$

=

20. $(-a^2b^3)^3$

=

21. $(\frac{2x^2}{y})^3(\frac{y^5}{x^3})^2$

=

22. $(\frac{7x^4y}{xy^2})^2$

=

23. $(\frac{10x^3}{x^5})^2$

=

24. $(-\frac{1}{2}m^2n)(\frac{2}{3}m^4n^2)$

=