

Practice Worksheet for Law of Exponents

Use the laws of exponents you discovered in your investigation to simplify each of the following expressions with positive exponents.

1. $3^3 \cdot 3^4$

11. 3^{-4}

2. $x^8 \cdot x^5$

12. $\frac{8^5}{8^2}$

3. $3x^3 \cdot 4x^2$

13. 27^0

4. $x^2y^4 \cdot x^5y^{12}$

14. $\frac{12x^5}{4x^2}$

5. $(5^2)^3$

15. $\frac{2x^6y^5}{16x^4y}$

6. $(x^4)^5$

16. $\frac{3^5}{3^7}$

7. $(2x)^3$

17. $\frac{4x^3y^2}{20x^3y^4}$

8. $(x^4y^5)^3$

18. $\frac{12xy^2}{3x^4y^2}$

9. $(3x^4y^3z^5)^3$

19. $\left(\frac{2x^4}{3x}\right)^3$

10. $(2x^3)^4(-3x^2y^3)^2$

20. $\frac{18x^{-5}y^4}{12x^{-3}y^{-3}}$

Algebra 1

Unit 7 Exponent Rules Worksheet #2

Simplify each expression below using exponent rules. Your final answer should not include any negative exponents. You MUST show work in order to receive credit.

1. $x^5 \cdot x^2$	2. $y^3 \cdot y \cdot y^4$	3. $b^4 \cdot b^{-4}$
4. $7x^3y^2 \cdot 5xy^9$	5. $a^{10} \cdot a^2 \cdot a^{-6}$	6. $(z^5)^5$
7. $(b^7)^2$	8. $(m^{-8})^{-3}$	9. $(x^2y^4m^3)^8$
10. $(3x^2)^4$	11. $(2ab)^5$	12. $(2x^3y)^6$
13. $(m^7)^4 \cdot m^3$	14. $p^2 \cdot (p^5)^2$	15. $\frac{x^5}{x^2}$
16. $\frac{c^4}{c^8}$	17. $\frac{5x^{-4}}{x^{-9}}$	18. $\frac{x^3 \cdot x^4}{x^2}$