

Name _____
Mr. Schlansky

Date _____
Algebra II

Exponents Rules

Express each of the following in simplest form

1. $(4x^3)(2x^5)$

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

3. $(-2x^2y^3)(3x^5y)$

4. $\frac{12x^8}{4x^3}$

5. $\frac{24x^9}{3x^2}$

6. $\frac{48x^8y^9}{4xy^8}$

7. x^0

8. $(4x)^0$

9. $(12x^3y^2)^0$

10. 7^2

11. 2^4

12. 5^3

13. $(3x^4y)^2$

14. $\left(\frac{2x^2}{y^3}\right)^3$

15. $\left(\frac{x^2y}{2mn^3}\right)^4$

16. $(x^4y^3)^{\frac{1}{2}}$

17. $\left(\frac{x^2}{y^6z^9}\right)^{\frac{1}{3}}$

18. $\left(\frac{x^4y^8}{z^3}\right)^{\frac{3}{2}}$

19. $\frac{5x^6 \cdot 4x^3}{2x^5}$

20. $(2x^2y^3)^2(3xy)$

21. $\frac{(2x^3)^4}{4x^7}$

22. $\left(\frac{4x^0y^3}{z}\right)^3\left(\frac{2z}{y}\right)^2$

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

24. $\left(\frac{x^2y}{z^8}\right)^{\frac{1}{2}}(xz^{10})$