

Math 9 Assignment 4: Exponents

Name: _____

1. 3^4

2. Simplify $w \times w \times w$

3. $(-2)^4$

4. $x \times x^6 \times x^3$

5. $(a^3)(a) \cdot a^7$

6. $(2x^2)^4$

7. $\left(\frac{-5}{2}\right)^3$

8. Simplify $\frac{x^8}{x^6}$

9. $x^p \cdot x^q$

10. $\left(\frac{3}{2}\right)^3$

11. $\left(\frac{w}{x}\right)^y$

12. Evaluate -4^2

13. Evaluate $(-4)^2$

14. $\frac{x^7}{x^5} \div \frac{x}{x^3}$

$$15. \frac{10ab^2c}{15a^3b^4}$$

$$16. (x^3)^4$$

$$17. ((a^c)^d)^e$$

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

$$19. \frac{(-2)^5}{(-2)^2} \times -2^3$$

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

$$21. ((3x^2)^2)^3$$

$$22. (3(2a^2)^2)^2$$

$$23. (-1)^{12345}$$

$$24. \frac{(-2)^{112}}{-2^{109}}$$

$$25. 1^0 + 0^1$$

$$26. 0^0$$

$$27. \left(\frac{6p^4p^6q^4}{4p^6q^3}\right)^2$$

28. $\left(\frac{(-2)^2}{(-3)^4}\right)^2$

29. $-3\left(-\frac{1}{3}\right)^2 + (-2)^3 - \left(\frac{-3^4}{(-3)^2}\right)^2$

30. $\frac{3}{x}\left(\frac{2x}{3x^3}\right)^3 \div \frac{1}{x^2}$

31. Solve $16 = 4^{5x}$

32. Solve $\frac{2^8}{2^x} = 2^{x+1}$

33. Solve $27^{1-3x} = \frac{3^8}{3^x}$