

Name: Key Period: _____

Score: _____

HW 4-7: Using All Exponent Rules_____/_____
_____% = _____

Answer each question completely. Show your work. Simplify the expression.

1. $b^3 \cdot b^6 = b^9$

2. 7^{-2}

3. $y^6 xy^3 = xy^9$

4. $\frac{10x^3y^9}{2x^2y^7}$

5. $(-6)^{-2} = \frac{1}{36}$

6. 6^{-3}

7. $\frac{b^3b^6}{b^9} = 1$

8. $2b^3b^4$

9. $(x^4)^9 = x^{36}$

10. $(8x^4y^3)^2$

11. $4x^0y^2 = 4y^2$

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

13. $(x^4)(x^{-9}) = \frac{1}{x^5}$

14. $p^5q^2p^{-2}r^3$

15. $(-4b^{-3}a^6c^{-12})^0 = 1$

16. $5x^0$

17. $\frac{3^{-3}}{5^{-2}} = \frac{25}{27}$

18. $\frac{x^{-1}}{6^2}$

19. $\frac{10^3}{7^{-2}} = 49,000$

20. $\frac{1}{5^{-3}}$

21. $\frac{7^{-1}}{3^3} = \frac{1}{189}$

22. $\frac{3^2}{t^{-3}}$

23. $\frac{4^{-1}}{t} = \frac{1}{4t}$

24. $6y^{-4}$