

# 9.5 Practice WS

## Properties of Exponents Practice

Name: \_\_\_\_\_

Simplify the following. All problems can be "cleaned-up" or rewritten in some way.

1. $(2^2)^4$	2. $(A^6)^3$	3. $(-2b^3)^3$
4. $6(3x^5)^4$	5. $(\frac{4}{3})^3$	6. $(\frac{x}{y})^4$
7. $(\frac{2ab^3}{4x^2y^5})^3$	8. $(\frac{3A^3}{9A^5})^2$	9. $(\frac{44}{3})^0$
10. $(5 \cdot 3)^4$	11. $(2x^3)^4$	12. $A^{-8} \cdot A$
13. $21^{-3} \cdot 21^0$	14. $\frac{6}{6^3}$	15. $\frac{4^2}{4^5}$
16. $(5A)^3$	17. $16^{-5} \cdot 16^5$	18. $-X^{-31} \cdot X^{29}$
19. $(-6)^{-1}$	20. $w^{-17}$	21. $\frac{1}{(-8)^4}$

22.  $-3b^{-3}$

23.  $\frac{x^{-2}}{y^{-3}}$

24.  $\frac{19c^{-2}}{d} =$

25.  $\frac{3x^4}{y^{-5}}$

26.  $\frac{-7Ab^6}{-14A^5b^2}$

27.  $\frac{3^4}{3}$

28.  $A \cdot A^4 \cdot A^{-3}$

29.  $A^0 \cdot b^5$

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

31.  $\frac{w^3 \cdot w}{(w^4)^2 \cdot w^7}$

32.  $r^5 \cdot (r^5)^5$

33.  $z \cdot 14 \cdot z^{-1}$

34.  $\frac{m^{-8}}{m^{-5}}$

35.  $(-5m^8n^5)^3$

36.  $\frac{10^0}{10^4}$

37.  $-(7A^5b^8)^2$

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

39.  $37.6^0 \cdot x^2 \cdot 5$

40.  $\left(\frac{x^{-3}x^6y}{4y^3}\right)^2$

41.  $\left(\frac{x}{y}\right)^A$

42.  $\frac{1}{x^{-5}}$