Name _____ Date _____

6.1 Notetaking with Vocabulary (continued)

Extra Practice

In Exercises 1–8, evaluate the expression.

1. 3^0 **2.** $(-2)^0$ **3.** 3^{-4} **4.** $(-4)^{-3}$

5. $\frac{2^{-3}}{5^0}$ **6.** $\frac{-3^{-2}}{2^{-3}}$ **7.** $\frac{4^{-1}}{-7^0}$ **8.** $\frac{3^{-1}}{(-5)^0}$

In Exercises 9–23, simplify the expression. Write your answer using only positive exponents.

9. z^0 **10.** a^{-8} **11.** $6a^0b^{-2}$

12. $14m^{-4}n^0$ **13.** $\frac{3^{-2}r^{-3}}{s^0}$ **14.** $\frac{2^3a^{-3}}{8^{-1}b^{-5}c^0}$

15. $\frac{3^5}{3^3}$ **16.** $\frac{(-2)^7}{(-2)^5}$ **17.** $(-5)^3 \bullet (-5)^3$

18. $(q^5)^3$ **19.** $(a^{-4})^2$ **20.** $\frac{c^4 \bullet c^3}{c^6}$

21. $(-4d)^4$ **22.** $(-3f)^{-3}$ **23.** $\left(\frac{4}{x}\right)^{-3}$

24. A rectangular prism has length x, width $\frac{x}{2}$, and height $\frac{x}{3}$. Which of the expressions represent the volume of the prism? Select all that apply.

A. $6^{-1}x^3$ **B.** $6^{-1}x^{-3}$ **C.** $(6x^{-3})^{-1}$ **D.** $2^{-1} \bullet 3^{-1} \bullet x^3$