

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

HW

**Properties of Exponents****Multiply. Write the product as one power.**

1.  $2^2 \cdot 2^3$

\_\_\_\_\_

2.  $3^5 \cdot 3^2$

\_\_\_\_\_

3.  $1^3 \cdot 1^5$

\_\_\_\_\_

4.  $5^4 \cdot 5^3$

\_\_\_\_\_

5.  $8^1 \cdot 8^1$

\_\_\_\_\_

6.  $7^4 \cdot 7^5$

\_\_\_\_\_

7.  $12^1 \cdot 12^2$

\_\_\_\_\_

8.  $n^3 \cdot n^8$

\_\_\_\_\_

**Divide. Write the quotient as one power.**

9.  $\frac{2^5}{2^2}$

\_\_\_\_\_

10.  $\frac{10^4}{10^3}$

\_\_\_\_\_

11.  $\frac{4^6}{4^3}$

\_\_\_\_\_

12.  $\frac{(-3)^6}{(-3)^4}$

\_\_\_\_\_

13.  $\frac{5^8}{5^6}$

\_\_\_\_\_

14.  $\frac{24^9}{24^3}$

\_\_\_\_\_

15.  $\frac{(-6)^8}{(-6)^5}$

\_\_\_\_\_

16.  $\frac{b^7}{b^5}$

\_\_\_\_\_

**Simplify.**

17.  $(3^2)^4$

\_\_\_\_\_

18.  $(6^3)^{-1}$

\_\_\_\_\_

19.  $(4^5)^0$

\_\_\_\_\_

20.  $(8^2)^3$

\_\_\_\_\_

21.  $(5^{-2})^3$

\_\_\_\_\_

22.  $(7^0)^4$

\_\_\_\_\_

23.  $(9^4)^{-2}$

\_\_\_\_\_

24.  $(s^5)^2$

\_\_\_\_\_

25. The Haywood Paper Company has  $5^2$  warehouses. Each warehouse holds  $5^5$  boxes of paper. How many boxes of paper are stored in all the warehouses? Write the answer as one power.

\_\_\_\_\_

26. Write the expression for 5 used as a factor eight times being divided by 5 used as a factor six times. Simplify the expression as one power.

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