

# Practice 4-8

## Exponents and Division

Complete each equation.

1.  $\frac{8^n}{8^7} = 8^2$ ,  $n =$  \_\_\_\_\_

2.  $\frac{12x^5}{4x} = 3x^n$ ,  $n =$  \_\_\_\_\_

3.  $\frac{1}{h^5} = h^n$ ,  $n =$  \_\_\_\_\_

4.  $\frac{p^n}{p^8} = p^{-6}$ ,  $n =$  \_\_\_\_\_

5.  $\frac{1}{81} = 3^n$ ,  $n =$  \_\_\_\_\_

6.  $\frac{12^4}{12^n} = 1$ ,  $n =$  \_\_\_\_\_

Simplify each expression.

7.  $\frac{a^3}{a^7}$  \_\_\_\_\_

8.  $\frac{j^5}{j^6}$  \_\_\_\_\_

9.  $\frac{x^7}{x^7}$  \_\_\_\_\_

10.  $\frac{k^5}{k^9}$  \_\_\_\_\_

11.  $\frac{9x^8}{12x^5}$  \_\_\_\_\_

12.  $\frac{2f^{10}}{f^5}$  \_\_\_\_\_

13.  $\frac{3y^4}{6y^{-4}}$  \_\_\_\_\_

14.  $n^{-5}$  \_\_\_\_\_

15.  $\frac{3xy^4}{9xy}$  \_\_\_\_\_

16.  $(-15)^0$  \_\_\_\_\_

17.  $\frac{15h^6k^3}{5hk^2}$  \_\_\_\_\_

18.  $4b^{-6}$  \_\_\_\_\_

Write each expression without a fraction bar.

19.  $\frac{a^7}{a^{10}}$  \_\_\_\_\_

20.  $\frac{4x^2y}{2x^3}$  \_\_\_\_\_

21.  $\frac{x^3y^4}{x^9y^2}$  \_\_\_\_\_

22.  $\frac{12mn}{12m^3n^5}$  \_\_\_\_\_

23.  $\frac{16s^2t^4}{8s^5t^3}$  \_\_\_\_\_

24.  $\frac{21e^4f^2}{7e^2}$  \_\_\_\_\_

25. Write three different quotients that equal  $4^{-5}$ .

\_\_\_\_\_

© Pearson Education, Inc., publishing as Pearson Prentice Hall. All rights reserved.