

Name \_\_\_\_\_

# 8-5A Lesson Master

## Questions on SPUR Objectives

See pages 521–523 for objectives.

### SKILLS Objectives A, B and C

In 1–3, simplify and give the answer as a simple fraction.

1.  $6\left(\frac{3}{4}\right)^{-1}$  \_\_\_\_\_

2.  $124\left(\frac{2}{3}\right)^{-3}$  \_\_\_\_\_

3.  $8\left(\frac{5}{7}\right)^{-2}$  \_\_\_\_\_

4. *True or False.* If  $f(x) = -3x^2$ ,  $f(2) > f(4)$ . \_\_\_\_\_

In 5 and 6, an expression is given.

a. Write the expression in expanded form.

b. Simplify the expression.

5.  $(3a)^4$

a. \_\_\_\_\_

b. \_\_\_\_\_

6.  $\left(\frac{2}{5x^2}\right)^3$

a. \_\_\_\_\_

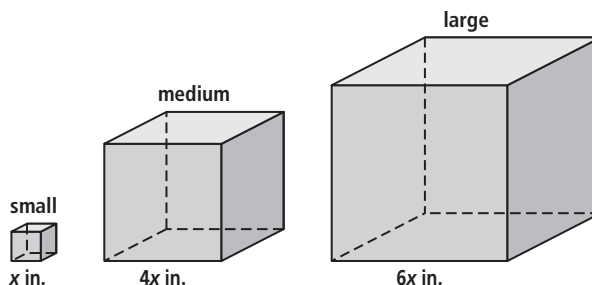
b. \_\_\_\_\_

7. The length of one side of each cube is given.  
Find the volume of each cube.

Small \_\_\_\_\_

Medium \_\_\_\_\_

Large \_\_\_\_\_



In 8–10, rewrite without parentheses.

8.  $(4m^2n^5)^3$  \_\_\_\_\_

9.  $\left(\frac{-2a^7b}{5a^2b^4}\right)^2$  \_\_\_\_\_

10.  $(7x^3)^2 \left(\frac{x^4}{2}\right)^3$  \_\_\_\_\_

### PROPERTIES Objective G

In 11–13, a. Fill in the blank to make the statement true for all values of the variables.

b. Identify the property that justifies the statement.

11.  $(5x^4y^7)^2 = 125x^{12}y^{21}$

a. \_\_\_\_\_

b. \_\_\_\_\_

12.  $\left(\frac{3a^4}{8b^7}\right)^2 = \frac{9a^8}{64b^{14}}$

a. \_\_\_\_\_

b. \_\_\_\_\_

13.  $(\underline{\hspace{1cm}})^4 = 16m^{32}n^{20}$

a. \_\_\_\_\_

b. \_\_\_\_\_