

Name \_\_\_\_\_

**5-1B Lesson Master****Questions on SPUR Objectives**

See pages 320–323 for objectives.

**SKILLS** Objective A

In 1–12, simplify.

1.  $\frac{10x^2y}{5x}$  \_\_\_\_\_

2.  $\frac{36x^3y^2}{-4xy}$  \_\_\_\_\_

3.  $\frac{26a^4b^3}{39a^2b}$  \_\_\_\_\_

4.  $\frac{-75c^3d^4}{30cd^8}$  \_\_\_\_\_

5.  $\frac{7r^6t^7}{77r^8t^{10}}$  \_\_\_\_\_

6.  $\frac{84p^8q^2}{16p^5q^7}$  \_\_\_\_\_

7.  $\frac{-102m^3n}{51m^9n^7}$  \_\_\_\_\_

8.  $\frac{27v^9w^8}{81v^6w^5}$  \_\_\_\_\_

9.  $\frac{16x^{10}y}{56x^9y^2}$  \_\_\_\_\_

10.  $\frac{-63a^5b^2}{18a^3b^6}$  \_\_\_\_\_

11.  $\frac{15c^7d^5}{150c^{10}d^4}$  \_\_\_\_\_

12.  $\frac{48f^{11}g^3}{12f^7g^5}$  \_\_\_\_\_

13. *Multiple Choice.* Which fraction is equivalent to  $\frac{16mnp^2}{64n^2p}$ ? \_\_\_\_\_

A  $\frac{2mp^2}{8n}$

B  $\frac{4mnp}{16}$

C  $\frac{m}{4np}$

D  $\frac{mp}{4n}$

Name \_\_\_\_\_

**5-1B****page 2**

The width of a family room is  $\frac{2}{3}$  as long as its length. Let  $L$  = the length of the family room.

14. Write an expression to find the area of the family room. \_\_\_\_\_

15. Simplify the expression in Question 14. \_\_\_\_\_

A box of cereal has a length of  $x$  inches. The width is  $\frac{1}{6}$  its length and its height is 3 times  $\frac{1}{2}$  its length.

16. The volume of a box is found by multiplying length  $\times$  width  $\times$  height. Write an expression to find the volume of the cereal box. \_\_\_\_\_

17. Multiply and simplify the expression in Question 16. \_\_\_\_\_

In 18–25, multiply the fractions. Simplify if possible.

18.  $\frac{3x^2}{4y} \cdot \frac{8y^2}{9x}$  \_\_\_\_\_

19.  $\frac{15a^2b}{4} \cdot \frac{-12b}{9a^3}$  \_\_\_\_\_

20.  $\frac{26c^5d}{3d^4} \cdot \frac{d^2}{13c^3}$  \_\_\_\_\_

21.  $\frac{-42f}{70g^5} \cdot \frac{5g^7f^3}{6}$  \_\_\_\_\_

22.  $\frac{18m^3n^2}{9n^6} \cdot \frac{72m^5n}{36m^4}$  \_\_\_\_\_

23.  $\frac{121r^3}{24p^4} \cdot \frac{6p^7r}{33p^3}$  \_\_\_\_\_

24.  $\frac{20v^3}{w^3} \cdot \frac{v^2}{15w^2}$  \_\_\_\_\_

25.  $\frac{54d^7f}{18d^3e^6} \cdot \frac{-48e^2}{12d^5f^4}$  \_\_\_\_\_