Name _____

5-1B Lesson Master

SKILLS Objective A

In 1–12, simplify.

1. $\dfrac{10x^2y}{5x}$ _____

2. $\dfrac{36x^3y^2}{-4xy}$ _____

3. $\dfrac{26a^4b^3}{39a^2b}$ _____

4. $\dfrac{-75c^3d^4}{30cd^8}$ _____

5. $\dfrac{7r^6t^7}{77r^8\,t^{10}}$ _____

6. $\dfrac{84p^8q^2}{16p^5q^7}$ _____

7. $\dfrac{-102m^3n}{51m^9\,n^7}$ _____

8. $\dfrac{27v^9w^8}{81v^6w^5}$ _____

9. $\dfrac{16x^{10}y}{56x^9y^2}$ _____

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

11. $\dfrac{15c^7d^5}{150c^{10}d^4}$ _____

12. $\dfrac{48f^{11}g^3}{12f^7g^5}$ _____

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

    A $\dfrac{2mp^2}{8n}$ **B** $\dfrac{4mnp}{16}$ **C** $\dfrac{m}{4np}$ **D** $\dfrac{mp}{4n}$

Name

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 × width × 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. $\dfrac{3x^2}{4y} \cdot \dfrac{8y^2}{9x}$ _____

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

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

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

22. $\dfrac{18m^3n^2}{9n^6} \cdot \dfrac{72m^5\,n}{36m^4}$ _____

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

24. $\dfrac{20v^3}{w^3} \cdot \dfrac{v^2}{15w^2}$ _____

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