

# Lesson 3 Skills Practice

## Multiply and Divide Monomials

Simplify. Express using exponents.

1.  $5^9 \cdot 5^3$   $5^{9+3}$   $5^{12}$

3.  $c \cdot c^6$

4.  $m^5 \cdot m^2$

5.  $3x \cdot 4x^4$   $3 \cdot 4 \cdot x \cdot x^4$   $12x^{1+4} = 12x^5$

7.  $-5d^6(8d^6)$

8.  $(6k^5)(-k^4)$

9.  $(-w)(-10w^3)$   $-1 \cdot -10 = 10$   $-w^1 \cdot w^3 = w^{1+3} = w^4$   $10w^4$

11.  $bc^3(b^2c)$

12.  $3a^4 \cdot 6a^2$

13.  $3m^3n^2(8mn^3)$   $24m^{3+1}n^{2+3} = 24m^4n^5$

15.  $(3ab^2)(a^2c^5)$

16.  $(9p^4)(-8p^2)$

17.  $\frac{2^9}{2^3}$   $2^{9-3} = 2^6$

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

20.  $\frac{8^7}{8}$

21.  $\frac{b^{12}}{b^5}$   $b^{12-5} = b^7$

22.  $\frac{12n^5}{4n^2}$

23.  $\frac{14m^3}{7m^2}$

24.  $\frac{9r^8}{3r^4}$

25.  $\frac{24t^9}{6t^3}$   $\frac{4t^{9-3}}{1} = 4t^6$

26.  $\frac{18y^6}{2y}$

27.  $\frac{a^4c^6}{a^2c}$

28.  $\frac{5^{10}}{5^2}$

Simplify.

29.  $\frac{4^8 \cdot 5^3 \cdot 7^6}{4^6 \cdot 5^2 \cdot 7^5}$   $4^{8-6} \cdot 5^{3-2} \cdot 7^{6-5} = 4^2 \cdot 5^1 \cdot 7^1 = 4 \cdot 4 \cdot 5 \cdot 7 = 112$

30.  $\frac{(-2)^9 \cdot (-3)^7 \cdot 4^3}{(-2)^5 \cdot (-3)^5 \cdot 4^1}$

31.  $\frac{3^{10} \cdot (-6)^5}{3^7 \cdot (-6)^2}$

32.  $\frac{9^8 \cdot 10^{12}}{9^6 \cdot 10^6}$

$3^{10-7} \cdot (-6)^{5-2}$   
 $3^3 \cdot (-6)^3$

$3 \cdot 3 \cdot 3 \cdot -6 \cdot -6 \cdot -6 =$