

# Practice 4-7

## Exponents and Multiplication

Complete each equation.

1.  $9^3 \cdot 9 \text{ --- } = 9^7$

2.  $6^8 \cdot 6 \text{ --- } = 6^{17}$

3.  $n \text{ --- } \cdot n^5 = n^{15}$

4.  $(a \text{ --- })^8 = a^{24}$

5.  $(c^4) \text{ --- } = c^{12}$

6.  $r \text{ --- } \cdot r^{12} = r^{20}$

Simplify each expression.

7.  $(z^3)^5$  \_\_\_\_\_

8.  $-(m^4)^3$  \_\_\_\_\_

9.  $(-3^2)^3$  \_\_\_\_\_

10.  $(x^3)(x^4)$  \_\_\_\_\_

11.  $y^4 \cdot y^5$  \_\_\_\_\_

12.  $(-y^5)(y^2)$  \_\_\_\_\_

13.  $(3y^2)(2y^3)$  \_\_\_\_\_

14.  $3x^{12} \cdot 2x^3$  \_\_\_\_\_

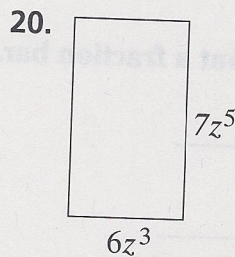
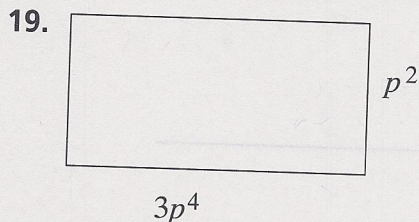
15.  $m^{30} \cdot m^{12}$  \_\_\_\_\_

16.  $(x^4)(y^2)(x^2)$  \_\_\_\_\_

17.  $(-6x^7)(-9x^{12})$  \_\_\_\_\_

18.  $(h^4)^4$  \_\_\_\_\_

Find the area of each rectangle.



Compare. Use  $>$ ,  $<$ , or  $=$  to complete each statement.

21.  $(4^3)^2$    $(4^2)^3$

22.  $5^3 \cdot 5^4$    $5^{10}$

23.  $(3^5)^4$    $3^{10}$

24.  $3^4$    $9^2$

25.  $(9^7)^9$    $(9^8)^8$

26.  $4^2 \cdot 4^3$    $4^5$

27.  $(6^2)^2$    $3^4 \cdot 2^4$

28.  $5^2 \cdot 5^6$    $5^7$

29.  $(8^2)^2$    $(8^2)^3$

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