

# Lesson 4 Homework Practice

## *Powers of Monomials*

Simplify.

1.  $(6t^5)^2$

2.  $(4w^9)^4$

3.  $(12k^6)^3$

4.  $(15m^8)^3$

5.  $(4d^3e^5)^7$

6.  $(-4r^6s^{15})^4$

7.  $[(7^2)^2]^2$

8.  $[(3^2)^2]^3$

9.  $(\frac{3}{5}a^6b^9)^2$

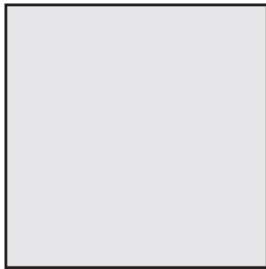
10.  $(4x^2)^3(3x^6)^4$

11.  $(0.6p^5)^3$

12.  $(\frac{1}{5}w^5x^3)^2$

**GEOMETRY** Express the area of each square below as a monomial.

13.

 $9c^6d$ 

14.

 $14g^5h^9$

**15. MEASUREMENT** In the Metric System, you would need to have  $(10^4)^2$  grams to equal 1 metric ton. Simplify this measurement by multiplying the exponents, then simplify by finding the actual number of grams needed to equal 1 metric ton.

**16. GAMING** A video-game designer is using the expression  $6n^3$  in a program to determine points earned, where  $n$  is the game level. Simplify the expression for the  $n^2$  level.