

Lesson 1.1 Extra Practice

Write the product using exponents.

- 1. $6 \cdot 6 \cdot 6 \cdot 6 \cdot 6$
- 2. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$
- 3. $4 \cdot 4 \cdot 4 \cdot 4$
- 4. $7 \cdot 7 \cdot 7$
- 5. $3 \cdot 3 \cdot 8 \cdot 8 \cdot 8$
- 6. $10 \cdot 10 \cdot 5 \cdot 5 \cdot 5 \cdot 5$
- 7. $9 \cdot 9 \cdot 9 \cdot 9 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$

Evaluate the expression.

- 8. 9^2
- 9. -5^4
- 10. 3^4
- 11. 8^3

12. Your friend evaluates the power -3^2 . Is your friend correct? Explain.

$$-3^2 = -3 \cdot 3 = -9$$

13. The five spheres in a set have different sizes. The smallest concrete sphere in the set has a volume of 5 cubic feet. The volume of each of the other spheres is 3 times the volume of the next smaller one. Write an expression involving a power that represents the volume of the largest sphere. What is the volume of the largest sphere?

Evaluate the expression.

- 14. $7 + (-2) \cdot 3^2$
- 15. $(15^2 - 5 \cdot 4^2) \div 5$
- 16. $\frac{1}{4}(2^5 - 8)$
- 17. $(4^3 \cdot 2^2 - 3^2)$

18. Copy and complete the table. Compare the values of $2^x - 2$ with the values of 2^{x-2} .

x	2	3	4	5	6
$2^x - 2$					
2^{x-2}					