

**ANSWER KEY FOR PRACTICE PROBLEMS:  
EXPONENTS**

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1. Specify the base and exponent.

a.  $3^4$             The base is 3, and the exponent is 4.

b.  $(-3)^4$             The base is -3, and the exponent is 4.

c.  $-3^4$             The base is 3, and the exponent is 4.

2. Write the following in exponential notation.

a.  $15 \times 15 \times 15 = 15^3$

b.  $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 7^5$

c.  $-9 \cdot -9 = (-9)^2$

d.  $(-10)(-10)(-10)(-10)(-10)(-10) = (-10)^6$

3. Simplify.

a.  $-4^2 = -(4)(4) = -16$

b.  $(-4)^2 = (-4)(-4) = 16$

c.  $4^2 = (4)(4) = 16$

d.  $-(4)^2 = -(4)(4) = -16$

e.  $-(-4)^2 = -(-4)(-4) = -16$