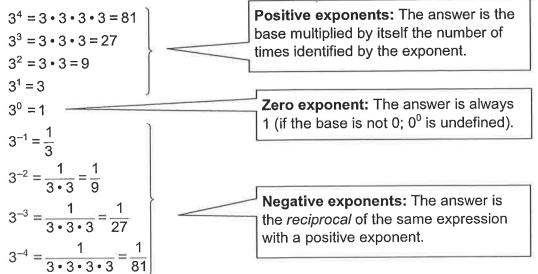
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LESSON Reading Strategies

7-1 Using Patterns

Studying the patterns that are found in expressions with exponents can help you remember the rules for evaluating expressions with integer exponents.



Note that the rules are the same when the base is a variable:

$$b^{3} = b \cdot b \cdot b$$
 $g^{0} = 1$ $k^{-5} = \frac{1}{k^{5}}$ $\frac{1}{m^{-3}} = m^{3}$

Answer each question.

- 1. What is the base of the expression 6^{-4} ?
- 2. What number can go in the box to make a true statement: $5^{\square} = 1$?
- 3. Write the expression $\frac{1}{8^3}$ with a negative exponent.
- 4. What is the *reciprocal* of b^7 ?

Simplify each expression.

5. 2 ⁵	6. 2 ⁻⁵
7. 7 ⁰	8. 10 ⁻⁶
9. (4) ³	10. (-4) ⁻³
11. t ⁻⁴	12. $c^2 d^{-3}$
13. 8 <i>x</i> ⁻⁵	14. 12 <i>r</i> ⁰

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