

LESSON
9-3

Order of Operations

Reteach

A mathematical phrase that includes only numbers and operations is called a *numerical expression*.

$9 + 8 \times 3 \div 6$ is a numerical expression.

When you evaluate a numerical expression, you find its value.

You can use the order of operations to evaluate a numerical expression.

Order of operations:

1. Do all operations within *parentheses*.
2. Find the values of numbers with *exponents*.
3. *Multiply* and *divide* in order from left to right.
4. *Add* and *subtract* in order from left to right.

Evaluate the expression.

$60 \div (7 + 3) + 3^2$

$60 \div 10 + 3^2$

Do all operations within parentheses.

$60 \div 10 + 9$

Find the values of numbers with exponents.

$6 + 9$

Multiply and divide in order from left to right.

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Add and subtract in order from left to right.

Simplify each numerical expression.

1. $7 \times (12 + 8) - 6$

2. $10 \times (12 + 34) + 3$

3. $10 + (6 \times 5) - 7$

$7 \times \underline{\hspace{2cm}} - 6$

$10 \times \underline{\hspace{2cm}} + 3$

$10 + \underline{\hspace{2cm}} - 7$

$\underline{\hspace{2cm}} - 6$

$\underline{\hspace{2cm}} + 3$

$\underline{\hspace{2cm}} - 7$

4. $2^3 + (10 - 4)$

5. $7 + 3 \times (8 + 5)$

6. $36 \div 4 + 11 \times 8$

7. $5^2 - (2 \times 8) + 9$

8. $3 \times (12 \div 4) - 2^2$

9. $(3^3 + 10) - 2$

Solve.

10. Write and evaluate your own numerical expression. Use parentheses, exponents, and at least two operations.
