

Order of Operations

A numerical expression is a group of numbers and math operations such as $3 + 4$ or $(3 + 8) \cdot 5$ (the sum of 3 plus 8 multiplied by 5). When an expression has more than one operation, you must do the operations in a specific order to evaluate, or find the answer of, the expression. The rules below show the order in which math operations must be done.

Order of Operations

1. Do operations within parentheses.
2. Do operations with powers and roots.
3. Do all multiplication and division operations from left to right.
4. Do all addition and subtraction operations from left to right.

Evaluate $(3 + 4) \cdot 7$

$$\begin{array}{l} (3 + 4) \cdot 7 \\ 7 \cdot 7 = 49 \end{array}$$

Evaluate $12 \div (10 - 4)$

$$\begin{array}{l} 12 \div (10 - 4) \\ 12 \div 6 = 2 \end{array}$$

Evaluate using the correct order of operations.

- | | | | |
|-------------------------------------|---------------------|-------------------|---------------------|
| 1. $5 \cdot 5 + 9$
$25 + 9 = 34$ | $(6 - 2) \div 4$ | $2 \cdot 7 + 6$ | $14 - 4 \div 2$ |
| 2. $18 + 2 \cdot 3$ | $(21 - 7) \cdot 7$ | $(4 + 3) \cdot 9$ | $30 \div 3 \cdot 2$ |
| 3. $16 - 9 + 4$ | $42 - 12 \div 6$ | $3 \cdot 5 - 10$ | $12 \cdot (2 - 1)$ |
| 4. $50 \div (8 + 2)$ | $5 + 6 \cdot 3$ | $12 \div 4 + 8$ | $2 + 3 \cdot 3$ |
| 5. $10 - 3 \div 3$ | $(15 - 10) \div 5$ | $5 \cdot 3 + 2$ | $20 - 7 \cdot 2$ |
| 6. $16 \div 4 - 4$ | $10 \cdot 10 - 100$ | $9 \div (2 + 1)$ | $9 + 10 \div 5$ |
| 7. $(10 - 1) \cdot 9$ | $13 - 7 + 4$ | $18 + 4 \cdot 2$ | $2 \cdot 4 \div 2$ |
| 8. $(2 + 7) \cdot 8$ | $1 + (9 - 3)$ | $8 \cdot 6 + 9$ | $12 \div 4 - 1$ |

Order of Operations

Answer Key

1.	34	1	20	12
2.	24	98	63	20
3.	11	40	5	12
4.	5	23	11	11
5.	9	1	17	6
6.	0	0	3	11
7.	81	10	26	4
8.	72	7	57	2

