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## Order of Operations

## Follow the rules of PEMDAS

1. Perform any calculations inside parentheses.
2. Calculate any exponents
3. Perform all multiplications and divisions, working from left to right.
4. Perform all additions and subtractions, working from left to right.

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| Example: | Evaluate each expression using the rules for order of operations. |
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| Solution: | |  |  |  | | --- | --- | --- | | **Order of Operations** | | | | **Expression** | **Evaluation** | **Operation** | | 6 + 7 x 8 | = 6 + **7 x 8** | Multiplication | | = 6 + 56 | Addition | | = 62 |  | | 16 **÷** 8 - 2 | = **16 ÷ 8** - 2 | Division | | = 2 - 2 | Subtraction | | = 0 |  | | (25 - 11) x 3 | = **(25 - 11)** x 3 | Parentheses | | = 14 x 3 | Multiplication | | = 42 |  | |

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| Example:  Evaluate 9 - 5 **÷** (8 - 3) x 2 + 6 | |
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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Step 1: | 9 - 5 **÷** **(8 - 3)** x 2 + 6 | = | 9 - 5 **÷** 5 x 2 + 6 | Parentheses | | Step 2: | 9 - **5 ÷ 5** x 2 + 6 | = | 9 - 1 x 2 + 6 | Division | | Step 3: | 9 - **1 x 2** + 6 | = | 9 - 2 + 6 | Multiplication | | Step 4: | **9 - 2** + 6 | = | 7 + 6 | Subtraction | | Step 5: | 7 + 6 | = | 13 | Addition | |  | |