

Order Of Operations

The order of operations is a special rule in mathematics that tells us what operation we must do first.

Steps:

1: Do operations in Parentheses and other grouping symbols first. If there are grouping symbols within other grouping symbols do the innermost one first.

2: Then Exponent

3: Then Multiplication or Division from left to right.

4: And then Addition or Subtraction from left to right

A popular Acronym to Help you Remember the order of operations

(**PEMDAS**) Please **E**xcuse **M**y **D**ear **A**unt **S**ally

(**P**arenthesis), **E**xponents, **M**ultiply and **D**ivide, **A**dd and **S**ubtract)

Example: Simplify the expression by using the order of operations.

$$(8 + 4 + 3) \div 3 - 2$$

Do the Parentheses first, then do the division, then add or subtract from left to right.

$$(15) \div 3 - 2$$

$$5 - 2 = 3$$

Answer 3

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Order Of Operations Examples

Simplify each expression by using the order of operations.

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|----|------------------------------|----|----|
| 1. | $18 \div 9 + 32$ | 1. | 11 |
| 2. | $6 \div 2 + 1 \cdot 4$ | 2. | 7 |
| 3. | $18 - 23 + 3 \cdot 4$ | 3. | 22 |
| 4. | $(8 + 4 + 3) \div 3 - 2$ | 4. | 3 |
| 5. | $(8 + 4 + 5) \div (3 - 2)$ | 5. | 17 |
| 6. | $10 \div 5 - 22 \div 2$ | 6. | 0 |
| 7. | $40 + 24 \div 8 - 3 + 1$ | 7. | 41 |
| 8. | $(40 + 24) \div 8 - (3 + 1)$ | 8. | 4 |
| 9. | $(27 + 18) \div 9 - (3 + 1)$ | 9. | 1 |

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