

Order Of Operations Worksheet

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Part 1: Building a Foundation

What does the acronym PEMDAS stand for?

Hint: Think about the order of operations in mathematics.

- Parentheses, Exponents, Multiplication, Division, Addition, Subtraction
- Parentheses, Exponents, Multiplication, Division, Subtraction, Addition
- Parentheses, Exponents, Division, Multiplication, Addition, Subtraction
- Parentheses, Exponents, Addition, Subtraction, Multiplication, Division

Which of the following operations should be performed first according to the order of operations?

Hint: Consider the hierarchy of operations.

- Multiplication
- Addition
- Parentheses
- Exponents

Explain why the order of operations is important in mathematics. Provide an example to illustrate your explanation.

Hint: Think about how different operations can lead to different results.

List the operations in the order they should be performed according to PEMDAS.

Hint: Remember the acronym PEMDAS.

1. What is the first operation?

2. What is the second operation?

3. What is the third operation?

Part 2: comprehension and Application

If you have the expression $8 + (3 \times 2)^2$, what is the first step you should take to solve it?

Hint: Look for operations inside parentheses.

- Add 8 and 3
- Multiply 3 and 2
- Square the result of 3×2
- Solve the expression inside the parentheses

Which of the following expressions are equivalent to $3 + 6 \times (5 + 4) \div 3 - 7$?

Hint: Consider the order of operations when simplifying.

- $3 + 6 \times 9 \div 3 - 7$
- $3 + 54 \div 3 - 7$
- $3 + 18 - 7$
- 14

Create a real-world scenario where applying the order of operations is necessary to solve a problem. Explain the steps involved.

Hint: Think about everyday situations that require calculations.

Solve the expression: $4 \times (6 + 2) - 3^2$.

Hint: Follow the order of operations carefully.

- 19
- 25
- 31
- 37

Part 3: Analysis, Evaluation, and Creation

Analyze the expression $7 + 4 \times 3 - 2^2$ and determine the correct result.

Hint: Remember to follow the order of operations.

- 17
- 19
- 21
- 23

Which of the following steps are necessary to correctly solve the expression $10 - (2 + 3) \times 4 \div 2$?

Hint: Think about the order of operations and the steps involved.

- Solve inside the parentheses first
- Multiply before dividing
- Subtract after multiplying and dividing
- Divide before multiplying

Evaluate the correctness of the following solution: $6 + 2 \times (3 + 5) - 4 = 18$. Explain your reasoning.

Hint: Check each step of the calculation.

Design your own mathematical expression that uses all operations (addition, subtraction, multiplication, division, exponents, and parentheses). Solve it and explain each step according to the order of operations.

Hint: Think creatively about how to combine different operations.