

**Student Name:** \_\_\_\_\_

**Class:** \_\_\_\_\_

**Due Date:** \_\_\_\_\_

### Introduction

This homework assignment is designed to reinforce the concept of order of operations and its importance in solving mathematical expressions. By the end of this assignment, students will be able to understand and apply the order of operations (PEMDAS/BODMAS) to simplify expressions and solve problems.

## Section 1: Understanding Order of Operations

### What is PEMDAS/BODMAS?

Write a short paragraph explaining the meaning of PEMDAS/BODMAS and its importance in mathematics.

### Simplifying Expressions

1.  $2 + 3 \times 4 =$  \_\_\_\_\_

2.  $10 - 2 + 5 =$  \_\_\_\_\_

3.  $7 - 3 + 2 \times 2 =$  \_\_\_\_\_

### Multi-Step Problems

1.  $18 \div 3 + 2 \times 2 =$  \_\_\_\_\_

2.  $12 - 2 + 8 \div 2 =$  \_\_\_\_\_

3.  $9 + 3 \times 2 - 1 =$  \_\_\_\_\_

## Section 2: Real-World Applications

### Shopping

Tom has \$25 to spend on video games. He buys a game for \$15 and a controller for \$8. How much money does he have left?

### Cooking

A recipe calls for 2 cups of flour,  $\frac{1}{2}$  cup of sugar, and  $\frac{1}{4}$  cup of salt. If you want to make half the recipe, how much of each ingredient will you need?

- Flour: \_\_\_\_\_
- Sugar: \_\_\_\_\_
- Salt: \_\_\_\_\_

### Travel

A car travels 250 miles in 5 hours. If it travels at the same rate, how many miles will it travel in 8 hours?

### Section 3: Critical Thinking

#### Error Analysis

Identify the mistake in the following expression:  $12 + 2 \times 3 = 14$

#### Pattern Recognition

Identify the pattern in the following expressions:  $2 + 3$ ,  $4 + 5$ ,  $6 + 7$

#### Problem-Solving

A bookshelf has 5 shelves, and each shelf can hold 8 books. If the bookshelf is currently empty, how many books can be placed on it in total?

### Create Your Own Problems

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

### Real-World Project

Research and create a project that applies the order of operations to a real-world scenario, such as calculating the cost of materials for a building project or determining the distance traveled by a vehicle.

## Self-Assessment Opportunities

Throughout the assignment, take time to reflect on your understanding of the order of operations. Ask yourself:

- Do I understand the concept of PEMDAS/BODMAS?
- Can I apply the order of operations to simplify expressions and solve problems?
- Can I identify and explain the mistakes in the error analysis exercise?
- Can I create my own problems and apply the order of operations to real-world scenarios?

## Success Criteria

To successfully complete this assignment, you must:

- Demonstrate a clear understanding of the order of operations (PEMDAS/BODMAS)
- Accurately simplify expressions and solve problems using the order of operations
- Apply the order of operations to real-world scenarios
- Complete all sections of the assignment to the best of your ability

## Time Management Guidelines

To complete this assignment within the estimated time frame, please allocate your time as follows:

- Section 1: 10-12 minutes
- Section 2: 10-12 minutes
- Section 3: 5-7 minutes
- Extension activities: 5-10 minutes (optional)



## Parent/Guardian Notes

To support your child's learning, please:

- Encourage them to read the instructions carefully and ask questions if they need help
- Provide a quiet and comfortable workspace for them to complete the assignment
- Encourage them to check their work carefully before submitting the assignment
- Offer support and guidance as needed, but avoid giving them the answers

## Conclusion

Congratulations on completing this homework assignment! Remember to review your work carefully and ask for help if you need it. Good luck!