

## Worksheet: Operations on Decimals (Addition and Subtraction) : Difficulty Level : Advance

**Instructions:** Solve each problem below. Show your work for full credit.

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### Part 1: Addition and Subtraction

1. **Add the following decimals:**

- (a)  $123.456 + 78.901 =$  \_\_\_\_\_
- (b)  $45.789 + 89.123 =$  \_\_\_\_\_
- (c)  $234.567 + 0.123 + 56.789 =$  \_\_\_\_\_
- (d)  $98.765 + 12.345 =$  \_\_\_\_\_

2. **Subtract the following decimals:**

- (a)  $567.890 - 234.567 =$  \_\_\_\_\_
  - (b)  $150.5 - 78.901 =$  \_\_\_\_\_
  - (c)  $67.890 - 23.456 =$  \_\_\_\_\_
  - (d)  $80.123 - 45.789 =$  \_\_\_\_\_
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### Part 2: Multiplication

3. **Multiply the following decimals:**

- (a)  $9.876 \times 5.4 =$  \_\_\_\_\_
- (b)  $12.345 \times 0.6 =$  \_\_\_\_\_
- (c)  $4.321 \times 7.89 =$  \_\_\_\_\_
- (d)  $8.765 \times 3.2 =$  \_\_\_\_\_

4. **Word Problem:**

A pack of markers weighs 0.156 kg. If there are 18 such packs, what is the total weight?

Answer: \_\_\_\_\_

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### Part 3: Division

5. **Divide the following decimals:**

- (a)  $456.789 \div 5.1 =$  \_\_\_\_\_

- (b)  $100.234 \div 4.5 =$  \_\_\_\_\_
- (c)  $89.765 \div 0.75 =$  \_\_\_\_\_
- (d)  $3.456 \div 1.2 =$  \_\_\_\_\_

**6. Word Problem:**

A 15.678-liter can of paint is split into 4 equal containers. How much paint is in each container?

Answer: \_\_\_\_\_

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### Part 4: Mixed Operations

**7. Solve the following mixed operations:**

- (a)  $(15.678 + 3.456) \times 5.5 =$  \_\_\_\_\_
- (b)  $56.789 - (12.345 + 5.678) =$  \_\_\_\_\_
- (c)  $(78.901 \times 1.5) \div 4.2 =$  \_\_\_\_\_
- (d)  $23.456 \div (3.2 + 0.4) =$  \_\_\_\_\_

**8. Word Problem:**

A juice factory fills 0.875 liters of juice per bottle. How much juice will they need to fill 250 bottles?

Answer: \_\_\_\_\_

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### Part 5: Challenge Problems

**9. Advanced Word Problem:**

A piece of ribbon is 7.654 meters long. It is cut into 0.987-meter segments. How many full segments are there, and how much ribbon is left?

Answer: \_\_\_\_\_

**10. Complex Calculation:**

$(35.789 \times 3.5) - (9.876 \div 2.2) + 22.345 =$  \_\_\_\_\_

**11. Challenge Question:**

Divide 500.123 by 2.345 and add 34.567 to the result.

Answer: \_\_\_\_\_

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### Part 6: Real-World Application

**12. Word Problem:**

A bakery uses 0.567 kg of sugar for each batch of cookies. How much sugar is needed

for 42.5 batches?

Answer: \_\_\_\_\_

**13. Practical Problem:**

A piece of fabric is 35.678 meters long. If sections of 3.789 meters are cut from it, how many full sections can be cut and what is the remaining length?

Answer: \_\_\_\_\_

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### Part 7: Bonus Challenge

**14. Bonus Problem:**

A farmer has 0.234 hectares of land per plot. How much total land is covered if he has 150.5 plots?

Answer: \_\_\_\_\_

**15. Challenge Puzzle:**

Multiply 67.890 by 3.456 and then divide the product by 4.321.

Answer: \_\_\_\_\_

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This worksheet will help reinforce students' skills in solving advanced decimal operations and applying them to real-life situations.

**—BE CHAMPION—**