One Step Equations Worksheet

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Part 1: Building a Foundation

What is a one step equation?

Hint: Think about the number of operations needed to solve it.

- ◯ A) An equation that requires multiple operations to solve
- ◯ B) An equation that can be solved in a single operation
- ◯ C) An equation with no variables
- ◯ D) An equation that cannot be solved

Which of the following operations can be used to solve one step equations?

Hint: Consider the basic arithmetic operations.

- ☐ A) Addition
- ☐ B) Subtraction
- ☐ C) Multiplication
- ☐ D) Division

Explain why it is important to perform the same operation on both sides of an equation.

Hint: Think about maintaining balance in the equation.

List the inverse operations for the following:

Hint: Think about how to reverse each operation.

1. Addition

2. Subtraction

3. Multiplication

4. Division

Part 2: comprehension and Application

If x + 7 = 10, what operation would you use to solve for x?

Hint: Think about how to isolate x.

- ◯ A) Addition
- ◯ B) Subtraction
- ◯ C) Multiplication
- ◯ D) Division

Which of the following equations can be solved by division?

Hint: Look for equations that involve multiplication.

- ☐ A) 3x = 12
- ☐ B) x - 5 = 10
- ☐ C) x + 8 = 15
- ☐ D) x/4 = 2

Create a real-world scenario where solving a one step equation would be necessary. Explain the situation and the equation used.

Hint: Think about everyday situations that involve solving for an unknown.

Solve the equation x - 9 = 4. What is the value of x?

Hint: Think about what you need to add to 9 to get 4.

- ◯ A) 5
- ◯ B) 13
- ◯ C) -5
- ◯ D) 9

Part 3: Analysis, Evaluation, and Creation

Which property of equality is used when solving the equation x + 5 = 12 by subtractING 5 from both sides?

Hint: Consider the rules that govern equality.

- ◯ A) ReflexIVE Property
- ◯ B) Symmetric Property
- ◯ C) Transitive Property
- ◯ D) Subtraction Property of Equality

Analyze the following equations and identify which ones are incorrectly solved:

Hint: Look for mistakes in the solutions provided.

- ☐ A) x + 4 = 9 → x = 5
- ☐ B) 2x = 8 → x = 4
- ☐ C) x - 3 = 2 → x = 1
- ☐ D) x/5 = 3 → x = 15

Explain how you would solve the equation 5x = 20 and why the method works.

Hint: Think about isolating x and the operations involved.

Evaluate the solution of the equation x + 6 = 14. What is the correct value of x?

Hint: Think about what you need to subtract from 14.

- ◯ A) 8
- ◯ B) 20
- ◯ C) 14
- ◯ D) 6

Which of the following solutions are correct for the given equations?

Hint: Evaluate each solution carefully.

- ☐ A) x - 4 = 10 → x = 14
- ☐ B) 3x = 9 → x = 3
- ☐ C) x + 7 = 15 → x = 8
- ☐ D) x/2 = 4 → x = 8

Design a one step equation problem that involves a real-life context, such as budgeting or cooking. Describe the problem and provide the solution.

Hint: Think about everyday situations that involve solving for an unknown.