

Solving One Step Equations Worksheet

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Part 1: Building a Foundation

Which operation would you use to solve the equation $(x + 7 = 12)$?

Hint: Think about how to isolate (x) .

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

Which of the following are properties of equality? (Select all that apply)

Hint: Consider the operations that maintain equality.

- A) Addition Property
- B) Subtraction Property
- C) Multiplication Property
- D) Exponential Property

Explain in your own words what a one-step equation is and why it is called "one-step."

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

List the inverse operations for the following:

Hint: Think about what operation undoes another.

1. Addition

2. Multiplication

Part 2: Comprehension and Application

If you have the equation $(x - 5 = 10)$, what is the first step to solve for (x) ?

Hint: Consider how to isolate (x) .

- A) Add 5 to both sides
- B) Subtract 5 from both sides
- C) Multiply both sides by 5
- D) Divide both sides by 5

Which of the following equations can be solved using division? (Select all that apply)

Hint: Look for equations where (x) is multiplied by a number.

- A) $(3x = 9)$
- B) $(x + 4 = 8)$
- C) $(\frac{x}{2} = 6)$
- D) $(x - 7 = 3)$

Solve the equation $(\frac{x}{4} = 7)$ and explain each step you took to find the solution.

Hint: Think about how to isolate (x) .

Solve the equation $5x = 25$. What is the value of x ?

Hint: Think about how to isolate x .

- A) 1
- B) 5
- C) 10
- D) 25

Part 3: Analysis, Evaluation, and Creation

If you solve the equation $x - 9 = 4$ and get $x = 13$, what property of equality did you use?

Hint: Consider what operation you performed to isolate x .

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

Evaluate the solutions for the following equations. Which solutions are correct? (Select all that apply)

Hint: Check each solution by substituting back into the original equation.

- A) $x + 5 = 10$, solution: $x = 5$
- B) $3x = 9$, solution: $x = 3$
- C) $x - 4 = 6$, solution: $x = 10$
- D) $\frac{x}{2} = 8$, solution: $x = 16$

Create your own one-step equation and provide a detailed explanation of how to solve it. Include the solution and verify its correctness.

Hint: Think about a simple equation you can create.

Compare and contrast solving the equations $x + 6 = 10$ and $x - 6 = 10$. How do the steps differ?

Hint: Think about the operations needed for each equation.