

Solving One Step Equations Worksheet Answer Key PDF

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Part 1: Building a Foundation

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

undefined. A) Addition

undefined. B) Subtraction ✓

undefined. C) Multiplication

undefined. D) Division

You would use subtraction to isolate (x) .

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

undefined. A) Addition Property ✓

undefined. B) Subtraction Property ✓

undefined. C) Multiplication Property ✓

undefined. D) Exponential Property

The Addition Property and Subtraction Property are correct.

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

A one-step equation is an equation that can be solved in one operation, hence the name.

List the inverse operations for the following:

1. Addition

Subtraction

2. Multiplication

Division

The inverse of addition is subtraction, and the inverse of multiplication is division.

Part 2: Comprehension and Application

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

The first step is to add 5 to both sides.

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

A) $3x = 9$ ✓

B) $x + 4 = 8$

C) $\frac{x}{2} = 6$ ✓

D) $x - 7 = 3$

The equations $3x = 9$ and $\frac{x}{2} = 6$ can be solved using division.

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

To solve, multiply both sides by 4 to get $x = 28$.

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

A) 1

B) 5 ✓

C) 10

D) 25

The value of x is 5.

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?

undefined. A) Addition Property ✓

undefined. B) Subtraction Property

undefined. C) Multiplication Property

undefined. D) Division Property

You used the Addition Property of Equality.

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

undefined. A) $x + 5 = 10$, solution: $x = 5$ ✓

undefined. B) $3x = 9$, solution: $x = 3$ ✓

undefined. C) $x - 4 = 6$, solution: $x = 10$

undefined. D) $\frac{x}{2} = 8$, solution: $x = 16$ ✓

The correct solutions are A, B, and D.

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

Create an equation like $x + 3 = 7$ and explain the steps to solve it.

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

The first equation requires subtraction, while the second requires addition.