2 Step Equations Worksheets Answer Key PDF

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Part 1: Building a Foundation

What is the first step in solving the equation 3x + 4 = 10?

undefined. Add 4 to both sides
undefined. Subtract 4 from both sides ✓
undefined. Multiply both sides by 3
undefined. Divide both sides by 3

The first step is to subtract 4 from both sides.

Which of the following are examples of 2 step equations? (Select all that apply)

undefined. 2x + 5 = 11 ✓
undefined. x/3 - 7 = 2 ✓
undefined. 4x = 16
undefined. x + 3 = 5

The correct examples are those that require two steps to isolate the variable.

Explain why it is important to perform operations in the correct order when solving 2 step equations.

Perform operations in the correct order ensures that the solution is accurate and valid.

List the two main operations typically involved in solving a 2 step equation.

1. First operation
Addition or Subtraction

2. Second operation
Multiplication or Division

The two main operations are addition/subtraction and multiplication/division.

Part 2: Understanding and Interpretation

In the equation 5x - 9 = 16, what is the result after performing the first step?

undefined. 5x = 25 ✓
undefined. 5x = 7
undefined. x = 5
undefined. x = 1.4

After the first step, you would have 5x = 25.

Which steps are necessary to solve the equation x/4 + 3 = 7? (Select all that apply)

undefined. Multiply both sides by 4 ✓
undefined. Subtract 3 from both sides ✓
undefined. Add 3 to both sides
undefined. Divide both sides by 4

You need to subtract 3 and then multiply by 4 to isolate x.

Describe how you would check if your solution to the equation 2x + 6 = 14 is correct.

You would substitute your solution back into the equation to see if both sides are equal.

Part 3: Application and Analysis

Solve the equation 7x - 5 = 30. What is the value of x?

undefined. 5 ✓
undefined. 7
undefined. 10
undefined. 15

The value of x is 5.

You have the equation 3(x - 2) = 12. Which of the following steps are correct to solve for x? (Select all that apply)

undefined. Divide both sides by 3 ✓

undefined. Add 2 to both sides

undefined. Subtract 2 from both sides ✓

undefined. Multiply both sides by 3

You need to divide by 3 and then add 2 to isolate x.

Create a real-world scenario where solving a 2 step equation would be necessary, and demonstrate how you would solve it.

A scenario could involve budgeting or distance problems that require two steps to solve.

Part 4: Evaluation and Creation

If you have the equation 4x + 2 = 18, what operation would you perform after subtractinging 2 from both sides?

undefined. Multiply by 4

undefined. Divide by 4 ✓

undefined. Add 4

undefined. Subtract 4

You would divide by 4 after subtractinging 2 from both sides.

Analyze the equation 5x - 3 = 2x + 9 and explain the steps needed to isolate x on one side of the equation.

You would need to move all terms involving x to one side and constants to the other.

Which of the following equations has a solution that is a negative number?

undefined. 2x + 5 = 9

undefined. 3x - 4 = 2

undefined. x/2 + 3 = 1 ✓

undefined. 4x + 1 = 17

The equation x/2 + 3 = 1 has a negative solution.

Evaluate the following solutions to determine which are correct for the equation 6x + 4 = 22. (Select all that apply)

undefined. x = 3 ✓

undefined. x = 4

undefined. x = 2 ✓

undefined. x = 5

The correct solutions are those that satisfy the equation when substituted.

Design your own 2 step equation that could represent a real-world problem, and explain how you would solve it, including checking your solution.

A real-world problem could involve budgeting or distance, and you would solve it step by step.