

Two Step Equations Worksheet

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Part 1: Building a Foundation

What is the first step in solving the two-step equation $2x + 5 = 15$?

Hint: Think about how to isolate the variable.

- Add 5 to both sides
- Subtract 5 from both sides
- Multiply both sides by 2
- Divide both sides by 2

Which of the following are characteristics of a two-step equation?

Hint: Consider the operations involved in solving.

- Involves only one operation
- Requires two operations to solve
- Can be written in the form $ax + b = c$
- Always results in a fraction

Explain why it is important to perform the same operation on both sides of a two-step equation.

Hint: Think about maintaining equality.

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

Hint: Think about the common operations used.

1. First operation

2. Second operation

Part 2: Understanding and Interpretation

In the equation $4x - 7 = 9$, what is the purpose of adding 7 to both sides?

Hint: Consider what you want to achieve with the variable.

- To eliminate the variable
- To isolate the variable term
- To simplify the equation
- To check the solution

Which of the following steps are necessary to solve the equation $3x + 6 = 12$?

Hint: Think about the operations needed to isolate x .

- Subtract 6 from both sides
- Divide both sides by 3
- Multiply both sides by 3
- Add 6 to both sides

Describe how solving a two-step equation is similar to solving a real-world problem.

Hint: Think about the process of finding a solution.

Part 3: Application and Analysis

Solve the equation $5x + 3 = 23$. What is the value of x ?

Hint: Isolate x by performing the necessary operations.

- 3
- 4
- 5
- 6

Which of the following equations can be solved using the two-step method?

Hint: Identify equations that require two operations.

- $2x + 4 = 10$
- $x/3 - 2 = 5$
- $7x = 21$
- $x + 3 = 6$

Create a real-world scenario that can be modeled by the equation $2x + 5 = 15$. Explain how you would solve it.

Hint: Think about a situation involving quantities.

Part 4: Evaluation and Creation

If the equation $6x - 4 = 14$ is solved incorrectly as $x = 3$, what mistake might have been made?

Hint: Consider the operations that could lead to an incorrect solution.

- Incorrect addition
- Incorrect subtraction

- Incorrect division
- Incorrect multiplication

Analyze the equation $4x + 8 = 20$. Which steps are part of the correct solution process?

Hint: Identify the operations needed to isolate x .

- Subtract 8 from both sides
- Divide both sides by 4
- Add 8 to both sides
- Multiply both sides by 4

Which of the following statements best evaluates the solution process for the equation $3x + 9 = 18$?

Hint: Consider the correctness of the operations used.

- The solution process is incorrect because the wrong operations were used.
- The solution process is correct because the operations maintain equality.
- The solution process is incorrect because it results in a negative value.
- The solution process is correct because it simplifies the equation.

Design a two-step equation that represents the following scenario: "A person has \$50 and spends \$3 on each book they buy. How many books can they buy if they want to have \$20 left?"

Hint: Think about how to set up the equation based on the scenario.

- $3x + 20 = 50$
- $3x - 50 = 20$
- $50 - 3x = 20$
- $20 + 3x = 50$

Create a complex real-world problem that can be solved using a two-step equation. Provide the equation and explain the solution process.

Hint: Think about a scenario that involves multiple steps.

