

## Two-Step Equations Worksheets

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### Part 1: Building a Foundation

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**What is the first step in solving a two-step equation of the form  $( ax + b = c )$ ?**

*Hint: Think about how to isolate the variable.*

- A) Divide both sides by  $( a )$
- A) Add  $( b )$  to both sides
- C) Subtract  $( b )$  from both sides
- D) Multiply both sides by  $( a )$

**What is the first step in solving a two-step equation of the form  $( ax + b = c )$ ?**

*Hint: Identify the operation that needs to be reversed first.*

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**Which of the following are examples of two-step equations?**

*Hint: Look for equations that involve two operations to isolate the variable.*

- A)  $( 2x + 3 = 7 )$
- A)  $( x^2 + 4 = 20 )$
- C)  $( 5x - 9 = 16 )$

D)  $\left( \frac{x}{2} + 1 = 5 \right)$

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**List the two operations typically used to solve a two-step equation and provide a brief description of each.**

*Hint: Think about the order of operations.*

1. Operation 1

2. Operation 2

## Part 2: Understanding and Interpretation

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**What is the purpose of isolating the variable in a two-step equation?**

*Hint: Consider what you need to find.*

- A) To simplify the equation
- A) To find the value of the variable
- C) To eliminate constants
- D) To check the solution

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 C) To eliminate constants  
 D) To check the solution

**Which of the following statements are true about solving two-step equations?**

*Hint: Think about the process of solving equations.*

- A) You always start by dividing both sides by the coefficient of the variable.  
 A) You can check your solution by substituting it back into the original equation.  
 C) The order of operations is not important when solving two-step equations.  
 D) Solving two-step equations involves reversing the operations applied to the variable.

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**Describe a real-world scenario where solving a two-step equation would be necessary.**

*Hint: Think about situations involving budgeting or measurements.*

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### Part 3: Application and Analysis

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**Solve the equation  $4x + 5 = 21$ . What is the value of  $x$ ?**

*Hint: Isolate  $x$  by performing inverse operations.*

- A) 3
- A) 4
- C) 5
- D) 6

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**You have a budget of \$50 to buy notebooks and pens. Notebooks cost \$4 each, and pens cost \$2 each. If you buy 5 notebooks, how many pens can you buy?**

*Hint: Calculate the total cost of notebooks first.*

- A) 5 pens
- A) 10 pens
- C) 15 pens
- D) 20 pens

**You have a budget of \$50 to buy notebooks and pens. Notebooks cost \$4 each, and pens cost \$2 each. If you buy 5 notebooks, how many pens can you buy?**

*Hint: Calculate the remaining budget after buying notebooks.*

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D) 20 pens

**Create a two-step equation to represent the following situation: You have \$100. You spend \$20 on a book and want to save the rest to buy \$10 movie tickets. How many tickets can you buy?**

*Hint: Think about how to express the situation mathematically.*

**Create a two-step equation to represent the following situation: You have \$100. You spend \$20 on a book and want to save the rest to buy \$10 movie tickets. How many tickets can you buy?**

*Hint: Set up the equation based on your spending and saving.*

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**Which operation would you perform first to solve the equation  $(3x - 4 = 11)$ ?**

*Hint: Consider the order of operations.*

A) Add 4 to both sides

- A) Subtract 4 from both sides
- C) Divide both sides by 3
- D) Multiply both sides by 3

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## Part 4: Evaluation and Creation

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**If the solution to the equation  $(6x - 9 = 15)$  is  $(x = 4)$ , evaluate the correctness of this solution.**

*Hint: Substitute  $(x)$  back into the original equation.*

- A) Correct
- A) Incorrect
- A) N/A
- A) Maybe

**After solving the equation  $(7x + 2 = 30)$ , you find  $(x = 4)$ . Which of the following could be reasons for an incorrect solution?**

*Hint: Consider common mistakes made during calculations.*

- A) Incorrect subtraction of 2 from both sides
- A) Incorrect division by 7
- C) Incorrect addition of 2 to both sides
- D) Incorrect multiplication by 7

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**Create a real-world problem that can be solved using a two-step equation. Provide the equation and solve it.**

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