

# One Step Equations Worksheet Answer Key PDF

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## Part 1: Building a Foundation

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### What is a one step equation?

- undefined. A) An equation that requires multiple operations to solve  
**undefined. B) An equation that can be solved in a single operation ✓**  
undefined. C) An equation with no variables  
undefined. D) An equation that cannot be solved

A one step equation can be solved in a single operation.

### Which of the following operations can be used to solve one step equations?

- undefined. A) Addition ✓**  
**undefined. B) Subtraction ✓**  
**undefined. C) Multiplication ✓**  
**undefined. D) Division ✓**

Addition, subtraction, multiplication, and division can all be used.

**Explain why it is important to perform the same operation on both sides of an equation.**

**Perform the same operation on both sides to keep the equation balanced.**

**List the inverse operations for the following:**

1. Addition  
**Subtraction**
2. Subtraction  
**Addition**

3. Multiplication

**Division**

4. Division

**Multiplication**

The inverse operations are: Addition - Subtraction, Subtraction - Addition, Multiplication - Division, Division - Multiplication.

## Part 2: comprehension and Application

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**If  $x + 7 = 10$ , what operation would you use to solve for  $x$ ?**

undefined. A) Addition

**undefined. B) Subtraction ✓**

undefined. C) Multiplication

undefined. D) Division

You would use subtraction to isolate  $x$ .

**Which of the following equations can be solved by division?**

**undefined. A)  $3x = 12$  ✓**

undefined. B)  $x - 5 = 10$

undefined. C)  $x + 8 = 15$

**undefined. D)  $x/4 = 2$  ✓**

The equation  $3x = 12$  and  $x/4 = 2$  can be solved by division.

**Create a real-world scenario where solving a one step equation would be necessary. Explain the situation and the equation used.**

**A scenario could involve budgeting, where you need to find out how much money you have left after spending.**

**Solve the equation  $x - 9 = 4$ . What is the value of  $x$ ?**

undefined. A) 5

**undefined. B) 13 ✓**

undefined. C) -5

undefined. D) 9

The value of  $x$  is 13.

### Part 3: Analysis, Evaluation, and Creation

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**Which property of equality is used when solving the equation  $x + 5 = 12$  by subtractING 5 from both sides?**

undefined. A) ReflexIVE Property

undefined. B) Symmetric Property

undefined. C) Transitive Property

**undefined. D) Subtraction Property of Equality ✓**

The Subtraction Property of Equality is used.

**Analyze the following equations and identify which ones are incorrectly solved:**

**undefined. A)  $x + 4 = 9 \rightarrow x = 5$  ✓**

undefined. B)  $2x = 8 \rightarrow x = 4$

**undefined. C)  $x - 3 = 2 \rightarrow x = 1$  ✓**

undefined. D)  $x/5 = 3 \rightarrow x = 15$

The incorrectly solved equations are C) and A).

**Explain how you would solve the equation  $5x = 20$  and why the method works.**

**You would divide both sides by 5 to isolate  $x$ , which works because of the properties of equality.**

**Evaluate the solution of the equation  $x + 6 = 14$ . What is the correct value of  $x$ ?**

**undefined. A) 8 ✓**

undefined. B) 20

undefined. C) 14

undefined. D) 6

The correct value of  $x$  is 8.

**Which of the following solutions are correct for the given equations?**

**undefined. A)  $x - 4 = 10 \rightarrow x = 14$  ✓**

**undefined. B)  $3x = 9 \rightarrow x = 3$  ✓**

undefined. C)  $x + 7 = 15 \rightarrow x = 8$

**undefined. D)  $x/2 = 4 \rightarrow x = 8$  ✓**

The correct solutions are A), B), and D).

**Design a one step equation problem that involves a real-life context, such as budgeting or cooking. Describe the problem and provide the solution.**

**A problem could involve calculating how much money is left after spending a certain amount.**