

-12x=-10 Can Give Brainly

-12x=-10 Can Give Brainly

When encountering the algebraic equation $-12x = -10$, many students and learners might wonder how to approach solving it and what insights they can gain from such a problem. Platforms like Brainly serve as valuable resources for understanding these types of equations, providing step-by-step solutions, explanations, and peer assistance. In this article, we will explore the process of solving the equation $-12x = -10$, delve into related algebra concepts, and discuss how Brainly can aid in mastering such problems.

Understanding the Equation $-12x = -10$

Before jumping into solving the equation, it's essential to understand what it represents and the key components involved.

Breaking Down the Equation

- The equation is linear in one variable, x .
- The coefficient of x is -12 .
- The constant term on the right side is -10 .

This equation asks: "What value of x , when multiplied by -12 , results in -10 ?"

Why is Solving Such Equations Important?

- Fundamental in algebra and higher-level mathematics.
- Forms the basis for understanding functions, equations, and problem-solving.
- Applies in real-world scenarios like physics, economics, and engineering.

Step-by-Step Solution of $-12x = -10$

The goal is to isolate x to determine its value.

Step 1: Write down the original equation

$$-12x = -10$$

Step 2: Divide both sides of the equation by the coefficient of x

Since the coefficient is -12, divide both sides by -12:

$$x = (-10) \div (-12)$$

Step 3: Simplify the division

$$-10 \div -12 = 10/12$$

- Simplify the fraction:

$$10/12 = 5/6$$

Step 4: Write the solution

$$x = 5/6$$

Interpreting the Solution

The solution $x = 5/6$ indicates that when x is $5/6$, the original equation holds true.

Verification

To verify, substitute x back into the original equation:

$$-12 (5/6) = ?$$

Calculate:

$$-12 (5/6) = (-12) (5/6) = (-12/1) (5/6) = (-12 \cdot 5) / (1 \cdot 6) = (-60) / 6 = -10$$

Since the result matches the right side of the original equation, the solution $x = 5/6$ is correct.

Common Mistakes and How to Avoid Them

When solving equations like $-12x = -10$, students often make errors. Here are common mistakes and tips to avoid them.

Mistake 1: Forgetting to divide both sides by the coefficient

- Always perform the same operation on both sides to maintain equality.

Mistake 2: Incorrect division or simplifying fractions

- Use careful fraction simplification techniques.
- Double-check calculations, especially signs and numerical values.

Mistake 3: Ignoring negative signs

- Pay attention to the signs of numbers throughout the steps.
- Remember that dividing or multiplying both sides by a negative number reverses inequalities (not an issue here, but good to remember).

Related Algebra Concepts

Understanding equations like $-12x = -10$ provides a foundation to explore broader algebra topics.

Linear Equations in One Variable

- Equations where the highest power of the variable is 1.
- Solving involves isolating the variable using inverse operations.

Solving Multi-Step Equations

- Involves combining like terms, distributing, and then isolating variables.
- Example: $3(x + 2) = 12$

Working with Fractions and Negative Numbers

- Equations often include fractional coefficients or constants.
- Mastery of fraction operations is crucial.

How Brainly Can Help You Master Equations Like $-12x = -10$

Platforms like Brainly are excellent resources for learners seeking help with algebra problems.

Features of Brainly for Algebra Support

- Step-by-step solutions: Understand each step to learn the process.
- Peer explanations: Different perspectives can clarify confusing concepts.
- Ask questions: Get personalized help for specific problems.
- Community engagement: Discuss with fellow students to enhance understanding.

Benefits of Using Brainly

- Reinforces learning through active problem-solving.
- Provides immediate feedback.
- Encourages collaborative learning.
- Offers explanations tailored to various learning styles.

Practical Tips for Solving Equations Like $-12x = -10$

Here are some strategies to improve your algebra skills:

1. Practice regularly: Consistent practice helps internalize techniques.
2. Understand the concept: Focus on why each step is performed, not just how.
3. Use visual aids: Graphs and number lines can help visualize solutions.
4. Check your work: Always verify solutions by substitution.
5. Utilize online resources: Websites like Brainly, Khan Academy, and YouTube tutorials provide additional explanations.

Additional Practice Problems

To strengthen your understanding, try solving similar equations:

1. $4x = 20$
2. $-3x = 9$
3. $(1/2)x = 3$
4. $-7x = -14$
5. $5x + 10 = 0$

Solutions:

1. $x = 20 \div 4 = 5$
2. $x = 9 \div -3 = -3$
3. $x = 3 \div (1/2) = 3 \cdot 2 = 6$
4. $x = -14 \div -7 = 2$
5. $5x = -10 \rightarrow x = -10 \div 5 = -2$

The Importance of Understanding Algebra for Academic Success

Algebra forms the backbone of many higher mathematics topics, including calculus, statistics, and engineering. Mastering equations like $-12x = -10$ enhances logical thinking and problem-solving skills, which are valuable beyond academics.

Real-world Applications of Algebra

- Budgeting and financial planning
- Engineering designs
- Scientific research
- Data analysis

Building a Strong Foundation

- Practice solving varied equations
- Seek help when concepts are unclear
- Use online platforms like Brainly for explanations and support

Conclusion

The equation $-12x = -10$ is a straightforward linear algebra problem that demonstrates key principles of solving equations. By dividing both sides by -12 , we find that $x = 5/6$, confirming the solution through substitution. Platforms like Brainly are invaluable tools that can provide step-by-step guidance, peer explanations, and additional practice opportunities to deepen understanding. Developing proficiency in solving such equations not only boosts academic performance but also enhances critical thinking skills applicable in real-life situations. Keep practicing, seek help when needed, and remember that mastering algebra opens the door to a wide array of mathematical and practical skills.

Frequently Asked Questions

How do I solve the equation $-12x = -10$?

To solve $-12x = -10$, divide both sides by -12 : $x = (-10) / (-12) = 10 / 12$, which simplifies to $x = 5 / 6$.

What is the value of x in the equation $-12x = -10$?

The value of x is $5/6$ when you solve the equation $-12x = -10$.

Can I simplify the solution for $-12x = -10$?

Yes, the solution simplifies to $x = 5/6$ after dividing both sides by -12 .

Is $-12x = -10$ a linear equation?

Yes, $-12x = -10$ is a linear equation because it involves only first-degree (linear) terms.

What steps are involved in solving $-12x = -10$?

The steps are: divide both sides by -12 to isolate x , resulting in $x = 10/12$, which simplifies to $x = 5/6$.

Can I check my answer for $-12x = -10$?

Yes, substitute $x = 5/6$ back into the original equation: $-12(5/6) = -10$, which simplifies to $-10 = -10$, confirming the solution is correct.

What is the importance of understanding how to solve $-12x = -10$?

Solving such equations helps develop algebraic skills, enabling you to solve for variables in various real-world problems.

Are there any common mistakes when solving $-12x = -10$?

Common mistakes include forgetting to divide both sides by -12 or simplifying incorrectly. Always double-check your calculations.

How can I graph the solution $x = 5/6$?

Since $x = 5/6$ is a specific value, you can draw a number line and mark the point at $5/6$ to represent the solution.

Additional Resources

$-12x = -10$ Can Give Brainly: An In-Depth Review and Explanation

Mathematics often challenges students with its complex equations and abstract concepts. One such equation that frequently appears in algebra lessons is $-12x = -10$. This simple yet fundamental linear equation provides a solid foundation for understanding algebraic principles such as solving for variables, balancing equations, and understanding the properties of equality. In this article, we will explore what this equation means, how to solve it step-by-step, its significance in educational contexts like Brainly, and provide insights into how learners and educators can approach such problems effectively.

Understanding the Equation: $-12x = -10$

At first glance, the equation $-12x = -10$ might seem intimidating due to the presence of negative coefficients and variables. However, it is quite straightforward once broken down.

What does the equation represent?

This linear equation states that when -12 is multiplied by some unknown number x , the result is -10. The goal is to find the value of x that makes this statement true.

Relevance in educational platforms like Brainly

Brainly is a popular peer-to-peer learning platform where students ask questions and receive explanations from the community. Equations like $-12x = -10$ are common questions on such platforms, often asked by students seeking help with algebra homework. Providing clear, step-by-step solutions helps learners understand the problem deeply and develop confidence in their problem-solving skills.

Step-by-Step Solution to $-12x = -10$

Solving for x involves isolating the variable on one side of the equation. Here's a detailed walkthrough:

Step 1: Recognize the form of the equation

This is a linear equation in one variable, with the variable x multiplied by a coefficient -12 .

Step 2: Isolate the variable

To isolate x , divide both sides of the equation by -12 .

$$\begin{aligned} & \backslash \\ & -12x = -10 \\ & \backslash \end{aligned}$$

Dividing both sides by -12 :

$$\begin{aligned} & \backslash \\ & x = \frac{-10}{-12} \\ & \backslash \end{aligned}$$

Step 3: Simplify the fraction

Dividing -10 by -12 simplifies to:

$$\begin{aligned} & \backslash \\ & x = \frac{-10}{-12} = \frac{10}{12} \\ & \backslash \end{aligned}$$

Since dividing a negative numerator and denominator yields a positive result.

Step 4: Reduce the fraction to lowest terms

The fraction $\frac{10}{12}$ can be simplified by dividing numerator and denominator by their greatest common divisor, which is 2 :

$$\begin{aligned} & \backslash \\ & x = \frac{10 \div 2}{12 \div 2} = \frac{5}{6} \\ & \backslash \end{aligned}$$

Final answer:

$$\begin{aligned} & \backslash \\ & x = \frac{5}{6} \end{aligned}$$

\]

This is the solution to the equation $-12x = -10$.

Significance of the Solution

Finding that $x = 5/6$ demonstrates the importance of understanding coefficients and fractions. It also exemplifies how negative signs cancel out in division when both numerator and denominator are negative, leading to a positive result.

Educational Value:

- Reinforces the concept of balancing equations.
- Demonstrates the process of isolating variables.
- Highlights the importance of simplifying fractions.

Features of Solving Similar Equations

When tackling equations similar to $-12x = -10$, certain features and strategies become essential:

Features

- Handling Negative Coefficients: Recognize that dividing or multiplying both sides by a negative number will change the sign of the variable or constant.
- Fraction Reduction: Always simplify fractions to their lowest terms for clarity.
- Checking Solutions: Substitute the solution back into the original equation to verify correctness.

Pros and Cons of Solving Such Equations

Pros:

- Builds foundational algebra skills.
- Enhances problem-solving confidence.
- Prepares students for more complex equations.

Cons:

- Negative coefficients can sometimes cause confusion.
- Fractions may seem intimidating at first.
- Requires careful attention to signs and simplification.

Common Mistakes to Avoid

When solving equations like $-12x = -10$, students often encounter pitfalls:

- Ignoring Sign Changes: Forgetting that dividing both sides by a negative number reverses the inequality or sign.
- Incorrect Fraction Simplification: Not reducing fractions to lowest terms can lead to less clear solutions.
- Skipping Verification: Failing to substitute the found value back into the original equation can result in unnoticed errors.

How Brainly and Similar Platforms Help Learners

Platforms like Brainly serve as invaluable tools for understanding equations such as $-12x = -10$. They offer:

- Step-by-Step Explanations: Users can view detailed solutions that break down each step.
- Community Support: Learners can ask follow-up questions or clarify doubts.
- Diverse Approaches: Different solvers may use varied methods, enriching understanding.
- Immediate Feedback: Quick responses help reinforce learning.

Features and Benefits of Using Brainly for Algebra Questions

- Interactive Learning: Engages students through asking and answering questions.
- Peer Assistance: Encourages collaborative problem-solving.
- Access to Resources: Provides explanations, tutorials, and related problems.
- Coverage of Various Difficulty Levels: From basic equations to advanced algebra.

Pros:

- Enhances understanding through multiple explanations.
- Builds confidence with community support.
- Encourages active learning.

Cons:

- Sometimes explanations vary in quality.
- Dependence on peer responses can lead to inaccuracies if not checked.
- May require moderation for complex or incorrect answers.

Conclusion: Mastering Equations like $-12x = -10$

Solving equations such as $-12x = -10$ is a fundamental skill in algebra, serving as a stepping stone toward mastering more complex mathematical concepts. By understanding the principles of balancing equations, correctly handling negative numbers, and simplifying fractions, students can confidently approach similar problems. Platforms like Brainly play a crucial role in this learning journey by providing accessible, community-driven support that fosters understanding and problem-solving skills. Whether you're a student seeking help or an educator designing lessons, emphasizing step-by-step solutions, common pitfalls, and the importance of verification can greatly improve comprehension.

Remember, consistent practice and the willingness to ask questions—be it through platforms like Brainly or with teachers—are key to becoming proficient in algebra. Keep exploring, stay curious, and don't hesitate to seek help when needed. Math is not just about finding the right answer but understanding the process behind it.

[12x 10 Can Give Brainly](#)

12x 10 Can Give Brainly

Related Articles

- [Can 0.4651 Be A Fraction](#)
- [Solve For X \$2\(4-3x\)=20\$](#)
- [Explain How Nuclear Physics Works?](#)

[Back to Home](#)