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Welcome to our solving one-step equations worksheet review! In the event that you or your students are having a hard time solving any of the problems on our solving one step equations worksheets, this quick review will teach you everything you need to know about how to solve a one-step algebraic equation.Before we get to any practice problems, it is imperative that you understand two things when it comes to solving a one-step algebraic equation":The goal of solving any algebraic equation is to get the variable by itself on one side of the equals sign.You can achieve this goal of isolating the variable by rearranging the equation by using inverse operations.As long as you understand those two main points, then you can learn how to solve any one-step algebraic equation with relative ease.Now, let’s dive deeper into point #2. What does it mean when we say that we can isolate the variable by using inverse operations? In math, there are four main operations: addition, subtraction, multiplication, and division, and each operation has an inverse, or opposite.First, let’s focus on the fact that addition and subtraction are inverses of each other. In other words:addition is the inverse of subtractionsubtraction is the inverse of additionFor example, the inverse of adding 3 to a number is subtracting 3 from the number.Next, we have multiplication and division, which are, in fact, inverses of each other. In other words:multiplication is the inverse of divisiondivision is the inverse of multiplicationFor example, the inverse of multiplying a number by 8 is dividing the number by 8.Inverse operations can be used to rearrange an equation and to “cancel out” terms, which is incredibly useful since the goal of solving an algebraic equation is to isolate the variable (i.e. get the variable by itself).Now, let’s take a look at a few examples of how to solve a one-step equation.Solving One-Step Equations Example #1Example: Solve for x: x + 8 = 10For this first example, our goal is to get the variable, x, by itself, and we can use inverse operations to do that. In this case, we can get x by itself by taking the +8 term and moving it to the right side of the equation. The opposite of +8 is -8, so we just have to subtract 8 from both sides of the equation to isolate x as follows:x + 8 = 10x + 8 -8 = 10 - 8x = 2Final Answer: x=2 is the solution to the one-step equation x + 8 = 10.How do we know that our final is correct? Whenever you solve a one step equation, you should always check your answer (x=2 in this case) by substituting it back into the original equation to see if the left and right-sides of the equation equal the same value (which validates that your answer is correct).x + 8 = 10(2) + 8 = 1010 = 10 ✔Clearly, our answer has worked out and we can say that x=2 is the answer. Learn how to rearrange the terms that are contained within equations. Follow the steps in order to solve the following problem, then practice the problems provided. Example: Solve: y/10 + 3y/5 = 7/2 Solve these 10 fractional equations. You will need to counter operations on both sides of the equals sign. Example: a/5 + 4a/5 = 10/5 x 2 These problems include equations that all different types of operators found all over the place. You will need to do your best to get those variables by themselves. Follow the steps to solve the following problem: y/10 + 4y/5 = 5/2. Then practice the skill with the 6 problems provided. This offers a solid review for you to work with. This quiz will help you understand how well you know this material and if you need more time reviewing the topic. This is a nice quick recap of the skills that are required for this topic. A fractional equation is an equation in which at least one of the variables is represented by a fraction. In other words, it's an equation that contains fractions on one or both sides of the equals sign. The great thing about solving fractional equations is that they always have a single, definite solution. This makes them much easier to solve than ordinary equations, which can often have multiple solutions. Step-by-Step Guide Find the Lowest Common Denominator (LCD) To solve a fractional equation, you need to find the Lowest Common Denominator (LCD) of all the fractions in the equation. The LCD is the smallest number that all denominators will go into evenly. For example, suppose you have the following equation: 2/3x + 1/4 = 11/12 The LCD of this equation is 12. Now Multiply each erm individually with the number that makes the denominator equal to the LCD, i.e., 12 in the present case. Once you've found the LCD, rewrite each fraction in the equation so that it has that denominator. In other words, you want to convert each fraction into an equivalent fraction with a denominator of 12. 4x2/3x + 3x 1/4 = 11/128/12x + 3/12 = 11/128+3x/ 12 = 11/12 Multiply both sides of the equation by the LCD (to remove the fractions). Now multiple both sides with the LCD to clear the denominators. 8 + 3x = 11 Solve the equation. Now that the equation is no longer fractional, you can solve it using regular algebraic methods. In this case, you would subtract 8 from both sides of the equation to isolate the variable on one side and then divide both sides by 3 to solve for x. 3x = 11 - 83x = 33x = 3 x = 1 Thus, the solution to the original equation is x = 1. Remember that there are a few different ways to solve fractional equations. This is just one method. However, it is a reliable method that always works, so it's good to know. You'll solve fractional equations like a pro with a little practice! Tips for Solving Equations That Contain Fractions There are some valuable tips that will not only save you time, but also increase your level of accruacy. When solving fractional equations, always try to simplify the fractions as much as possible. This will make it easier to see a pattern and solve the equation. Suppose there is a variable in the denominator. In that case, you can often get rid of it by multiplying both sides of the equation by that variable. Sometimes you can use inverse operations to cancel out a fraction. For example, if there is a 1/x on one side of the equation, you can multiply both sides by x to get rid of it. If you are having trouble solving a fractional equation, try rewriting it as a decimal. This will sometimes make it easier to see what is going on. How to Check Your Answer One method is to clear the equation of fractions by multiplying both sides by the LCD (least common denominator). This will give you an equation with only whole numbers and no fractions. You can then solve this equation like any other and check your work by plugging your answer back into the original equation. Final Words Solving fractional equations may seem daunting at first, but with a bit of practice, you'll be able to do it like a pro. In this article, we have provided a step-by-step guide on how to solve fractional equations using the LCD. We also included some tips for making the process easier. With a little patience and perseverance, you'll be solving fractional equations in no time! Integers: Mixed Operations | Level 1 A variety of one-step equations involving all the four basic operations are given in these mixed operation pdf worksheets. Perform the appropriate operation and solve for the unknown variable. Integers: Mixed Operations | Level 2 Taking your practice a step higher, the coefficients are rendered in positive and negative integers. Retain the variable on one side, take the coefficient and constant to the other side and solve. Fractions: Mixed Operations | Level 1 Add, subtract, multiply, and divide to solve the one-step fraction equations in these level 1 worksheets that involve proper and improper fractions as coefficients and constants. Fractions: Mixed Operations | Level 2 A moderate practice awaits 7th grade and 8th grade students here! Solve a series of one-step equations with their terms incorporating fractions as well as mixed numbers. Decimals: Mixed Operations The terms of the one-step equations in these worksheets are either decimals or integers. All four arithmetic operations are involved here to solve the problems. Integers, Fractions and Decimals In these printable worksheets, the coefficient of each one-step equation may be an integer, fraction or decimal. Complete practice can be given to children by solving these equations. One-Step Equation MCQs | Integers Plenty of multiple choice questions are available in these handouts. Solve the indicated equations and choose the correct integer values from the given options. One-Step Equation MCQs | Fractions Solving equations, finding the equation with a given solution, and evaluating expressions with the obtained values are the skills you can acquire in these pdf MCQ worksheets featuring fractions. Cost of the Product These printable worksheets contain an activity based exercise to find the cost of the products. The price tags of the objects are represented in an equation form. Solve the equations. Translating One-Step Equation Children in grade 6 should read each verbal phrases / sentences and translate it to an appropriate one-step linear equation. What Number am I? Guess my number! These fun math riddles help kids to easily understand and translate the sentences into equations. Try all these interesting problems.