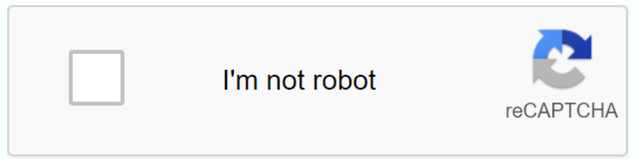

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Solving by substitution worksheet

6th, 7th, 8th, 9th, 10th, 11th, 12th Page 26th, 7th, 8th, 9th, 10th, 11th page 2 Sometimes it is not possible or convenient to solve a system of equations through graphs. In this case, we can turn to a method known as substitution to find the values of the variables. To use the substitution method, we use the following procedure: Select one of the two equations to start with decide on one of the variables in relation to the other Expression Substitute in the other equation You will get the value of one of the variables Replace this value in one of the original equations to get the value of the other variable. Let's set an example. Example: Solve the system by replacing \(- 8x + 5y = - 6\) \(- 3x + y = - 4\) Solution: We follow the first procedure. We want to choose one of two equations to begin with. We select the second equation because it is easier to solve the \(y\) variable in this equation. Solving \(y\) in the second equation gives us \(- 3x + y = - 4\) \(y = 3x - 4\) Continuing the procedure, we replace the expression \(3x - 4\) for \(y\) in another original equation. We have \(- 8x + 5y = - 6\) \ (- 8x + 5 \left ({3x - 4} \right) = - 6\) \ (- 8x + 15 x - 20 = - 6\) \(7x - 20 = - 6\) \(7x = 14\) \ (x = 2 \) We have received a value for one of the variables. We replace this value in one of the initial equations. We will replace it in the second original equation: \(- 3x + y = - 4\) \ (- 3 \ left (2 \right) + y = - 4\) \ \ y = 6 + y = - 4\) \ (y = 2 \) The solution is (2, 2) Another example: Solve the system by replacing \(7x + y = - 15\) \ (- 6x - 7y = - 24\) Solution: Here we choose to start working with the first equation, solving for \(y\). We have \(- 6x - 7y = - 24\) \ (- 6x - 7\left(- 7x - 15} \right) = - 24\) \ (- 6x + 49x + 2 0 105 = - 24\) \(43x + 105 = - 24\) \(43x = - 129\) \(x = - 3\) We replace this value in one of the initial equations. We choose the first equation. We have \(7x + y = - 15\) \(7\left({ - 3} \right) + y = - 15\) \(- 21 + y = - 15\) \(y = 6\) The solution is (-3, 6). Below you can download some free math worksheets and practice. The substitution method is one way to solve a system of linear equations. Using this method, you isolate the variables and replace one to decide on the other. These are worksheets that you can use to practice the method. Table for the substitution method. D. Russell Answers are on the second page of the PDF. y = 3x + 1d = 7 y = -2xx – y = y =x − 12d = -2x y =5x − 6y = 7x y = 2xx – 2x – 20 g = −4x + 16y = -2x y =−2x − − 6 y = -1 8x y =−5x + 5y = -6x y = 3x + 14y = 5 y = 2xy = 6x + 8 y = 5xy = 8x – 24 y = 7x + 24y = 3 Print worksheet in PDF, the answers are on page 2 of pdf replacement worksheet. Russell Answers are on the second page of the PDF. y = −7xy =−x – 4 y = −4y =−2x – 2 g = −3x − 12d =6d = 8d =x + 8 y = 3y =−3x – 21 y = −1 6d =−7x – 6 g =−8x − 8d = −8d = 8d = 3d = x – 2 y = 2x − 1d = -3 d = − 23d = −211.) y = −6xy =−7x – 6 12.) y = −4xy =−5x − 5 Print worksheet in PDF, replies are on the second page of pdf Replacement worksheet. D. Russell Answers are on the second page of the PDF. y = 5y = 2x – 9 y =5x = 5x − 16d = 4 y = −4x + 24d = -7x y = x + 3y = 8 y = −8y =-7x + 20 y = −7x + y 22d = -6 y = -5y =−19 y =19 y =7x + 22 y = -6 y =x + 19 y =19 y =7x + 22 y = -6 y =5y =-19 y =7x + 22 y = -6 y =x + 19 y =19 y =7x + 22 y = -6 y =x + 19 y =1 4x + 11y = 3 y =−6x + 6y −= 5x y = −8y = −5x + 22 y =−2x − 3y = −5x y =−7x − 12y = −4 Print the worksheet in PDF, the answers are on the second page of PDF Problem 1:Solve the system of linear equations by substitution. Check your response using graphs.4x + y = 8-3x + y = 1Problem 2 :Solve the linear equation system by replacing. Check your answer using graphs.x + Y = 82x + Y = 11Problem 3: Park fee $10 for adults and $5 for children. How many adult and children's tickets were sold if a total of 548 tickets were sold for a total of $3,750? Detailed Answer Key Issue 1 : Solve the system of linear equations by replacing. Check your response using graphs.4x + Y = 8-3x + y = 1Solution: Step 1:Solve equation for one variable. Select one of the equation, say -3x + y = 1.Solve for the variable y in relation to x. Add 3x on both sides. (-3x + y) + 3x = (1) + 3x - 3x + Y + 3x = 1 + 3xSplify. y = 1 + 3xStep 2 : Replace the expression y in the other equation and solve.4x + y = 84x + (1 + 3x) = 8Combin terms. 7x + 1 = 8Subtract 1 on both sides.7x = 7Divide and both sides 7. 7x / 7 = 7 / 7x = 1Step 3: Replace the x value we received above (x = 1) in one of the equations and solve other variables, y.4x + y = 84 (1) + y = 84 + y = 8 + y = 8Subttrac 4 on both sides.y = 8 S, the system solution is (1, 8). Step 4 : Check the solution using the schedule. To depict the equations, write them in the form of slope-blocks. That is, Y = mx + b 4x + Y = 8y = - 4x + 8Slope = - 4y-intercept = 8 -3x + y = 1y = 3x + 1Slope = 3Y-intercept = 1 Crossing point is (1, 4). Problem 2 :Solve the linear equation system by replacing it. Check your answer as graph.x + Y = 82x + Y = 11Solution : Step 1:Solve equation for one variable. Select one of the equation, say x + y = 8.Solve for the variable y in relation to x. Subtract x on both sides. (x + y) - x = (8) - xx + y - x = 8 - xSimplify. y = 8 - xStep 2 : Replace the expression y in the other equation and solve.2x + y = 112x + (8 - x) = 11 Kobyn-like terms. x + 8 = 11S signature 8 on both sides. 3Step 3: Replace the x value we have above (x = 3) in one of the equations and solve the other variable, y.x + y = 83 + y = 8Subtract 3 on both sides.y = 5Hence, the system solution is (3, 5). Step 4 : Check the solution using the schedule. To depict the equations, write them in the form of slope-blocks. That is, Y = mx + b x + Y = 8y = - x + 8Slope = - 1g-intersection = 8 2x + y = 11y = -2x + 11Slope = -2Y-intercept = 11 The crossing point is (1, 4). Issue 3: The park charges $10 for adults and $5 for children. How many adult and children's tickets were sold if a total of 548 tickets were sold for a total of $3,750? Solution: Step 1: Let x be the number of adult tickets and y be the number of children tickets.No. adult tickets + No. children's tickets = Totalx + Y = 548 -------- (2) Step 2 : Write an equation representing the total price. X price no. tickets for adults = 10xCost of y no. on children's tickets = 5yTotal costs = $3750Then, we have 10x + 5y = 3750 Divide both sides of 5.2x + y = 750 -------- (2) Step 3 : Solve equation for one variable. Select one of the equation, say x + y = 548.Solve for the variable y in relation to x. Subtract x on both sides. (x + y) - x = (548) - xy = 548 - xStep 4: Replace the expression y in the other equation and solve.2x + y = 7502x + (548 - x) = 750Combin-like terms. x + 548 = 750Subtract 548 on both sides.x = 202Step 5: Replace the x value, we received above (x = 202) in one of the equations and solve the other variable, y.x + Y = 548202 + y = 548Subtract 202 on both sides.y = 346Th, the system solution is (202, 346). Step 6: Interpret the solution in the original context. So, the number of tickets for adults sold is 202, and the number of children's tickets sold is 346. Besides the things given above, if you need other things in math, please use google custom search here. If you have any feedback on our mathematical content, please email us: v4formath@gmail.com always appreciate feedback. You can also visit the following web pages of different things in mathematics. Word problemsHCF and LCM word problemsTerm problems of simple equations Word problems of linear equations Word problems per square equationsTaking problems word on trainsTey and perimeter word problemsArticles problems of direct variation and reverse variation Word problems per unit priceScript problems of tandem word problems when comparing the percentageconverting of the usual units word problems Convert metric word problemsConforming problems of simple problems with interestsCreate the complex problems of interestsThermtord problems of the types of angles Additional and additional angles problems wordWood facts word problemsTrigonometrySword problemsWith simple problems with interest with complex of variations Additional and additional angles Set double facts word problemsTrigonometryTarrinitoma word problemsWith problemsSy and loss word problems Markup and tagging word problems Decimal word problemsSword problems fractionsZ problems of mixed fractrionsOne step equation equation equation equation problemsLinear inequalities word problemsRatio and proportion word problemsTime and work word problemsSword problemsSets and venn chartsWith problems of agePythagorean word problems theoremFrom a number of word problemsProperty problems at constant speedThrough problems of average speed Word problems the sum of the corners of the triangle is 180 degreesother themes Profit and loss shortcutsPercentage shortcutsTimetime combinations Time , speed and distance shortcutsRatio and proportions shortcutsDomain and a range of rational functionsDomain and a range of rational functions with holesD developed functions jet-streaming function with holesConverting repeating decimal numbers in fractionsDecimal representation of rational numbersDiscovering the square root method, to use long problem solving time and workRemainder problems in algebraic expressionsRemainder when 2 power 256 is divided into 17Remainder when 17 power 23 is divided into 16Missing the three digits numbers divided by 6Sum by all three digits, dividing by 7Ism by the three digits, which is divided by 8Sum by the three digits formed using 1, 3, 4Calculation of the three four digits formed by a non-zero digit, 3 numbers formed using 0, 1, 2, 3 of all three four digits formed using 1, 2, 5, 6 copyrights onlinemath4all.com SBI! 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