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Lesson plan: Using Equations and Inequalities

School:

Gulbaba Zeynep Yıldırım Yatılı Bölge Ortaokulu in Kilis, TR

Subject:

Mathematics

Topic:

Using Equations and Inequalities

Class:

Grade 7-8

Content:

Define a variable, write an equation or inequality, and then solve. Sum= addition product= multiplication quotient= division is=equals (=) at most= less than or equal to (<) at least= greater than or equal to (>) more than= greater than (>) difference= subtraction increased= addition decreased= subtraction.

Goals:

Students will be able to solve verbal problems by translating them into equations and inequalities.

Objectives:

- a) Solve verbal problems by translating them into inequalities.
- b) Solve verbal problems by translating them into equations.

Introduction:

We have gone over how to solve equations and inequalities in the past. You know how to do those. Now we are going to see how to take a word problem where we don't have anything to solve and turn it into an equation or inequality so that we can then solve it. These word problems have been put into codes and so you need to know how to break the codes to find out how to work the problems

Development:

Steps: 1. Explore-Look at the problem to get the main idea of what it is asking you to do. Find all the important information that you will need to solve the problem. 2. Plan- Translate the words that are used into an equation or inequality using the variable. 3. Solve- Solve the problem. 4. Examine- Check the answer and see if it makes sense. Examples: 1. A number increased by 4 is 16. $x+4=16$; $x=12$ 2. The product of 21 and a number is at most -84. $21x<-84$; $x=-4$. 3. The result of dividing a number by 7 is

49. $x/7=49;x=343$ 4. The quotient of a number and 8 is greater than 72. $x/8>72;x>576$ 5. Four times a number is greater than 76. $4x>76;x>19$

Practice

Work through problems with class until they are able to reach level of three consecutive solved problems. 1. Five times some number equals -85. $5x=-85;x=-17$ 2. Seven dollars less than the cost of the compact disc is \$12. $x-\$7=\$12;x=\$19$ 3. The quotient when dividing a number by -7 is less than 112. $x/-7<112;x<-784$ 4. Maria bought 3 pairs of jeans for \$75. If each pair costs the same amount, how much did each pair cost? $3x=75;\$25$. 5. Three friends went to dinner together to celebrate one of them getting a job promotion. The total of the check was less than \$36. If the cost was shared evenly, how much did each person pay for dinner? $3x<36;x<12$

Checking for understanding:

When correcting worksheets look for correct answer as well as comprehension of what different terms mean and how to organize the information into equations or inequalities.

Closure:

Evaluation:

Teacher reflections: