How to Solve Word Problems

Word problems may worry students, but reading comprehension skills will help in solving them.

Step 1 - Read the problem three times. Read the problem quickly the first time as a scanning procedure. While reading the second time, answer these three questions:

1. What is the problem asking me? (Usually at the end of the problem)
2. What is the problem telling me that is useful? (Cross out unneeded information).
3. What is the problem implying? (Usually something you have been told to remember).

Read the problem a third time to check that you fully understand its meaning.

Step 2 - Draw a simple picture of the problem to organize your thoughts.

Step 3 - Make a table of information and leave a blank space for information you are not told.

Step 4 - Use as few unknowns in your table as possible. If you represent all the unknown information in terms of a single letter do so! Write down what your unknowns represent. This eliminates the problem of assigning the correct answer to the wrong unknown. Remember, you have to create as many separate equations as you have unknowns.

Step 5 - Translate the English terms into an algebraic equation. Remember they are sometimes stated in a different order than the algebraic terms.

Step 6 - Immediately retranslate the equation, as you now have it, back into English. The translation will not sound like a normal English phrase, but the meaning should be the same as the original problem. If the meaning is not the same, the equation is incorrect and needs to be rewritten. Rewrite the equation until it means the same as the English phrase.

Step 7 - Solve the equation using the rules of algebra.

Step 8 - Look at your answer to see if it makes sense.

Example: If tax was added to an item, it will cost more, and if a discount was applied to an item it will cost less. Is there more than one answer? Does your answer match the original question? Does your answer have the correct units?

Step 9 - Put your answer back into the original equation to see if it is correct. If one side of the equation equals the other side of the equation, then you have the correct answer. If you do not have the correct answer, go back to Step 5.

Try one yourself!

Three times a number plus 10 less than that number is 26. What is the number?

Answer:

$3x+(x-10)=26$

$3x+x-10=26$

$4x-10=26$

$4x=36$

$X=9$