How to read “Mathematical English” so you can succeed in solving Word Problems

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How many times do we sit and look at word problems and think to ourselves, “What is the best way to break this problem down and interpret it in the lowest form possible?” “How do I convert this sentence of numbers to English so I can understand?” Well, this article will discuss how to demystify word problems.

The first thing that we have to realize when interpreting word problems is what the problem is truly asking. Is it asking for a percentage, an amount, two answers, one answer, an estimate, exact answer or what? Once that is known, you then should assign variables to the unknown of what you need to find so the problem can be solved. Once the unknown variables are mapped to words and numbers, a solution can be set up using an equation, and the unknowns can then turn into “known” answers. At this point, you test and check the answers to make sure they fit the equation that represents the words. Let’s dig deeper into this using a simplistic case.

“What is 75% of 300?”

How are we going to break this problem down? When a problem says “What”, that means “x”. The word is ALWAYS means “equals”. Percentage always means out of 100 parts, so the 75% converts to 75/100. “Of” means multiplication and the number 300 remains just that – a number. So, here is the updated version of this: x = (75/100) \* 300. Now, 100 goes into 300 three times. So, you have 3 times 75 which equals 225. Problem solved. This is how easy math can be using mathematical English. Let’s try this again in a different way.

35 is what percent of 80?

80

\*

x/100

=

35

 We now solve this problem: 80 goes into 100 1.25 times. So, we have 35 = x/1.25. We then cross multiply 35 \* 1.25 and get 43.75 which is our answer. X = 43.75%. As you see, this process is again very simple. Visual learners will need to break problems down by drawing pictures or sketching out the process of the problem. Auditory learners just need to hear the correct conversion of the problem. Kinesthetic learners will need to get up and act out the problem or write on the boards themselves. This simple mathematical English process can be used on more advanced problems to provide clarity to the problem solver.

 People have a fear of math normally not because they cannot do the problems, but because they cannot read or navigate through the problem effectively enough to break it down. INC Tutoring clients are taught this method and success has come from it time and time again often ending with the client saying, “I wish my teacher taught me this.” Or “This is way easier than what I learned in school.” As we continue to hone and sharpen our skillsets in tutoring, we will always share quicker ways to think and learn and well as the longer way so the client has chosen options that fit their needs. This is simply mathematics word problems demystified.