

General Word Problem Solving Strategy

Understand.

1. *Read it. And read it again.*
Don't assume that reading it once is good enough. This isn't like reading a novel. What kind of general problem is it? What information is it giving me? What information is it asking for?
2. *Plan a way to organize your problem.*
Would it help to draw picture? Would it help to make a chart? What did you do the last time you solved a problem like this? Don't be embarrassed about drawing stick figures either. We are interested in making sense of the problem not your artistic skills.

Translate.

1. *Assign a variable to the quantity you are looking for* (this is almost always in the very last sentence). Write down what x represents and be specific. (It will help you later in the problem, not to mention the partial credit!)
If there are other unknowns in the problem, represent them in terms of the same variable. In Math 102 we will have only one variable per problem. It helps to look for what all the other variables are being compared to. Let that be your x , and then the other relationships will be clearer.
2. *Write an equation that says in symbols what the words of the problem say.* (Model the problem.)
It may help to write the problem itself in simpler words first. Throw away any information that seems extraneous or isn't being used right now. Is there a formula you can follow for the relationship the problem is asking for?

Solve.

1. *Solve the equation you have written.*

Interpret.

1. *Answer the questions asked.*
The **solution** to your equation is not necessarily the **answer**. You may need your solution to find other parts of the answer, other unknowns, or apply another formula to directly answer the question.
2. *Make sure the answer is in appropriate units and label them.*
Sometimes problems will give you information in hours, for instance, and want an answer in minutes. Be sure that you have given the question the answer it is asking for.
3. *Reread the problem again to make sure that your answers meet the conditions of the problem.*
For instance, consecutive number problems are about whole numbers, is yours a decimal? Did the problem ask for perimeter and you gave them area? Try reworking the problem with the values you found (this is often easier than with variables). Does it still work out? What does your answer "mean" to the problem?