CAN'T FIGURE OUT HOW TO SOLVE A PROBLEM? TRY THESE FOUR EASY STEPS!

STEP 1: UNDERSTAND THE PROBLEM

PUT YOUR PENCIL DOWN.

This is the very first step. Read the problem carefully.

Now, you'll probably want to pick your pencil back up because we have to separate all the relevant data from the irrelevant data. Once we do that, we can move on to step 2.

STEP 2: CHOOSE AN APPROPRIATE STRATEGY TO TACKLE THE PROBLEM.

This can either mean you act it out, draw a picture, guess and check, make a chart or table, make an organized list, and use logical reasoning.

You want to be able to answer the question in your own words.

STEP 3: SOLVE THE PROBLEM.

Now, armed with your strategy and your relevant information, try and solve the problem.

STEP 4: DOUBLE CHECK YOUR ANSWER.

Make sure your answer makes sense.

Lets do an example!

Here is a problem from your textbook:

What would be the best way to tell which brand of paper towels is the "strongest when wet?"

(The answers are withheld until the end)

Step 1: Understand the problem

What is the problem asking? What do you want to know?

Well, without looking at the answers (because I took them away,) we know we want to know how strong different brands of paper towels can be when they're wet.

That seemed pretty straightforward.

Step 2: How are we going to figure that out?

Well, how do we figure out anything in science? With the scientific method of course! We have our question, so how would we set up an experiment to answer our question?

Step 3: Solve the problem!

So what would be the best way to tell which brand of paper towels is the "strongest when wet?"

We'd want to set up an experiment to test how much weight a particular brand of paper towels holds when wet and compare it with a different brand of paper towels in the same experiment.

Ok. Now, let's see what answers are available for you to pick from?

a) Compare television commercials that demonstrate the strength of paper towels.
b) Tear different brands of towels when they are wet to feel which seems strongest.
c) Compare how much weight each brand of towel can hold when wet before it breaks.
d) Conduct a survey of consumers, professional cooks and restaurant staff.

Do we see our answer somewhere?

Step 4: Analyze

Does my answer make sense? Well, lets look at the other answers. Nowhere in our problem does it ask to look at television commercials, so answer A is out. Both B and C deal with a wet paper towel, so they look promising. Answer D asks us to survey consumers- that means qualitative data. We're looking for quantitative data!

So how do I choose between B and C? Well, how did we answer the problem in our own words? We're looking for the WEIGHT on the wet paper towel. **So choice C is a better choice than B- because B is just an observation!**