

Stumbling Over Statistics

How to get through word problems

1) Define what you know.

- Do you understand the question *and the information given*?
 - Identify and look up any unfamiliar words, symbols, etc...
 - Ask for help if you do not understand the statement(s) or question(s).
- What variables are provided for you? (μ or \bar{x} , Σ , P, X, N, π , σ , σ^2 , etc...)
 - Make a list in order to avoid confusion.
 - Do you know what all of the variables are? What they tell you?

2) Determine what you are being asked to do.

- Is there more than one action required?
- Does it ask you to find a probability, σ , μ , etc...?
- Pay attention to the details of the request.
 - More *than* 6 vs. 6 *or* more, less *than* 6 vs. 6 *or* less, etc....?
- Will you need to run a test or solve an equation or both?
- If you need to run a test, what type of test are you being asked to run?

3) Decide which equation(s) you need to use.

- If you need to run a test, what type of test are you being asked to run?
- What is the equation you need to use to solve for the variable or run the test?
 - What are the possible variations of this question?
 - combinations vs. permutations, discrete vs. continuous, mutually exclusive vs. not, type of distribution, sample size, number of samples, etc...
 - Is this dealing with a hypothesis, proportion or confidence interval?

4) Plug in the information you have.

- Use the list of variables that you made in step (1).
 - If you haven't made the list, this might be a good time to do it.
 - Put the variables that you have into the equation.
- Do you already have enough information to complete the equation?
- If not, ask yourself what other variables you need to know.
- Return to step (3) for each variable that you need until you have defined all that are needed.

5) When you have everything you need, run the equation (or test).

- Solve the equation(s) that you can.
- Did you find the answer you are looking for?
- If not, what are you missing?
- Does the solution require you to use a chart from the appendix?