M1100. Quiz. November 18, 2002   Name:_____

1) (2 pts) Define the following terms and describe an example of each, where the population in question is *all LSU students enrolled in fall 2002*.
   a) Population mean (or population average)

   b) Population proportion

2) (2 pts) If a population is too large to determine a population proportion by examining each and every member of the population, then a statistician might select a _____ and infer the population proportion from the _____.

3) (1 pt) We have a sample distribution when (circle best answer):
   a) a statistician distributes samples of a product to numerous randomly chosen households and then collects data on how favorably each household judges the product.
   b) numerous samples are drawn from a population and the frequencies with which various values of a statistic occur (among all the samples) are tabulated.
   c) we infer the distribution of a variable from a random sample.
   d) we use the binomial formula.

4) (2 pts) A fish scientist has been studying farm-raised catfish. She has determined that when she examines samples of 35 fish from a crop, then in 19 out of 20 cases the mean weight of the 35 fish in the sample is within 1.5 ounces of the true average weight for the entire crop (which is determined at the time of harvest). Use the terms "level of confidence" and "margin of error" to state what she would report about a future crop, if she has just taken a sample of 35 fish, weighed them and found their average weight to be 45 ounces.

5) (2 pts) A newspaper poll shows the Democrat getting 54% percent of the vote. One thousand voters have been surveyed, and the paper reports (correctly) that the margin of error is 3% at 95% confidence. Can the democrat fail to get more than 50% of the vote? If so, would the editor of the paper need to admit to his readers that his paper had made a faulty prediction?

   (1 pt) The editor is not satisfied with the results from the poll of 1000, so he orders a poll of 4000. The sample proportion for Democrat now turns out to be 53%. What **more** can the paper report in terms of margin of error and level of confidence?