Module 16 prep guide

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1-Sample Z-test

1. Statistical inference is the process of making a conclusion about the parameter of a population based on the statistic computed from a sample.
2. The 11 steps are 1)State the rejection criterion, 2) state the null and alternative hypotheses to be tested and define the parameters, 3) ID the hypothesis test to be used, 4) collect the data, 5) check all necessary assumptions, 6) calculate the appropriate statistics, 7) calculate the appropriate test statistic, 8) calculate the p-value, 9) state your rejection decisions about Ho, 10) summarize your findings in terms of the problem and 11) if Ho was rejected compute and interpret an appropriate confidence region for the parameter.
3. In a 1-sample Z-test the null hypothesis = H0: µ = µ0.
4. In a 1-sample Z-test the statistic is the sample mean.
5. In a 1-sampel Z-test the test statistic formula is Z = ¯ x−µo/σ/square root of n.
6. The formula for confidence regions is ¯ x + Z∗ σ /√n
7. The assumptions for are σ is known, n ≥ 30, n ≥ 15 and the population is not strongly skewed or the population is normally distributed.
8. The characteristics when to use a 1-sample Z-test is it must be quantitative, one population and σ is known.
9. The R code formula for a 1-sample Z-test is z.test(dfobj$qvar,mu=mu0,alt=HAtype, conf.level=confval,sd=sdval)