

STAT 270 Lecture 31
Fall 2015
23 November 2015

- I started on confidence intervals.
- I did examples of CI's for proportions with large n , for means with large n and for a mean with small n .
- I introduced the t -table.
- The relevant slides in “Inference for 1 Sample” are 10-13,15-19.
- Relevant problems: 6.02, 6.04, 6.05, 6.06, 6.07, 6.08, 6.09, 6.11, 6.24, 6.27.
- Handwritten slides.
- Key jargon, ideas:

- Confidence intervals have form:

estimate \pm multiplier \times est'd SE.

- For a population proportion: estimate is \hat{p} the sample proportion, multiplier from normal tables, Estimated SE is $\sqrt{\hat{p}(1 - \hat{p})/n}$
- For a population mean and a large sample: estimate is \bar{X} , multiplier from normal tables, Estimated SE is s/\sqrt{n} .
- For a population mean, a small sample, and *a normally distributed population*: estimate is \bar{X} , multiplier from t tables, Estimated SE is s/\sqrt{n} .
- To use t tables use $\nu = n - 1$ for the degrees of freedom.
- The multipliers are adjusted to get the desired confidence level.
- These formulas require random sampling from a population.
- The population is described by μ , σ or a population proportion p .
- You must distinguish these from the sample values \bar{X} , s , and \hat{p} .