

STAT 270 Lecture 29  
Fall 2015  
18 November 2015

- I finished my demonstration of sampling distributions.
- I almost finished computing the variance of a sample mean.
- I have finished slide 84 of “Continuous Distributions”.
- No good problems today.
- Handwritten slides.
- Key jargon, ideas:
  - We often draw samples from populations.
  - We compute *statistics* from the sample data to *estimate* the corresponding number for the population.
  - Many statistics have approximately a normal *sampling distribution*.
  - We compute the mean and variance of those statistics to make a normal approximation.
  - The variance of a sample mean is

$$\text{Var}(\bar{X}) = \frac{\sigma^2}{n}.$$

- In that formula the variance  $\sigma^2$  is the variance of the population.