

Topics on final

Design an experiment: What are the elements? (blocking, random number table)

Interpreting histograms stem and leaf graphs, charts, normal distribution, and boxplots:

Where's the mean median interquartile range and standard deviation.

Symmetric versus skew.

Connecting boxplots to histograms to stemplots.

Outliers

Meaning of z scores: percentile to z-score and vice versa. Use NORMALCDF and INVNORM

probability. $p(A, \text{ then } B)$, with replacement and without,
what is a binomial situation and how do you get probabilities?

What is independence?

How can you use it?

variability versus bias (types)

sample error

response bias

non-response bias/undercoverage

convenience/voluntary

types of sampling (standard dev of distribution of sample means = $\sigma/\sqrt{n}$), what is the population and the sample?

SRS

Cluster

Stratified

Systematic

Multi-stage

Confidence intervals (what determines the width/Margin of Error?)

Interpret Conf Interval and Conf Level and Margin of Error

Find CI for t or z-prop

What happens to mean and standard deviation with linear transformations or adding/subtracting data sets?

What are the mean and standard deviation of a random probability or a binomial distribution?

