Advanced Placement Statistics A/B

- Exploratory analysis of data makes use of graphical and numerical techniques to study patterns and departures from patterns
- Comparing distributions of univariate data (dotplots, back-to-back stemplots, parallel boxplots)
- Exploring bivariate data
- Exploring categorical data
- Sampling and Experimentation: Planning and conducting a study (10%-15%)
- Overview of methods of data collection
- Planning and conducting surveys
- Planning and conducting experiments
- Generalizability of results and types of conclusions that can be drawn from observational studies, experiments, and surveys
- Data must be collected according to a well-developed plan if valid information is to be obtained
- Probability is the tool used for anticipating what the distribution of data should look like under a given model
- Statistical inference guides the selection of appropriate models
- Exploring Data
- Constructing and interpreting graphical displays of distributions of univariate data (dotplot, stemplot, histogram, cumulative frequency plot)
- Summarizing distributions of univariate data
- Anticipating Patterns: Exploring random phenomena using probability and simulation (20%-30%)
- Interpreting probability
- Combining independent random variables
- The normal distribution
- Sampling distributions
- Statistical Inference: Estimation population parameters and testing hypotheses
- Estimation (point estimators and confidence intervals)
- Tests of significance