

Exam #5 Objectives

For Exam #5, a well-prepared student should be able to

- set up hypotheses about a distribution of proportions for a categorical variable and use the null hypothesis in carrying out a “goodness of fit” significance test on relevant data from a sample
- define what is meant by an *association* between two variables
- choose and compute an appropriate distribution of proportions (joint, marginal, or conditional) to provide a useful view of data on two categorical variables measured on a sample
- make and use side-by-side pie charts or bar charts to explore a potential association between two categorical variables
- carry out a χ^2 significance test on relevant data using the null hypothesis of “no association between the variables”
- make and use a scatterplot to explore a potential association between two quantitative variables
- compute and interpret the correlation between distributions of two quantitative variables measured on a sample when there is evidence of a linear association
- compute and use the equation of the least-square regression line for a linear association between distributions of two quantitative variables measured on a sample