
Inference for Proportions

Inference for a Single Proportion

Section 8.1

Analysis of categorical data

Objective: One- and two-sample analysis of data on categorical variables

- Data are counts or percents
 - Ex: percent of Virginians who favor Issue X

- Parameters are population proportions
 - Ex: percent of all Virginians

- Estimates are sample proportions
 - Ex: percent of Virginians in an opinion poll

Sampling framework for proportions

- **Population proportion:** the proportion of “successes” in the population
 - Denote by p
- **Sample success count:** the number of “successes” in the sample
 - Denote by X
- **Sample proportion:** proportion of “successes” in the sample
 - Denote by $\hat{p} = \frac{X}{n}$