

## Confidence Interval for Population Proportion

COR1-GB.1305 – Statistics and Data Analysis

1. The SURVEY USA polling organization interviewed 1200 adults from the United States to measure public opinion on the Ebola virus. The results are at <https://infogr.am/poll-ebola-concern/>. Of the respondents, 19% said that they are “very” concerned they will catch Ebola.

(a) What is a reasonable population to associate with this sample?

(b) What is the population parameter of interest?

(c) Find a 95% confidence interval for the population parameter?

(d) Under what conditions is the confidence interval valid?

2. Use the following data from the class survey to estimate the relevant population proportions. Give 95% confidence intervals for these proportions.

(a) Gender: 13 Female, 23 Male.

(b) Drinks at least one cup of coffee on a typical day: 26 Yes, 11 No.

(c) Industry: 13 Finance, 24 Other.

3. In Problem 2, what are the relevant populations?

4. In Problem 2, what assumptions do we need for the confidence intervals to be valid?