

Stat 4620 Homework 4

Due: January 22, 2019

1. A random sample of 225 women were asked if they usually have more than 3 drinks per week, and 38 women said 'yes'.
 - (a) Estimate the proportion of women in the population who usually have more than 3 drinks per week.
 - (b) Calculate a standard error for your estimate in (a).
 - (c) Calculate a 95% confidence interval for the true proportion.

2. A random sample of 172 women were given the flu vaccine while pregnant, and a control sample of 168 women were not given the vaccine. The average birthweight for the vaccine group was 3.13 kg with a standard deviation of .51 kg. The average birthweight for the control group was 3.01 kg with a standard deviation of .45 kg.
 - (a) Estimate the mean difference in birthweight $\mu_1 - \mu_2$ for the two population groups.
 - (b) Calculate a standard error for your estimate in (a).
 - (c) Calculate a 95% confidence interval for the true mean difference.