Chapter 21 Worksheet

Imagine that our class data comes from a simple random sample of Bi-Co students.

1. Consider the variable “major” from the class data.
   (a) Estimate the percent of all Bi-Co students that are social science majors.
   
   (b) How accurate is your estimate? Compute a 95% confidence interval for the percent of all Bi-Co students that are social science majors.

2. Consider the variable “degree” from the class data.
   (a) Estimate the percent of all Bi-Co students that intend to pursue a PhD.
   
   (b) How accurate is your estimate? Compute a 95% confidence interval for the percent of all Bi-Co students that intend to pursue a PhD.
3. Consider the variable “exercise” from the class data.

(a) Estimate the percent of all Bi-Co students that plan to spend 10 or more hours per week exercising or playing sports.

(b) How accurate is your estimate? Compute a 95% confidence interval for the percent of all Bi-Co students that plan to spend 10 or more hours per week exercising or playing sports.

4. Compute three 95% confidence intervals for all Bi-Co students from the data you collected. Fill in the blanks given below.

(a) First Variable:

Survey Question: _____________________________
___________________________
___________________________
We estimate that ____% of all Bi-Co students _______________________
___________________________
___________________________
A 95% confidence interval for this percent is ____% to ____%.
(b) Second Variable:

Survey Question: _____________________________________________________
___________________________________________________
___________________________________________________
___________________________________________________

We estimate that ____% of all Bi-Co students _________________________
___________________________________________________
___________________________________________________
___________________________________________________

A 95% confidence interval for this percent is ____% to ____%.

(c) Third Variable:

Survey Question: _____________________________________________________
___________________________________________________
___________________________________________________
___________________________________________________

We estimate that ____% of all Bi-Co students _________________________
___________________________________________________
___________________________________________________
___________________________________________________

A 95% confidence interval for this percent is ____% to ____%.