

Qualitative variable confidence interval problems and beyond!

Data: A survey of 1002 college students finds that 75.3% usually drive a car to school.

a) Find a 95% confidence interval for the proportion of all college students who usually drive a car to school.

b) If there are 21,800,000 college students in the U.S., find a 95% confidence interval for the number of college students who usually drive a car to school.

c) Looking again at (a), what sample size would you need to create a 95% confidence interval which has a margin of error equal to 1%?

d) Set up a hypothesis test to test the claim that 78% of college students usually drive a car to school.