

16. In a survey of 624 males ages 18-64, 394 say they have gone to the dentist in the past year.

Construct 90% and 95% confidence intervals for the population proportion. Interpret the results and compare the widths of the confidence intervals. If convenient, use technology to construct the confidence intervals.

The 90% confidence interval for the population proportion p is (,).
(Round to three decimal places as needed.)

The 95% confidence interval for the population proportion p is (,).
(Round to three decimal places as needed.)

Interpret your results of both confidence intervals.

- ☐ A. With the given confidence, it can be said that the sample proportion of males ages 18-64 who say they have gone to the dentist in the past year is between the endpoints of the given confidence interval.
- ☐ B. With the given confidence, it can be said that the population proportion of males ages 18-64 who say they have gone to the dentist in the past year is not between the endpoints of the given confidence interval.
- ☐ C. With the given confidence, it can be said that the population proportion of males ages 18-64 who say they have gone to the dentist in the past year is between the endpoints of the given confidence interval.

Which interval is wider?

- ☐ The 90% confidence interval
- ☐ The 95% confidence interval

17. In a survey of 7000 women, 4431 say they change their nail polish once a week. Construct a 99% confidence interval for the population proportion of women who change their nail polish once a week.

A 99% confidence interval for the population proportion is (,).
(Round to three decimal places as needed.)