

Introduction to Statistics - Homework #6

- Use Appendix C: Distribution tables (e.g. Z-table) from page 408 to 417 in the textbook if necessary.

Extra Exercise - Daily calorie intake

A researcher wants to estimate the mean daily calorie intake of adults in a neighborhood. A random sample of 36 adults from a neighborhood yields a sample mean of 2150 calories per day. Assume the population standard deviation is known to be $\sigma = 300$ calories.

Construct a 90% confidence interval for the mean daily calorie intake of adults in this neighborhood.

Exercise 7.11 - Play the piano

Georgianna claims that in a small city renowned for its music school, the average child takes less than 5 years of piano lessons. We have a random sample of 20 children from the city, with a mean of 4.6 years of piano lessons and a standard deviation of 2.2 years.

Construct a 95% confidence interval for the mean number of years students in this city take piano lessons.