

Data Science – Fall 2016
Hypothesis Testing

These data (found on the website) were collected soon after the metric system was introduced to Australia (in 1971). A group of 44 students were asked to guess, to the nearest meter, the length of the room in which they were sitting. They guessed the average length of a 13.1 meter room to be 16.02 meters with a standard deviation of 7.14 meters. Another group of 69 students were asked to guess the length of the same room in feet to the nearest foot, and guessed an average of 43.7 feet with a standard deviation of 12.5 feet. The actual size of the room was 43.0 feet.

- 1) Conduct the two relevant hypothesis tests and comment on whether students could accurately assess the length of the room.
- 2) Based on the results in part 1, do you think that the students guessed the same lengths for the room, on average? Conduct the hypothesis test to compare the two groups to see whether the students' guesses were equivalent.