

Math 13 Chapter 7 Overview

1) A sample of 30 men found their average height to be 70.1 inches with a standard deviation on 1.9 inches. Create the 95% confidence interval for the mean height of men from this population.

2) Out of 150 Americans interviewed, 116 claimed Christianity as their religion. Create a 98% confidence interval for the proportion of Americans that claim Christianity as their religion.

3) A sample of 56 college graduates found their mean IQ score to be 114.7. It is known that for IQ scores $\sigma = 15$. Create the 95% confidence interval for the mean IQ for college graduates.

4) For the 2012-13 season, Kobe Bryant played 78 basketball games. He averaged 27.4 points per game with $s = 7.5$. For his 15 year career in the NBA, Michael Jordan averaged 30.1 points per game. Use a 95% confidence interval to determine if Bryant is as good as Jordan when it comes to scoring points per game.

5) For exams worth 100 points, the standard deviation should be 15 points. For a class of 40 Calculus students, the average score on the first test was 80.1 with $s = 10.5$. Use a 95% confidence interval to see if a standard deviation of 15 is possible for this class by the end of the semester.