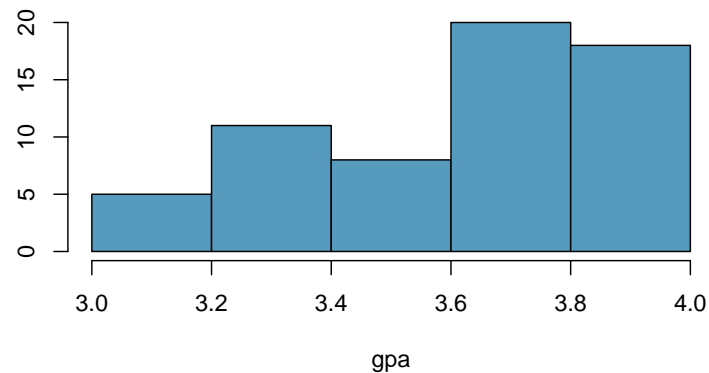


Application exercise:

3.3 Sample size

GPA at Duke - revisited

In 2001 the average GPA of students at Duke University was 3.37. This semester we surveyed you, and 63 students responded to the question on GPA. The mean was 3.58, and the standard deviation 0.53. A histogram of the data is shown below.



1. Construct a 95% confidence interval for the average GPA of all Duke students.
2. If we wanted to cut the margin of error in half while keeping the confidence level the same, how many Duke students would we need to sample?
3. If we wanted to cut the margin of error in half (compared to the original confidence interval from Question 1 above) and increase the confidence level to 98%, how many Duke students would we need to sample?