

Math 21 Chapter 9 Project

1) What percentage of young drivers run red lights? A survey of 124 drivers aged 18 to 25 showed that 89 of them run red lights. Construct a 90% confidence interval for the proportion of all drivers aged 18 to 25 that run red lights.

2) A researcher wants to determine what proportion of all high school students have Internet access at home. He has no idea of what the sample proportion will be. How large of a sample is required in order to be 95% sure that the sample proportion is off by no more than 5%?

3) Here are 10 randomly selected blood sugar levels from a laboratory. (Levels measured after a 12-hour fast in mg/DL.)

105 89 96 135 94 91 111 107 141 83

Construct a 90% confidence interval for the mean blood sugar level of all people after a 12-hour fast.

4) The public relations officer at a college wants to estimate the mean IQ of all college students. If she wants to be 95% confident that her sample mean to be off by no more than 2 points, how large of a sample is necessary? The standard deviation for IQ scores is 15 points.