

1. The Nielsen ratings for television use a random sample of households. A Nielsen survey results in an estimate that a women's World Cup soccer game had 72.3% of the entire viewing audience. Assuming that the sample consists of $n = 5,000$ randomly selected households, find the margin of error and the 95% confidence interval for this estimate.
2. The Bureau of Labor Statistics finds 2,160 unemployed people in a sample of $n = 60,000$ people. Estimate the population unemployment rate and give a 95% confidence interval.
3. A study commissioned by the U.S. Department of Education concluded that 44% of teenagers cite grades as their greatest source of pressure. The study was based on responses from 1,015 teenagers. What is the 95% confidence interval?

