Problem H-14. In an experiment, a gene was injected into thousands of eggs, yielding 2000 offspring. The gene was successfully incorporated into the DNA of 600 of these offspring. Calculate 95% and 99% confidence intervals for the true proportion of offspring that incorporate the gene into their DNA.

Problem H-15.

(a) Compute the sample variance and sample standard deviation in problem 5.3.3.

(b) $x_1, \ldots, x_{80}$ have sum 240 and the sum of their squares is 1000. Compute the sample mean, sample variance, and sample standard deviation of those numbers.

(c) A survey question asks students for their annual income ranges. 30 respond $0\text{-}10K$, 10 respond $10K\text{-}20K$, 4 respond $20K\text{-}30K$, and 2 respond $30K\text{-}40K$. Estimate the sample mean, sample variance, and sample standard deviation of the annual income. Include units for each of these.