Producing Data*

Worksheet 5

1. A health study is being conducted on a population of 30 men and 70 women.
   (a) Label the men 1 through 30 and the women 31 through 100. Estimate many men are in a simple random sample of size 20.
   (b) Determine ten simple random samples of size 20 and record the number of men in each of the samples.
   (c) Find the mean and the standard deviation of the number of men in the samples. How does this conform to your estimate?
   (d) Perform a single stratified random sample having 10 men and 10 women and display your answer.
   (e) Perform 12 samples of 10 men from a population of size 30 and for each man, record the number samples in which he appears.
   (f) Find the mean and standard deviation of this data set. Why is the mean exactly equal to 4?
   (g) Make a histogram showing the number of men that appear 0, 1, 2, . . . , times.