

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, \dots , times.