Section 10/14

1 Question 7.11

Each Data 8 student is asked to draw a random sample and estimate a parameter using a method that has chance 95% of resulting in a good estimate.

Suppose there are 1300 students in Data 8. Let X be the number of students who get a good estimate. Assume that all the students' samples are independent of each other.

a) Find the distribution of X .

b) Find E(X) and SD(X) .

c) Find the chance that more than 1250 students get a good estimate.

2   Question 7.12

In a population of size 100 there are 50 women, 20 unemployed people, and 80 college graduates.

A simple random sample of 30 people is taken. In the sample, let W be the number of women, U the number unemployed, and C the number of college graduates.

a) Without calculation (other than obvious conversions to percents or proportions), rank E(W) , E(U) , and E(C) in increasing order. If you think two of the values are equal, put an = sign between them.

b) Without calculation (other than obvious conversions to percents or proportions), rank SD(W) , SD(U) , and SD(C) in increasing order. If you think two of the values are equal, put an = sign between them.