Sarah Ford

Randomness & Computation Assignment 7

1)

If CM \* qM(x) is the probability density for a random variable, then

We next solve this equation such that we find:

2)

Given

We first find C by solving , such that

Next, for FX(X) between 0 and 20, we say

3)

4)

5)

See Code

6)

7)

For 3 Standard Deviations…

8)

To find the N required such that , we solve

This figure is borne out by our experimental results. When N reaches 29,106,900, the average value calculated in the code never deviates by more than .