Lakshay Seth
NE 255

Homework 6

Problem 1: See attached below

Problem 2:

a) Relative Error using first function for the different samples (N) are:

Number of Samples (N)	Relative Error (ϵ)
10	0.6180
100	0.0578
1000	0.0196
10000	0.0034

b) Relative Error using second function for different samples (N) are:

Number of Samples (N)	Relative Error (ϵ)
10	0.1459
100	0.0186
1000	0.0158
10000	0.0029

Relative error decreases as a function of number of trials. Below is the graph of a sample run. It's important to note than when values are generating at random, it could be possible that small sample size (N) can converge faster than larger sample size (N). But the results from larger sample size will always be more consistent.