

Optical Methods in Diagnosis

2nd semester, 2015-2016

Homework #1

Generate random numbers in the interval $[0,1]$. Test your program by five runs that each generates 10,000 numbers. Divide the region $[0,1]$ equally into 20 intervals.

(A) Determine the frequency of occurrence of the random numbers in each interval and display the result as a bar graph.

(B) For each of the 20 intervals, determine the mean and standard deviation over the five runs. Ideally the mean of each interval is about 500 and the standard deviation should be less than 36.