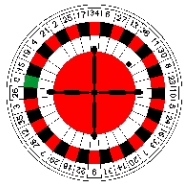

Random Numbers

Assessment

1. Use a random number generator with your favorite computer program to generate a series of 1000 random numbers.
2. Test your sequence for *uniformity* by making histogram similar to Figure 1.
3. Try bin sizes corresponding to 1/5th , 1/10th, and 1/50th of the number of data points, and comment on the apparent changes in uniformity. Which size do you think represents the best test?
4. Test your distribution for randomness by making a plot of $(x_i, y_i) = (r_i, i)$ similar to Figure 2. What is your conclusion?
5. Test your distribution for randomness by making a plot of $(\boldsymbol{x}, \boldsymbol{y}) = (\boldsymbol{r_i}, \boldsymbol{r_{i+1}})$ similar to Figure 3. What is your conclusion?