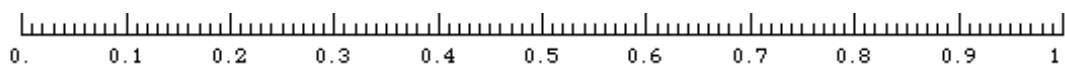


ASSIGNMENT 6—DUE MONDAY, MARCH 19, 2007

Read Chapter 1 of Issacs' *The Pleasures of Probability*.

1. Consider the following experiment: toss a nickel, a dime, and a quarter.
 - a) List the sample space for this experiment—i.e., all the possible outcomes.
 - b) Assuming each outcome in (a) is equally likely, find the probability that no toss comes up heads.
 - c) Assuming each outcome in (a) is equally likely, find the probability that exactly two coins come up heads.
2. List all the ways that a deck of 3 cards—say, the king, queen, and jack of hearts—can be arranged in a row.
3. Use your calculator to generate 25 random numbers between 0 and 1. Draw a dot in the corresponding location on the number line below (working to 2 decimal places is accurate enough).



- a) How many of your numbers are less than $1/2$?
- b) How close are the two closest numbers?
- c) Do your 25 random numbers look like you expected random numbers to look?

Note: if you don't yet have a scientific calculator, you can use the random number generator at <http://www.random.org/nform.html>. It will generate random integers in a specified range; you should ask for random numbers between 0 and 100, then divide each by 100 to get a number between 0 and 1 (for example, if the web site generates 37, you should record it as 0.37).