

# Computer Assignment 1

Math 5040 – Fall 2002

Due: Wednesday Sept. 4

The goal of this assignment is to familiarize yourself with using a computer for simulating random variables.

1. Simulate 100 exponential random variables, using the inverse distribution function method. What proportion are below 1? What proportion are above 2? Calculate (exactly) the probability that an exponential random variable is less than 1. Also calculate the probability that it is greater than 2.
2. Simulate 100 standard normal random variables, using the rejection method. What proportion are between  $-1$  and  $1$ ?