

C++ Random Number Generation

Click on the link below for information on generating random numbers in C++.

[C++ Reference on Random Number Generation](#)

Normal Distribution

The program in the lab 5 description uses the normal distribution. The parameters for the normal distribution are the mean and the standard deviation. In a normal distribution about 95% of all the data will lie within 2 standard deviations of the mean, and over 99% of the all the data will lie within 3 standard deviations of the mean. In the example in the lab 5 description, the mean is 50 and the standard deviation is 10. This means that nearly all of the randomly generated coefficients will lie between 20 and 80. To get a wider spread of numbers you could change the standard deviation. Statistically speaking, it is possible that you will get a number outside of this range (called an outlier) so you will want to check that your randomly generated number is not outside the desired range.

There are other distributions that you could use. Above is a link to a Webpage with more information on other distributions. You might want to check out the uniform distribution.