

# Math 160/263 Minitab Assignment # 7 - Unix Version

## Chapters 1 and 4 - Examining Distributions and Probability

1. The waiting time for the next available station at a particular computer lab is uniformly distributed on the interval  $[0, 15]$ .
  - (a) Use the **RANDom** command with the **UNIFORM** subcommand to simulate the waiting times for 500 students.
  - (b) Create a histogram of the simulated waiting times, and briefly describe the shape of the distribution.
  - (c) What is the average of the simulated waiting times? How close is it to 7.5 minutes?
  - (d) What percent of the simulated waiting times are less than 7.5 minutes? How close is it to 50%.
2. The yearly rainfall total for a city in northern California is normally distributed with mean 18 inches and standard deviation 6 inches.
  - (a) Use the **CDF** command with the **NORMAL** subcommand to find the probability that the total rainfall for a randomly selected year is less than 10 inches.
  - (b) Use the **CDF** command with the **NORMAL** subcommand to find the probability that the total rainfall for a randomly selected year is greater than 30 inches.
  - (c) Use the **CDF** command with the **NORMAL** subcommand to find the probability that the total rainfall for a randomly selected year is between 10 inches and 30 inches.
  - (d) Use the **INVCdf** command with the **NORMAL** subcommand to find the third quartile of the distribution of the yearly rainfall total for this city.