

Math 160/263 Minitab Assignment # 7 - Windows Version

Chapters 1 and 4 - Describing 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 **Calc > Random Data > Uniform** menu command 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 **Calc > Probability Distributions > Normal** menu command to find the probability that the total rainfall for a randomly selected year is less than 10 inches. (Hint: Use the Cumulative Probability Function.)
 - (b) Use the **Calc > Probability Distributions > Normal** menu command to find the probability that the total rainfall for a randomly selected year is greater than 30 inches. (Hint: Use the Cumulative Probability Function.)
 - (c) Use the **Calc > Probability Distributions > Normal** menu command to find the probability that the total rainfall for a randomly selected year is between 10 inches and 30 inches. (Hint: Use the Cumulative Probability Function.)
 - (d) Use the **Calc > Probability Distributions > Normal** menu command to find the third quartile of the distribution of the yearly rainfall total for this city. (Hint: Use the Inverse Probability Function.)