**Project**

Suppose you are opening a new coffee bar, and need to decide how to price each shot of espresso. If you price your espresso too high, no customers will buy from you. On the other hand, if you price your espresso too low, you will not make enough money to sustain your business.

To determine the most profitable price for espresso, you poll 1,000 potential daily customers, asking for the maximum price they would be willing to pay for a shot of espresso at your coffee bar. To simulate these potential customers, write a function **randCustomers(n)** that returns a list of n normally distributed prices with mean $4.00 and standard deviation $1.50. Use this function to generate a list of maximum prices for your 1,000 potential customers, and display of histogram of these maximum prices. Next, based on this information, you want to know how many customers would buy espresso from you at any given price. Write a function **sales(customers, price)** that returns the number of customers willing to buy espresso if it were priced at the given price. The first parameter customers is a list containing the maximum price that each customer is willing to pay. Then write another function **plotDemand(customers, lowPrice, highPrice, step)** that uses your sales function to plot a demand curve. A demand curve has price on the x-axis and the quantity of sales on the y-axis. The prices on the x-axis should run from lowPrice to highPrice in increments of step. Use this function to draw a demand curve for prices from free to $8.00, in increments of a quarter.