1. It is a hot day, and Bert is very thirsty. Here is the value he places on a bottle of water:

- Value of first bottle $7
- Value of second bottle 5
- Value of third bottle 3
- Value of fourth bottle 1

a. From this information, derive Bert's demand schedule. Graph his demand curve for bottled

water.

b. If the price of a bottle of water is $4, how many bottles does Bert buy? How much consumer surplus does Bert get from his purchases? Show Bert's consumer surplus in your graph.

c. If the price falls to $2, how does quantity demanded change? How does Bert's consumer surplus change? Show these changes in your graph.

2. Ernie owns a water pump. Because pumping large amounts of water is harder than pumping small amounts, the cost of producing a bottle of water rises as he pumps more. Here is the cost he incurs to produce each bottle of water:

- Cost of first bottle $1
- Cost of second bottle 3
- Cost of third bottle 5
- Cost of fourth bottle 7

a. From this information, derive Ernie's supply schedule. Graph his supply curve for bottled water.

b. If the price of a bottle of water is $4, how many bottles does Ernie produce and sell? How much producer surplus does Ernie get from these sales? Show Ernie's producer surplus in your graph.

c. If the price rises to $6, how does quantity supplied change? How does Ernie's producer surplus change? Show these changes in your graph.