Review

1. Suppose the blood pressure values for nine randomly selected individuals are

118.6	127.4	138.4	130.0	113.7	122.0	108.3	131.5	133.2

a) Determine the values of the sample mean, sample median, and compare these values. (5 points)

b) Construct a boxplot. (5 points)

2. Suppose that 55% of all adults regularly consume coffee, 45% regularly consume carbon- ate soda, and 70% regularly consume at least one of these product. What is the probability that randomly selected adult regularly consumes both coffee and coda?(5 POINTS)

3. At a certain gas station, 40% of the customers use regular unleaded gas, 35% use extra unleaded gas, and 25% use premium unleaded gas. Of those customers using regular gas, only 30% fill their tanks. Of those customers using extra gas, 60% fill their tanks, whereas of those using premium, 50% fill their tanks.

a. What is the probability that the next customer fills the tank? (5 points)

b. If the next customer fills the tank, what is the probability that regular gas is requested?(5 points)

4 A real estate agent is showing homes to a prospective buyer. There are ten homes in the desired price range listed in the area. The buyer has time to visit only four of them. If four of the homes are new and six have previously been occupied and if the four homes to visit are randomly chosen, what is the probability that all four are new?

5 Seventy percent of all vehicles examined at a certain emissions inspection station pass the inspection. Assuming that successive vehicles pass or fail independently of one another, calculate the following probabilities.

a.P(all of the next three vehicles inspected pass) (5 points).

b. P(at least one of the next three inspected fail)(5 points).

6 A random variable X has the following distribution

X	-1	0	1	2
P	0.4	0.1	0.3	0.2

a) Find and plot a Cumulative distribution function (5 points),

b) Calculate an expected value