Q1. According to a recent article in Forbes magazine, the average price in Midwest is $119600. Assume that the standard deviation is $35000. A random sample of 75 houses is taken and average price is computed

1. What is the probability that the sample mean exceeds $125000
2. The population standard deviation of the prices is not known. It may be any where between $30,000 to $ 40,000. Tabulate the probability of sample mean exceeding $125000 for standard deviation values $30000 to $ 40000 in steps of $500

Q2. According to Money, the average US Government bond earned 2.9% over the first 3 months of 2004. Assume a standard deviation of 0.5%. What is the probability that the average earnings in a random sample exceeded 3.0%?

Q3. 38 percent of all shoppers at a large department store are holders of store’s charge card. If a random sample of 100 shoppers is taken, what is the probability that at least 30 of them will be found holders of the card ?

Q4. Japan’s birth rate is believed to be 1.57 per woman. Assume that the population standard deviation is 0.4. If a random sample of 200 women is selected. What is the probability that the sample would fall between 1.52 and 1.62?