10.5 Practice B

1. The numbers of bait fish caught in a random sample of 40 cast net throws are shown in the table.

Number of Bait Fish Per Cast Net Throw									
4	8	6	15	1	6	8	0	1	14
9	6	8	7	3	10	4	11	2	4
15	2	0	5	1	2	7	5	6	6
9	11	8	9	5	1	4	7	2	1

   a. Estimate the population mean μ.

   b. Estimate the population proportion ρ of cast net throws that produce at least eight bait fish.

   c. Estimate the population proportion ρ of cast net throws that produce fewer than three bait fish.

2. A survey asks a random sample of U.S. voters how many times they have gone to the polls unknowledgeable about who they are voting for. The survey reveals that the sample mean is 5.8 times. How confident are you that the average number of times all U. S. voters have gone to the polls unknowledgeable is exactly 5.8 times? Explain your reasoning.

3. A national polling company claims that 45% of U.S. drivers do not adhere to the speed limits in construction areas. You survey a random sample of 50 households.

   a. What can you conclude about the accuracy of the claim that the population proportion is 0.45 when 15 drivers do not adhere to the speed limits in construction areas?

   b. What can you conclude about the accuracy of the claim that the population proportion is 0.45 when 23 drivers do not adhere to the speed limits in construction areas?

   c. Assume that the true proportion is 0.45. Estimate the variation among sample proportions for samples of size 50.