1. A company wants to know when they raise their prices if they will lose customers. Therefore, they complete a satisfaction survey with new customers to see if new customers would drop the service with the price increase. At the normal price, satisfaction is 4.0 points with a standard deviation of 1.2 points. After the price increase, satisfaction scores are as follows: 3, 4, 3, 4, 2, 1, 5, 3, 2, and 3. Using the p<.05 level, is this a significant drop in price?
2. 50 dogs were tested in a new dog-training program. They had an average obedience score of 5.6 after the dog-training program. The old dog-training program had an average score of 3.4 and standard deviation of 2.5 before they switched to the new program. Is there a significant increase in their program using the .01 significance level?
3. Netflix incorporated a new rating system to see how accurately they could predict your rating for new shows. They normally are within 1 point of your score with a standard deviation of 1.35. The new system is within .5 points of your score, after testing on 100 people. Is this a significant difference in scoring using the p<.05 significance level?
4. 10 students were tested on a new language learning program: 75, 60, 90, 95, 70, 80, 60, 65, 70, and 75. The normal score is 85% with a standard deviation of 14.2%. Is the student’s score statistically lower than normal using the p<.01 significance level?