Assignments: Friday, October 28, 2011.

Due: Thursday or Friday, November 3-4, 2011 in discussion section.

Textbook: Chapter 5 - # 22, 24, 26, 28, 30, 32, 34

Additional Problems:
1. The following data represents the battery life, in hours, for a random sample of 10 full charges on a fifth-generation iPod music player,

   7.3, 10.2, 12.9, 10.8, 12.1, 6.6, 10.2, 9.0, 8.5, 7.1.

   Construct a 95% confidence interval for the population standard deviation, and interpret the interval.

2. Investors not only desire a high return on their money, but they would also like the rate of the return to be stable from month to month [low volatility]. An investment manager invests with the goal of reducing volatility. The following data represent the rate of return (in percent) for his mutual fund for the last 12 months,

   13.8, 15.9, 10.0, 12.4, 11.3, 6.6, 9.6, 12.4, 10.3, 8.7, 14.9, 6.7.

   Construct a 95% confidence interval for the population standard deviation of the rate of return. Suppose a investment manager wants the population standard deviation of the rate of return to be less than 6%. Does the confidence interval validate this desire?

3. The US Golf Association requires that golf balls have a diameter that is 1.68 inches. An engineer for the USGA wishes to discover whether Maxfli XS golf balls have a mean diameter different than 1.68 inches. A random sample was selected, and the diameters are given below,

   1.683, 1.677, 1.681, 1.685, 1.678, 1.686, 1.684, 1.684, 1.673, 1.685, 1.682, 1.674.

   Determine and interpret the P-value using an $\alpha = 0.05$ level of significance.