In-class assignment 9 BQM Spring 2016

Name			

- 1. The average gasoline price of one of the major oil companies has been \$2.25 per gallon. Because of shortages in production of crude oil, it is believed that there has been a significant increase in the average price. In a sample of 36 of the company's gas stations, the average price for the gas stations was \$2.48 and the standard deviation was \$0.12.
 - a. State the null and the alternative hypotheses.
 - b. At $\alpha = .01$, find the critical value(s).
 - c. Are the assumptions of the test satisfied?
 - d. Compute the point estimate of the difference.
 - e. Compute the standard error
 - f. Compute the test statistic.
 - g. What is the conclusion of the test statistic?

- 2. A carpet company advertises that it will deliver your carpet within 15 days of purchase. In a sample of 49 past customers, the average delivery time in the sample was 16.2 days and the standard deviation was 5.6 days.
 - a. State the null and the alternative hypotheses.
 - b. At $\alpha = .01$, find the critical value(s).
 - c. Are the assumptions of the test satisfied?
 - d. Compute the point estimate of the difference.
 - e. Compute the standard error
 - f. Compute the test statistic.
 - g. What is the conclusion of the test statistic?