1.According to Giving and Volunteering in the United States, 2001 Edition, the mean charitable contribution per household in the United States in 2000 was $1623.  A researcher claims that the level of giving has changed since then.  **State the null and alternative hypotheses using correct symbols.**

**2.** With regard to question 1, explain what it would mean to make a Type I error.

3. The mean score on the SAT Math Reasoning exam is 518.  A test preparation company claims that the mean score of students who take its course are higher than the mean of 518.  Suppose sample data indicate that the null hypothesis should not be rejected.  State the conclusion of the company.

4. An energy official claims that the oil output per well in the United States has declined from the 1998 level of 11.1 barrels per day.  He randomly samples 50 wells throughout the United States and determines the mean output to be 10.7 barrels per day.  Assume that ![mathml 
equation]()barrels.  Test the researcher's claim at the ![mathml 
equation]()level of significance.

5.In 1997, 11% of adult Americans had no faith that the federal government was capable of effectively dealing with domestic problems.  In a survey conducted during September 2007 by the Gallup Organization of 1,100 adult Americans, 143 had no faith that the federal government was capable of effectively dealing with domestic problems.  Judge whether the proportion has changed since 1997.  Use a 10% level of significance.