Name: _____ Date: _____

Elementary Statistics HW 8.2 Part 1

1. What is the difference between estimating and hypothesis testing?

2. Claim: 20% of adults smoke. A recent Gallup survey of 1016 randomly selected adults showed that 21% of the respondents smoke.

   a. Express the original claim in symbolic form and state the "opposite" of the claim.

   b. Identify the null and alternative hypotheses.

   $H_0$:

   $H_1$:

3. Claim: When parents use the XSORT method of gender selection, the proportion of bay girls is greater than 0.5. The latest actual results show that among 945 babies born to couples using the XSORT method of gender selection, 879 were girls.

   a. Express the original claim in symbolic form and state the "opposite" of the claim.

   b. Identify the null and alternative hypotheses.

   $H_0$:

   $H_1$:

4. Claim: The mean pulse rate (in beats per minute) of adult females is 76 or lower. For the random sample of adult females, the mean pulse rate is 77.5.

a. Express the original claim in symbolic form and state the "opposite" of the claim.

b. Identify the null and alternative hypotheses.

$H_0$:

$H_1$:

In problems 5-7, find the value of the test statistic.

5. Claim: Three-fourths of all adults believe that it is important to be involved in their communities. Based on a USA Today/Gallup poll of 1021 randomly selected adults, 89% believe that it is important to be involved in their communities.

6. Claim: The mean pulse rate (in beats per minute) of adult females is 76 or lower. For the random sample of 40 adult females in Data Set 1 from Appendix B, the mean pulse rate is 77.5 and standard deviation is 11.55.

7. Claim: For adult females, the standard deviation of their white blood cell counts is equal to 5.00. The random sample of 40 adult females has white blood cell counts with a standard deviation of 2.28.