2. Just before the presidential election in November 2008, a local newspaper conducted a poll of residents of a medium-sized city and found that 120 out of a simple random sample of 250 men intended to vote for Barack Obama and 132 out of an SRS of 240 women intended to vote for Obama.

(a) Is this convincing evidence that there was a gender difference in Obama's support in this city? Support your conclusion with a test of significance, using $\alpha = 0.05$.

3.

In a study of heart surgery, one issue was the effect of drugs called beta-blockers on the pulse rate of patients during surgery. The available subjects were divided at random into two groups of 30 patients each. One group received a beta-blocker; the other group received a placebo. The pulse rate of each patient at a critical point during the operation was recorded. The treatment group had a mean pulse rate of 65.2 and standard deviation 7.8. For the control group, the mean pulse rate was 70.3 and the standard deviation was 8.3.

Conduct an appropriate hypothesis test to see if there is a significant difference between the two groups pulse rates.