1) In a survey, 45% of the respondents stated that they talk to their pets on the answering machine or telephone. A veterinarian believed this result to be too high, so she randomly selected 150 pet owners and discovered that 63 of them spoke to their pet on the answering machine or telephone. Does the veterinarian have a right to be skeptical? Use the 0.1 level of significance

2) A corporate call center hopes to resolve 75% or more of customer calls through an automated computer voice recognition system. It randomly surveys 50 recent customers; 45 report that their issue was resolved. Use significance level = .05

3) The mayor of a town saw an article that claimed the national unemployment rate is 8%. They wondered if this held true in their own town, so they took a sample of 200 residents to test the null hypothesis is that the unemployment rate is the same as the national one versus the alternative hypothesis which is that the unemployment rate is not the same as the national, where p is the proportion of residents in the town that are unemployed. The sample included 22 residents who were unemployed

4) A survey claims that 9 out of 10 doctors recommend aspirin for their patients with headaches. To test this claim, a random sample of 100 doctors is obtained. Of these 100 doctors, 82 indicate that they recommend aspirin. Is this claim accurate? Use a significance level of 0.05

5) We want to test the hypothesis that more than 30% of household in the US have internet access (with a significance level of .05). We sample 150 households and find that 57 of them have internet access

6) In 2010, 24% of children were dressed as Justin Bieber for Halloween. We want to test whether or not this proportion increased in 2011 (at a significance level of .01). In 2011, we randomly poll 1000 children who dressed up for Halloween and found that 254 of them dressed up as Justin Bieber

7) Suppose we think the casino is cheating by using dice that do not sum to seven as often as they should (a fair pair of dice should add to seven $1/6^{th}$ of the time). We collect data on 1000 dice rolls and find that 153 of them sum to seven. Is this enough evidence to accuse them of cheating? Use a significance level of .05