1. Participants in the All American Soap Box Derby Championships in Akron, Ohio include both boys and girls (Harrow & Kereslidze, 2006). Suppose 120 of these soapbox racers are sampled and 54 of them are girls. Do these data show that only a minority of the participants are girls? Use a significance level of 0.05.
Problem 2 Author: 

2. In March 2007, 49% of Americans felt that the U.S. made the wrong decision in using military force in Iraq. A sample of 1020 people taken in February 2008 showed that 550 now felt that the U.S. made the wrong decision in using military force in Iraq. (Data simulated from Pew Research Center for the People & the Press, 2008.) Do these data provide sufficient evidence at the 0.10 level of significance to conclude that the percentage of Americans who felt that the U.S. made the wrong decision in using military force in Iraq increased between March 2007 and February 2008?
3. In 1987, when the unemployment rate for the nation was 6.2 percent, a sample of 370 Boston workers showed that 10 were unemployed. (Data simulated from Freeman, 1991.) Do these data provide sufficient evidence at the 0.01 level of significance to conclude that the unemployment rate in Boston was less than the national unemployment rate in 1987?
4. A gay rights activist thinks that if Americans believe homosexuality is not chosen, the majority of them will then consider homosexuality an acceptable lifestyle. To test this, he asks a sample of Americans whether they believe homosexuality is chosen and whether they consider it an acceptable lifestyle. Out of 178 who believe homosexuality is not chosen, 101 say they consider it an acceptable lifestyle. (Data simulated from Schmalz, 1993.) Can we conclude at the 0.05 level of significance that the gay activist’s belief is true?