## **MCTC C-Now Intro Stats**

## 9.3 Hypothesis Tests for Population Proportions Classwork

1. For a number of years, the proportion of entering students who survived the first year in engineering school was about 65% nationwide. Engineering schools then instituted various measures to improve the situation, including more diligent screening of admissions and more counseling help. After the change, in a random sample of 800 students who were beginning their first year at engineering school, 560 (or 70%) of the students survived the year. Is this evidence at the 5% significance level that the changes instituted by the schools were effective?

**2.** A 2012 survey asked a random sample of 439 U.S. teen girls aged 13-17 if they liked Justin Bieber. In this sample, 112 said "yes." The same survey was conducted in 2011 which resulted in 136 out of 439 saying that they liked the Biebs. Is this evidence that his popularity went down from 2011 to 2012?

