

Chapter Seventeen Part Two: Examples

For this lecture let's walk through a few examples of Hypothesis testing using our seven steps that we learned last lecture.

Example *A magazine is considering the launch of an online edition. The magazine plans to go ahead only if it's convinced that more than 25% of current readers would subscribe. The magazine contacts a simple random sample of 500 current subscribers, and 137 of those surveyed expressed interest. Should the company launch the online edition?*

Example *In 1996, 34% of all students K-12 in the U.S. had not been absent from school even once during the previous month. Researchers are interested in whether or not there is statistical evidence of a change in student attendance? In the 2000 survey, responses from 8302 randomly selected students showed that this figure has slipped to 33%. Perform a hypothesis test to answer this question.*

Example *According to the Association of American Medical Colleges, only 46% of medical school applicants were admitted to a medical school in fall of 2006. Upon hearing this, the trustees of City College expressed concern that only 77 of 180 students in their class of 2006 who applied to medical school were admitted. Should the trustees of City College be concerned that the acceptance rate for their students applying to medical school is significantly less than the national average?*

Perform a hypothesis test to answer this question.

Example *A random sample of 1000 U.S. adults were asked which soft drink they preferred, Pepsi or Coke. 528 people said they preferred Coke. Is this enough evidence to state that the population of U.S. adults have a preference between Coke and Pepsi?*