

STAT 210 Practice: Conduct an appropriate hypotheses test for each scenario.

- 1) A new medication for treating a particular ailment is to be compared to a standard medication to see if there is any evidence that the proportion of complete cures is higher for the new medication. In a simple random sample of 200 subjects, the new medication is found to produce 140 complete cures; in a simple random sample of 300 subjects, the standard medication is found to produce 180 complete cures.

2.

An elementary school teacher is interesting in knowing if there is a significant difference in the average reading speed of fifth grade boys and girls. She randomly selects 40 fifth grade boys and 40 fifth grade girls for the study. She gives each student several pages of the same book to read. The time it takes them to complete the reading is recorded in minutes. The teacher is trying to determine if there is pervasive evidence to conclude at $\alpha = 0.05$ there is a difference in average reading speed of fifth grade boys and fifth grade girls. The results are summarized in the following table:

	n	\bar{x}	s
Boys	40	10	3
Girls	40	11	2