Section 9.1 - Two Proportions

In this section, we

1. Test a claim about two population proportions where $H_0: p_1 = p_2$
2. Construct a confidence interval estimate for the difference between two population proportions: $p_1 - p_2$

For the assumptions and formulas, see the table on pages 416-417.

Example

Labor statistics indicate the 77% of cashiers and servers are women. A random sample of cashiers and servers in a large metropolitan area found that 112 of 150 cashiers and 150 of 200 servers were women. At the level $\alpha = 0.05$, is there sufficient evidence to conclude that a difference exists between the proportions of servers and cashiers who are women?

Example

In a sample of 200 men, 130 said they used seat belts. In a sample of 300 women, 63 said they used seat belts. At the level $\alpha = 0.01$, test the claim that men are more safety-conscious than women.