

2. A recent study reported that in a random sample of 248 women, 58 had changed their political affiliation since the last election. It also reported that 120 in a random sample of 387 men had changed political affiliation. The researchers would like to know if these data provide convincing evidence that the proportion changing political affiliation is greater for men than for women.
- State the hypotheses of interest.
  - Identify the appropriate test and verify the conditions that must be met.
  - Is there convincing evidence that the proportion changing political affiliation is greater for men than for women? Use a significance level of 0.05.

1. Two types of fertilizer for roses are being considered by a housing community for their landscaping needs. The community decided to test the fertilizer on 170 bushes to see if one yielded more rose growth than the other. Each rose bush was assigned at random to one of the two fertilizers. The average growth, in centimeters, for each fertilizer was recorded. Fertilizer A is less expensive and will be used unless there is convincing evidence that mean growth is greater for Fertilizer B. Carry out an appropriate hypothesis test using  $\alpha = 0.05$ , and make a recommendation as to which fertilizer should be used.

<b>Fertilizer</b>	<b>Sample Size</b>	<b>Mean Growth (cm)</b>	<b>Standard Deviation</b>
Type A	87	12.7	1.5
Type B	83	13.3	2.2

1. Regina is worried that the color of her new cardigan will attract the attention of killer bees in southern California where she is going to hike. To settle her nerves she looks at the American Killer Bee Association website. It shows that these bees are highly agitated by various colors. They have found that 75% of bees are agitated by green, 9% by blue, 6% by purple or pink, and the remaining 10% by other colors.
- (a) In a random sample of 200 killer bees, how many would you expect to be agitated by each color?
- (b) A recent study of 120 randomly selected people stung by killer bees last year found the individuals were wearing the colors shown in the table below. Do these data provide convincing evidence that the color distribution of colors worn by people stung by killer bees is different from the percentages given on the web site?

**Color Worn By Individual Stung By Killer Bees**

Green	Blue	Purple/Pink	Other
86	21	6	7