

- 1) A recent study compared the proportions of young women and men who use Instagram. A total of 537 young women and 532 young men were surveyed. 328 of the women and 234 of the men stated that they use Instagram. construct and interpret a 95% confidence interval for the difference in the proportion of all young women and young men who use Instagram.
- 2) Are young women and men equally likely to say they use Instagram? Recall the data from our earlier example: 328 out of 537 women (61.1%) and 234 out of 532 men (44.0%) use Instagram. Perform a significance test to see if the difference is large enough to lead us to believe that the population proportions are not equal.

- 3) The adviser of an ecology club at a large college believes that the group consists of 10% freshmen, 20% sophomores, 40% juniors, and 30% seniors. The membership for the club this year consisted of 14 freshman, 19 sophomores, 51 juniors, and 16 seniors. At  $\alpha=.10$ , test the adviser claim. (Create a table)