1. A researcher wishes to know if there is an association between the gender of science teachers and the teaching effectiveness ratings they receive from students. Run a test of hypothesis using α = 0.05.

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| **Teaching Effectiveness** | **Gender of Science Teacher** | |
| **Male** | **Female** |
| High | 53 | 68 |
| Fair | 29 | 7 |
| Low | 18 | 25 |

1. A field researcher would like to find out if there is an association between the gender of viewers and their approval of a new TV program. Run a test of hypothesis using α = 0.05.

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| **Choice** | **Male** | **Female** |
| Like the program | 50 | 56 |
| Indifferent | 23 | 16 |
| Do not like the program | 43 | 55 |

1. An advertiser runs a commercial on national television and wants to determine whether the proportion of people exposed to the commercial is equal throughout the country. A random sample of 100 people is selected at each of five locations, and the number of people in each location who have seen the commercial at least once during the week is recorded. The numbers are as follow: location A, 32 people; location B, 59 people; location C, 78 people; location D, 40 people; and location E, 10 people. Do you believe that the proportion of people exposed to the commercial is equal across the five locations? Use α = 0.01