

# Lesson 19: Inference for Several Proportions, Goodness-of-Fit, and Independence

## Preparation

### Solutions

Please note that the steps show rounded numbers, but that the final answers to the problems are calculated without rounding.->## Solutions

| Problem | Part | Solution   |
|---------|------|--|
| 1       | -    | $H_0$ : The row variable and the column variable are independent<br>$H_a$ : The row variable and the column variable are not independent   |
| 2       | -    | True   |
| 3       | A    | $H_0$ :<br>Party affiliation and whether they were in favor or against Prop 8 are independent<br>$H_a$ :<br>Party affiliation and whether they were in favor or against Prop 8 are not independent |
| 3       | B    | That all expected cell counts are greater than 5   |
| 3       | C    | The requirements are met because all expected counts are greater than or equal to five   |
| 3       | D    | $\chi^2 = 33.96$   |
| 3       | E    | $df = 1$   |
| 3       | F    | P-value = 0  |
| 3       | G    | reject the null hypothesis   |
| 3       | H    | We have sufficient evidence to show that the party affiliation and the voters' views on Proposition 8 are not independent.   |