

Chi-Square

One-sample: Theoretic Expectations: (Use proportions from theory)

Equal Probability: N / n of categories

$$\chi^2 = \sum \frac{(f_{\text{observed}} - f_{\text{expected}})^2}{f_{\text{expected}}}$$

Observed frequency - number in the cell

Expected frequency - Row total divided by number of cells

1. Find observed frequencies for each cell
2. Expected frequencies for each cell
3. Subtract expected frequencies from observed frequencies for each cell
4. Square that number
5. Divide by expected frequency
6. Add these numbers together
7. Compare to critical value
 - Choose .05 or .01
 - Find df for $\chi^2 = R-1$