

Chi-Square Tests

$$\chi^2$$

About Chi-Square Tests

A Chi-Square test is a **hypothesis test**

The null hypothesis is that *the observed categorical distributions are not different from expected, given the row & column frequencies.*

Two different Chi-Square tests are covered here.

- 1) The Chi-square goodness-of-fit test
- 2) The Chi-square test-of-independence

About Chi-Square Tests

Example: Chi-Square goodness of fit:

Did equal numbers of freshmen, sophomores, juniors, and seniors show up to the political rally?

Freshmen	Sophomores	Juniors	Seniors
65	72	70	63

Thus 270 people showed up; equal numbers would be 67.5 in each class

67.5	67.5	67.5	67.5
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The Chi-Square tests if the observed numbers are sig. different from chance.

