Chi Squared Tests

There is a training institute called "Winiit", which claims that 41 out of 100 students in it's class qualify for premier engineering institutes. Normally each year only 33% students are able to make it into premier engineering institutes. So should you enroll yourself in "Winiit"?

- Expectation: that 33 out of 100 qualify for premier insitutes
- Observation : 41 out of 100 qualified

Frequency Table

	Successful	Unsuccessful
Observed	41	59
Expected	33	67

- **Null Hypothesis** : No sig. difference between observed and expected
- **Alternate Hypothesis :** Significant difference

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Chi Square Test

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Here O_i is the observed frequency while E_i is the expected frequency

	Successful	Unsuccessful
Observed	41	59
Expected	33	67

Chi Square Distribution

Calculating Chi Square Statistic

	Successful	Unsuccessful
Observed	41	59
Expected	33	67

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$