

Calculating Chi-Square

Dependent Variable

Low

High

Independent Variable

Low

High

21	112
159	88

Dependent Variable

Low

High

Total

Independent Variable

Low

High

Total

21	112	133
159	88	247
180	200	380

Make sure you get your totals

Dependent Variable

Low

High

Total

Independent Variable

Low

High

Total

%

21	112	133	35%
159	88	247	65%
180	200	380	

Figure out marginal percentages for the dependent variable

Dependent Variable

Low

High

Total

Independent Variable

Low

High

%

180x34%=63		35%
180		

Generate Expected Frequencies: multiply the marginal percentage by the total of each category of the independent variable

Low Low

Low High

High Low

High High

Observed	Expected	O-E	$(O-E)^2 / E$
21	63	-42	28
159	117	42	15.1
112	70	42	25.2
88	130	-42	13.6
Chi-Square:			81.8

Calculate Chi-Square, calculate degrees of freedom, and look it up (e.g. at the .05 level of significance)

Degrees of Freedom: $(\text{Rows}-1) \times (\text{Columns}-1) = (2-1) \times (2-1) = 1$