Calculating Chi-Square

Independent Variable

Dependent Variable	Low	High
Low	21	112
High	159	88

Independent Variable

Dependent Variable	Low	High	Total
Low	21	112	133
High	159	88	247
Total	180	200	380

Make sure you get your totals

Independent Variable

Dependent Variable	Low	High	Total	%
Low	21	112	133	35%
High	159	88	247	65%
Total	180	200	380	

Figure out marginal percentages for the dependent variable

Independent Variable

Dependent Variable	Low	High	%
Low	**180x34%=63**		**35%**
High			
Total	**180**		

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

	Observed	Expected	O-E	$(O-E)^2 / E$
Low Low	21	63	-42	28
Low High	159	117	42	15.1
High Low	112	70	42	25.2
High High	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: (Rows-1) x (Columns-1) = (2-1) x (2-1) = 1