Social Science Statistics

Chi-Square Test Calculator

This is a easy chi-square calculator for a contingency table that has up to five rows and five columns (for alternative chi-square calculators, see the column to your right). The calculation takes three steps, allowing you to see how the chi-square statistic is calculated.

The first stage is to enter group and category names in the textboxes below - this calculator allows up to five groups and categories, but fewer is fine. Note: You can overwrite "Category 1", "Category 2", etc., and you can type in the empty textboxes.

1: Type in the **names** of your categories.

Click for an example

Please enter group and category names.

Group and Category Names					
	Budget	Mid-Range	High Fashion		
East Store					
South Store					
West Store					

Please enter group and category names, above, then press Next.

2: Click "**Next**."

Next

Chi-Square Calculator

3: Type in the **Absolute Frequencies** from your Contingency Frequency Table.

The next stage is to fill in your data. Remember, the data is categorical - the number of subjects observed for each cell.

Enter your Data Below					
	Budget	Mid-Range	High Fashion		
East Store	65	58	80		
South Store	35	50	64		
West Store	35	43	20		

Please enter your categorical data, then press Next.

Next

4: Click "**Next**."

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Okay, we've set up a 3 x 3 contingency table, and we're almost ready to do the chi-square calculation. However, before you hit the "Calculate Chi^2" button, you need to select a significance level. It defaults to .05, but you can choose .01 or .10 if you prefer. You should also take a moment to check your data, and hit Reset if you need to start again.

Column and Row Totals						Row Totals
	Budget	Mid-Range	High Fashion			
East Store	65	58	80			203
South Store	35	50	64			149
West Store	35	43	20			98
Column Totals	135	151	164			450 (Grand Total)

Significance Level:

- ◯ .01
- ◉ .05
- ◯ .10

[Calculate Chi^2]   [Reset]
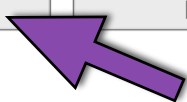
5: Click "**Calculate Chi^2**."

Chi-Square Calculator

Success! The contingency table below provides the following information: the observed cell totals, (the expected cell totals) and [the chi-square statistic for each cell].

The chi-square statistic, *p*-value and statement of significance appear beneath the table. Blue means you're dealing with dependent variables; red, independent.

Results						Row Totals
	Budget	Mid-Range	High Fashion			
East Store	65 (60.90) [0.28]	58 (68.12) [1.50]	80 (73.98) [0.49]			203
South Store	35 (44.70) [2.10]	50 (50.00) [0.00]	64 (54.30) [1.73]			149
West Store	35 (29.40) [1.07]	43 (32.88) [3.11]	20 (35.72) [6.92]			98
Column Totals	135	151	164			450 (Grand Total)

The chi-square statistic is 17.1986. The *p*-value is .001768. The result is significant at $p < .05$.

6: Here is your **chi-square statistic** and **p-value.**