

TECHNOLOGY CORNER

27. Chi-square tests for two-way tables with HP Prime



You can use the HP Prime to perform calculations for a chi-square test for homogeneity. We'll use the data from the restaurant study to illustrate the process.

- Press **Apps** and tap the *Inference* app icon. The app opens in Symbolic view.
- Tap the **Method** field and choose χ^2 test. Tap the **Type** field and choose 2-way test.

- Press **Num** to open Numeric view. Enter the observed counts in the matrix ObsMat. The data can be found on Page 705.

	1	2	3
1	30	39	30
2	11	1	19
3	43	35	35

- Tap **Calc** to see the test results. The χ^2 value is displayed, along with its associated probability and the degrees of freedom.

Stats	Value
χ^2	18.2792115
P	0.00108828
DF	4

- Tap **Exp** to see the matrix of expected counts and tap **OK** when you are done.

34.222222	30.555556	34.222222
10.716049	9.567901	10.716049
39.061728	34.876543	39.061728

- Tap **Cont** to see the matrix of the χ^2 contributions by category; again, tap **OK** when you are done.

0.52092352	2.3337373	0.52092352
0.00752403	7.67241736	6.4038374
0.39706341	0.00043701	0.42234786

The results agree with our previous calculations.

The result matrices are available to you in Home view via the variables ExpMat and ContribMat.