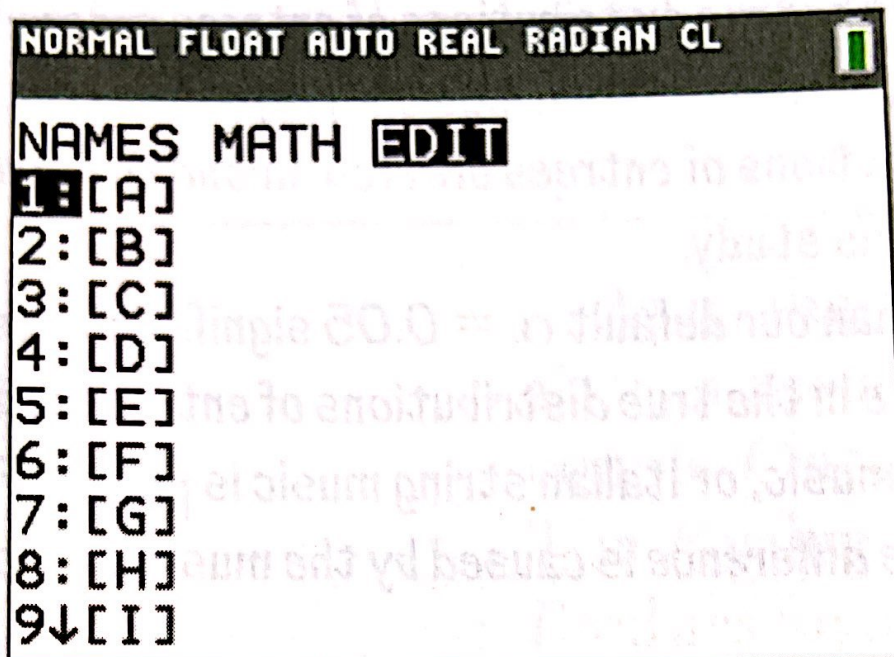
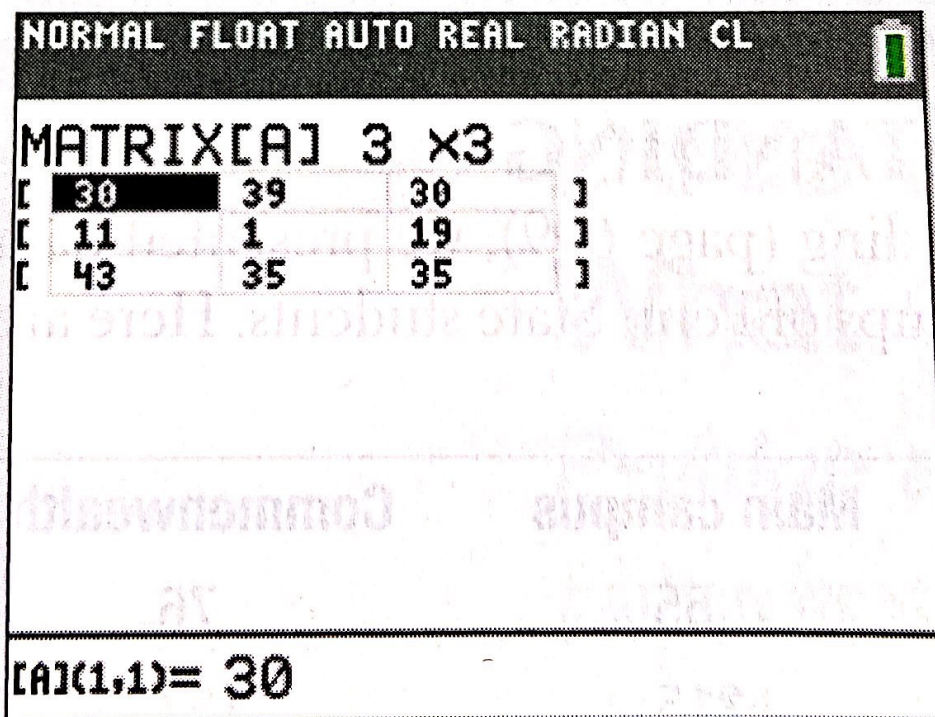


- Press **2nd** **X⁻¹** (MATRIX), arrow to EDIT, and choose A.
- Enter the dimensions of the matrix: 3×3 .



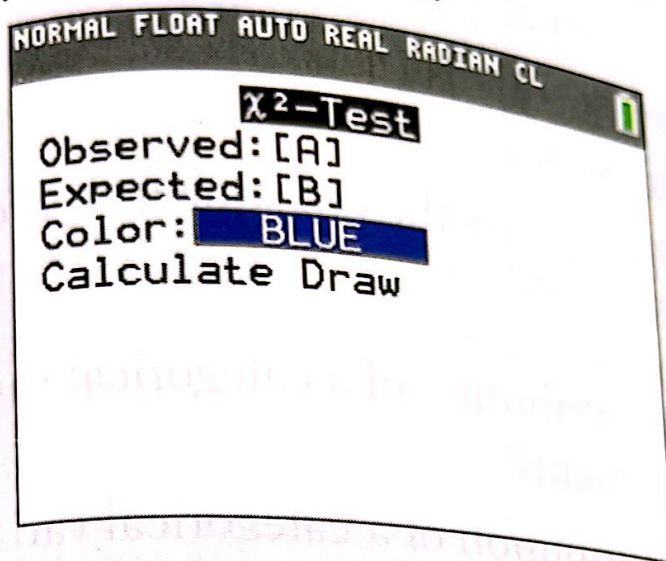
- Enter the observed counts from the two-way table in the matrix.



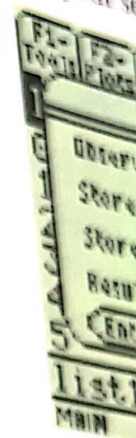
- Specify the chi-square test, the matrix where the observed counts will be stored.

- Press **STAT**, arrow to TESTS, and choose χ^2 -Test.
- Adjust your settings as shown.

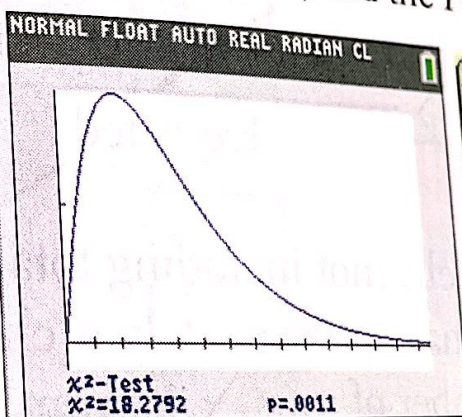
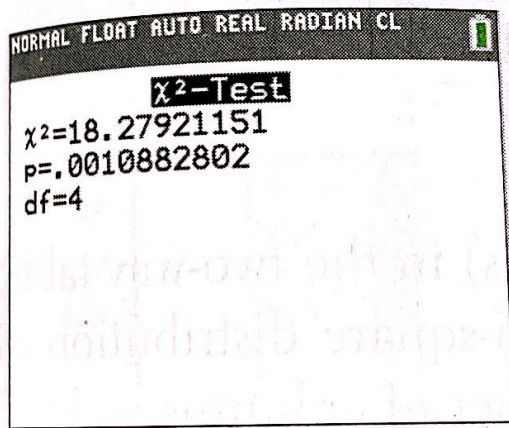
Section 11.2 Inference



- In the Statistic **F1** (**F6**), an
- Adjust your se



- Choose "Calculate" or "Draw" to carry out the test. If you choose "Calculate", the P-value, and df shown below. If you specify "Draw," the chi-square distribution will be drawn, the area in the tail will be shaded, and the P-value will be displayed.



F1=	F2=	F3=	F4=	F5=
Tools	Calc	Test	Draw	Stat
1	2	3	4	5
Chi-2	=18.2792			
P Value	=.0010882802			
df	=4			
Exp Mat	=10.0			
Comp Mat	=10.0			
Enter=OK				
list1=0,1,2,3				
MAIN				

- To see the expected counts, go to the home screen and ask for a matrix.
 - Press **2nd** **X⁻¹** (**MATRIX**), arrow to **EDIT**, and choose **[B]**.

NORMAL FLOAT AUTO REAL RADIAN CL				
MATRIX[B] 3 x3				
[	34.222	30.556	34.222	]
[	10.716	9.5679	10.716	]
[	39.062	34.877	39.062	]

We'll discuss the *Comp List* results later.

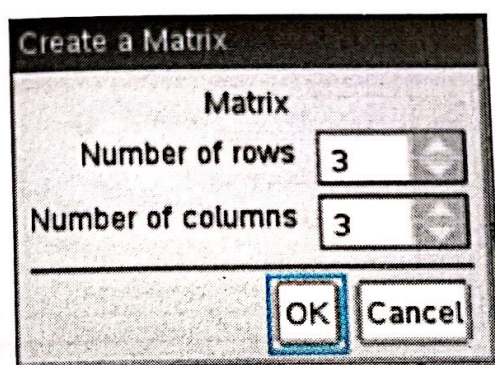
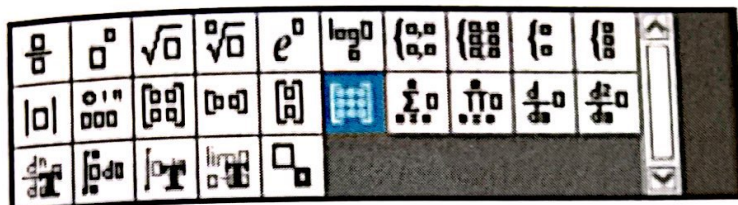
27. Chi-square tests for two-way tables on the calculator

You can use the TI-Nspire to perform calculations for a chi-square test for homogeneity. We'll use the data from the restaurant study on page 704 to illustrate the process.

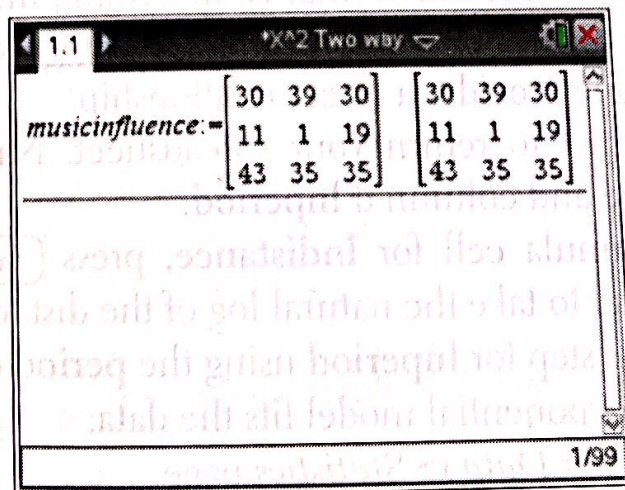
1. Press $\left[\frac{\square}{\square} \right]$ ($\left[\frac{\square}{\square} \right]$ $\left[\text{A} \right]$) to insert a *Calculator Scratchpad*.

2. Define a matrix by doing the following:

- Name your matrix by typing `musicinfluence` $\left[\text{ctrl} \right] \left[:= \right]$ $\left[\left(\begin{smallmatrix} \square & \square & \square \\ \square & \square & \square \\ \square & \square & \square \end{smallmatrix} \right) \right]$. A box will appear with different math type options. Select $\left[\left(\begin{smallmatrix} \square & \square & \square \\ \square & \square & \square \\ \square & \square & \square \end{smallmatrix} \right) \right]$ and enter "3" for Number of rows and "3" for Number of columns.



- Type in the corresponding row data, pressing $\left[\text{tab} \right]$ between entries. Press $\left[\text{enter} \right]$ when finished.



3. To perform the chi-square test, do the following steps:

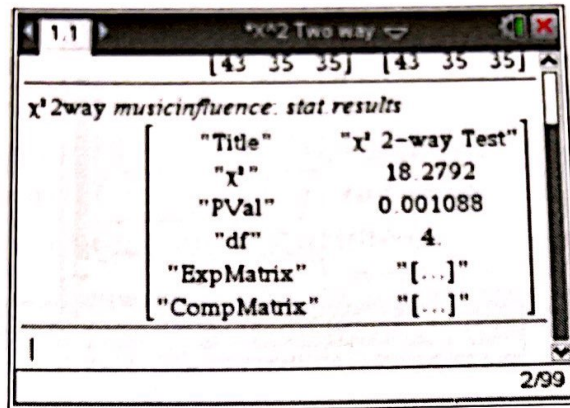
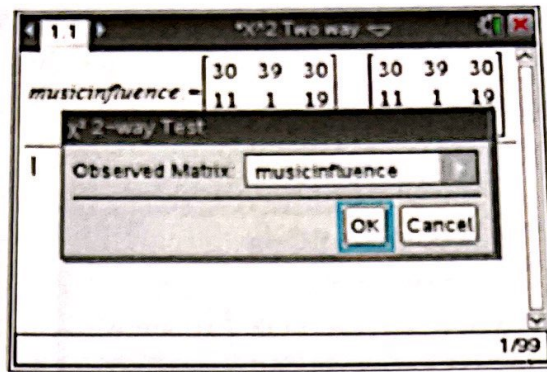
- Press $\left[\text{menu} \right] \rightarrow \text{Statistics} \rightarrow \text{Stat tests} \rightarrow \chi^2 \text{ 2-way Test}$.
- Specify the observed matrix, $\left[\text{tab} \right]$ to $\left[\text{OK} \right]$, and press $\left[\text{enter} \right]$.
- The results will be displayed and the expected matrix and component matrix will be calculated.

4. To see the and select matrix for

Chapter 28. Calculators

Let's
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2. T



4. To see the expected counts and component matrix, press **var** and select **stat.expmatrix** for the expected matrix or **stat.comp-matrix** for the component matrix.

