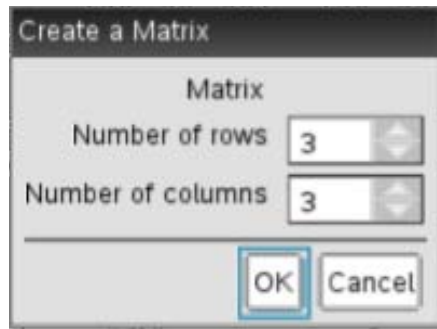
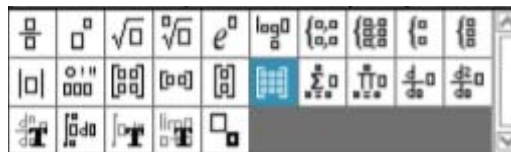


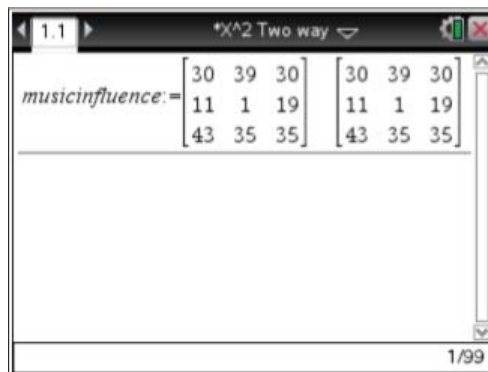
## 29. Chi-square tests for two-way tables on the calculator

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 to illustrate the process.

1. Press  $\left(\frac{\square}{\square}\right)$  ( $\text{ctrl}$   $\left[\text{:=}\right]$   $\left(\frac{\square}{\square}\right)$ ) to insert a *Calculator Scratchpad*.
2. Define a matrix by doing the following:
  - Name your matrix by typing **musicinfluence**  $\left(\text{ctrl}\right)$   $\left[\text{:=}\right]$   $\left(\frac{\square}{\square}\right)$ . A box will appear with different math type options. Select  $\left(\frac{\square}{\square}\right)$  and enter "3" for *Number of rows* and "3" for *Number of columns*.

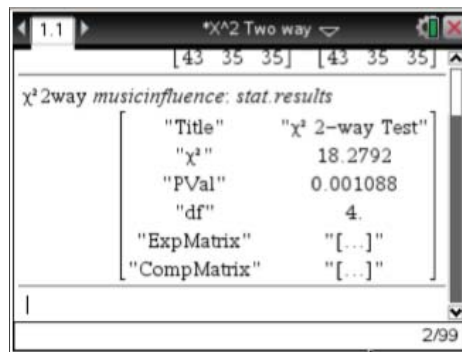
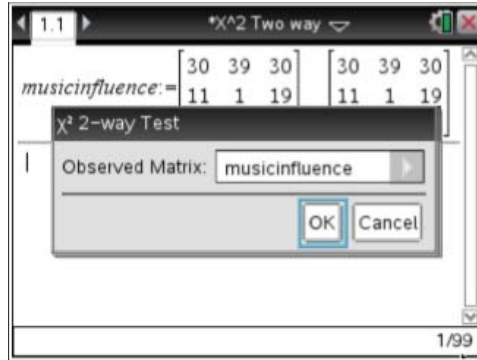


- Type in the corresponding row data, pressing  $\left(\text{tab}\right)$  between entries. Press  $\left(\text{enter}\right)$  when finished.



3. To perform the chi-square test, do the following:
  - Press  $\left(\text{menu}\right)$   $\rightarrow$  *Statistics*  $\rightarrow$  *Stat Tests*  $\rightarrow$   $\chi^2$  2-way Test

- Specify the observed matrix, (tab) to (OK), and press (enter). The results will be displayed and the expected matrix and component matrix will be calculated.



- To see the expected counts and component matrix, press (var) and select **stat.expmatrix** for the expected matrix or **stat.compmatrix** for the component matrix.



# TI-Nspire Technology Corners

