```
/*  SAS program to calculate test of   */
/*  independence of two categorical    */
/*  variables in a two-way contingency */
/*  table.  Data are from the 1982     */
/*  General Social Survey.  Variables  */
/*  are "death penalty opinion" (f=    */
/*  favor, o=opposed) and "gun regis-  */
/*  tration opinion" (favor, opposed). */

options nocenter ls=72;
data;
  input death $ gun $ y;
  cards;
  f f 784
  o f 236
  f o 311
  o o  66
  ;
proc freq;
  tables gun*death / chisq expected;
  weight y;
```

The FREQ Procedure

Table of gun by death

gun death

Frequency Expected Percent Row Pct Col Pct	f	o	Total
f	784 799.5 56.12 76.86 71.60	236 220.5 16.89 23.14 78.15	1020 73.01
o	311 295.5 22.26 82.49 28.40	66 81.499 4.72 17.51 21.85	377 26.99
Total	1095 78.38	302 21.62	1397 100.00

The FREQ Procedure

Statistics for Table of gun by death

Statistic	DF	Value	Prob
Chi-Square	1	5.1503	0.0232
Likelihood Ratio Chi-Square	1	5.3206	0.0211
Continuity Adj. Chi-Square	1	4.8233	0.0281
Mantel-Haenszel Chi-Square	1	5.1466	0.0233
Phi Coefficient		-0.0607	
Contingency Coefficient		0.0606	
Cramer's V		-0.0607	

Fisher's Exact Test

Cell (1,1) Frequency (F)	784
Left-sided Pr <= F	0.0131
Right-sided Pr >= F	0.9912
Table Probability (P)	0.0043
Two-sided Pr <= P	0.0233

Sample Size = 1397