A simple 2x2 table with 4 entries

The data as SAS sees it:

Obs	Sex	Income	Num
1	M	Rich	20
2	M	Poor	10
3	F	Rich	80
4	F	Poor	90

The FREQ Procedure

Sex	Frequency	Percent	Cumulative Frequency	Cumulative Percent
M	30	15.00	30	15.00
F	170	85.00	200	100.00

Income	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Rich	100	50.00	100	50.00
Poor	100	50.00	200	100.00

Frequency Percent Row Pct Col Pct

Table of Sex by Income

Sex	Income		Total
	Rich	Poor	
M	20 10.00 66.67 20.00	10 5.00 33.33 10.00	30 15.00
F	80 40.00 47.06 80.00	90 45.00 52.94 90.00	170 85.00
Total	100 50.00	100 50.00	200 100.00

A simple 2x2 table with 4 entries
(Two one-way tables followed by a 2x2 table)

The FREQ Procedure

Statistics for Table of Sex by Income

Statistic	DF	Value	Prob
Chi-Square	1	3.9216	0.0477
Likelihood Ratio Chi-Square	1	3.9866	0.0459
Continuity Adj. Chi-Square	1	3.1765	0.0747
Mantel-Haenszel Chi-Square	1	3.9020	0.0482
Phi Coefficient		0.1400	
Contingency Coefficient		0.1387	
Cramer's V		0.1400	

Fisher's Exact Test	
Cell (1,1) Frequency (F)	20
Left-sided Pr <= F	0.9859
Right-sided Pr >= F	0.0367
Table Probability (P)	0.0226
Two-sided Pr <= P	0.0734

Sample Size = 200

Data for a 2x5 table

The data as SAS sees it:

(Ignoring variables Num1-Num5)

Obs	Sex	Income	Count
1	F	1	10
2	F	2	12
3	F	3	19
4	F	4	17
5	F	5	20
6	M	1	20
7	M	2	15
8	M	3	12
9	M	4	14
10	M	5	10

Data for a 2x5 table
NOTE that the P-value for the (trend) Mantel-Haenszel test is MUCH MORE significant than the others.
Can you see why?

The FREQ Procedure

Frequency Percent Row Pct Col Pct

Table of Sex by Income

Sex	Income 1	2	3	4	5	Total
F	10 6.71 12.82 33.33	12 8.05 15.38 44.44	19 12.75 24.36 61.29	17 11.41 21.79 54.84	20 13.42 25.64 66.67	78 52.35
M	20 13.42 28.17 66.67	15 10.07 21.13 55.56	12 8.05 16.90 38.71	14 9.40 19.72 45.16	10 6.71 14.08 33.33	71 47.65
Total	30 20.13	27 18.12	31 20.81	31 20.81	30 20.13	149 100.00

Statistics for Table of Sex by Income

Statistic	DF	Value	Prob
Chi-Square	4	8.5610	0.0731
Likelihood Ratio Chi-Square	4	8.6861	0.0694
Mantel-Haenszel Chi-Square	1	7.0135	0.0081
Phi Coefficient		0.2397	
Contingency Coefficient		0.2331	
Cramer's V		0.2397	

Sample Size = 149

The FREQ Procedure

Frequency Percent Row Pct Col Pct

Table of Sex by Income

Sex	Income 1	2	3	4	5	Total
F	10 6.71 12.82 33.33	12 8.05 15.38 44.44	19 12.75 24.36 61.29	17 11.41 21.79 54.84	20 13.42 25.64 66.67	78 52.35
M	20 13.42 28.17 66.67	15 10.07 21.13 55.56	12 8.05 16.90 38.71	14 9.40 19.72 45.16	10 6.71 14.08 33.33	71 47.65
Total	30 20.13	27 18.12	31 20.81	31 20.81	30 20.13	149 100.00

The TTEST Procedure

Statistics										
Variable	**Sex**	**N**	**Lower CL Mean**	**Mean**	**Upper CL Mean**	**Lower CL Std Dev**	**Std Dev**	**Upper CL Std Dev**	**Std Err**	**Minimum**	**Maximum**
Income	**F**	78	3.0154	3.3205	3.6256	1.1691	1.3531	1.6066	0.1532	1	5
Income	**M**	71	2.3662	2.7042	3.0423	1.2258	1.4282	1.7113	0.1695	1	5
Income	**Diff (1-2)**		0.1659	0.6163	1.0667	1.2471	1.3894	1.5686	0.2279		

T-Tests					
Variable	**Method**	**Variances**	**DF**	**t Value**	**Pr > |t|**
Income	**Pooled**	Equal	147	2.70	0.0077
Income	**Satterthwaite**	Unequal	144	2.70	0.0078

Equality of Variances					
Variable	**Method**	**Num DF**	**Den DF**	**F Value**	**Pr > F**
Income	**Folded F**	70	77	1.11	0.6420