

GENERAL HELP SHEET: Starting Point for Two-Way Chi-Square

To decide whether to use SPSS or the interactive spreadsheet you must recognize whether your data are in their “raw” or “tallied” form. Data in their “raw form” are suited to use in SPSS but if in their “tallied form” you are better off using the interactive calculation sheet. These two forms of data are explained further below using an example set of observations on tomato plants whose fruits were either red or yellow and whose leaves were either green or purple

Raw Form

Recording the information for each object produces data in its “raw form”. For example, each row of the data below contains information on a different tomato plant: The first column indicates the colour of the fruit (red or yellow) and the second column the colour of the leaves (green or purple).

Red	Green
Red	Green
Yellow	Green
Yellow	Purple
Yellow	Purple
Red	Purple
Red	Green
Red	Green
Red	Green
Yellow	Green
Yellow	Purple
Yellow	Purple
Red	Purple
Red	Green

If your data are in this form you are well placed to use SPSS. SPSS calculates the frequencies as part of the procedure.

Tallied Form

Counting the number of objects with each combination of characteristics produces data in its “tallied form”. For example the tables below give the tallies (left) and totals (right) for the plants with each combination of fruit and leaf colour characteristics listed above.

FRUIT COLOUR	LEAF COLOUR	
	Green	Purple
Red	IIII	II
Yellow	II	IIII

FRUIT COLOUR	LEAF COLOUR	
	Green	Purple
Red	6	2
Yellow	2	4

If your data are in this form it is quicker not to use SPSS but to use the interactive calculation sheet as the data have already been processed into frequencies.