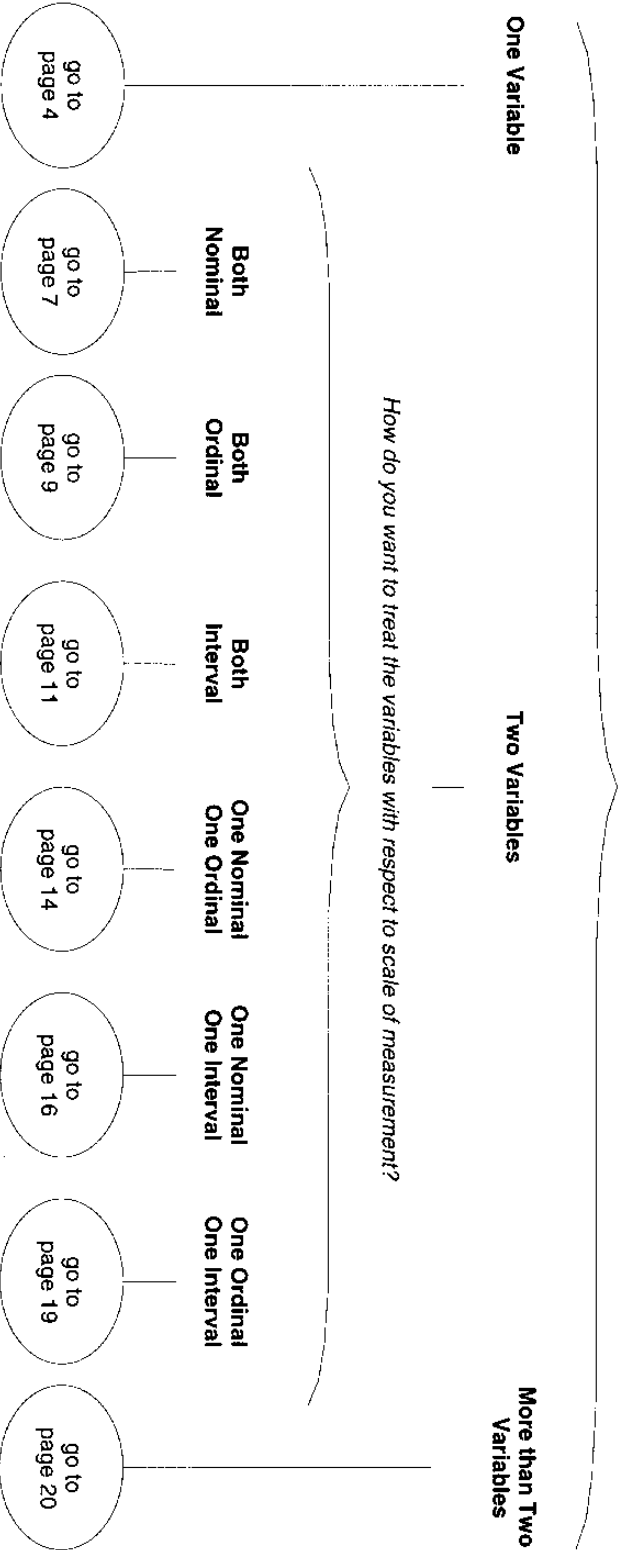


**THE DECISION TREE:
QUESTIONS AND ANSWERS LEADING TO APPROPRIATE STATISTICS OR STATISTICAL TECHNIQUES**

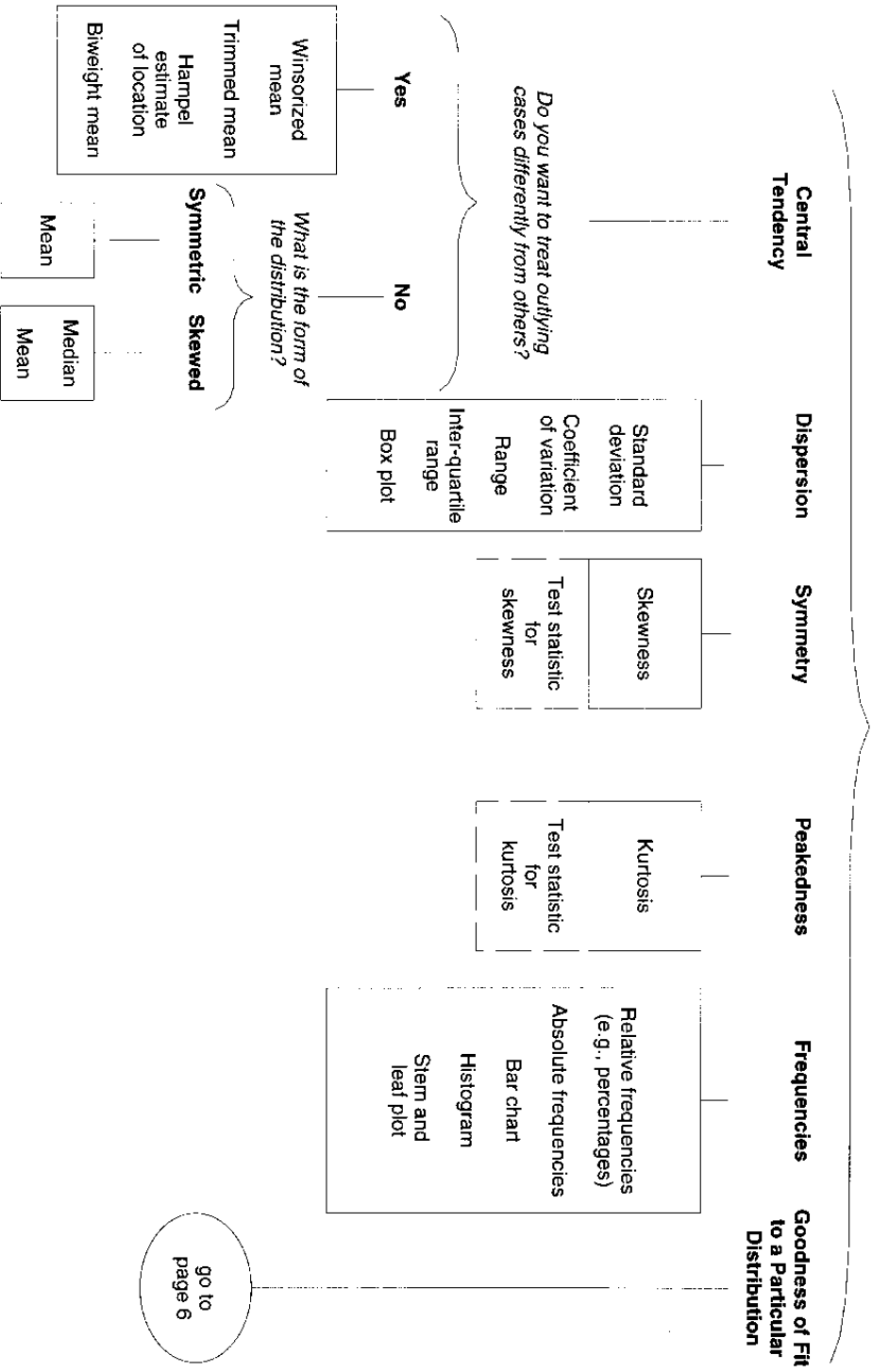
STARTING POINT

How many variables does the problem involve?



ONE VARIABLE: Interval (continued from page 4)

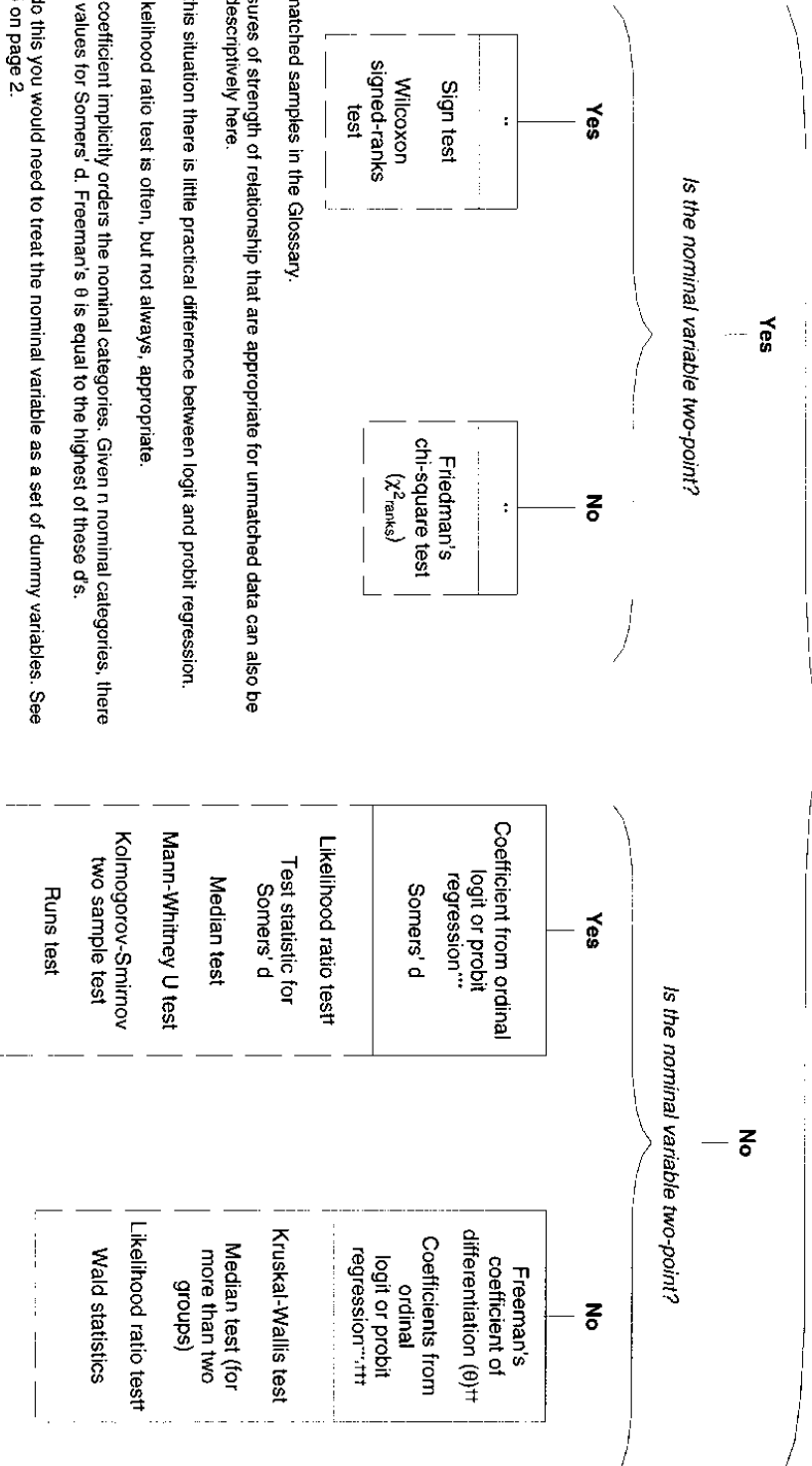
What do you want to know about the distribution of the variable?



TWO VARIABLES: One Nominal, One Ordinal (continued from page 14)

- A distinction made between a dependent and an independent variable
- The nominal variable is independent

Are the cases (e.g., people) in one category of the nominal variable matched to the cases in the other category of that variable?



See matched samples in the Glossary.

†Measures of strength of relationship that are appropriate for unmatched data can also be used descriptively here.

††For this situation there is little practical difference between logit and probit regression.

†The likelihood ratio test is often, but not always, appropriate.

††This coefficient implicitly orders the nominal categories. Given n nominal categories, there are $n!$ values for Somers' d . Freeman's θ is equal to the highest of these d 's.

†††To do this you would need to treat the nominal variable as a set of dummy variables. See note 5 on page 2.

Page	Technique or Test	SAS Procedure or Macro	Relevant Statements, Options, or Menu Choices	SAS Release					
				6.12	6.11	6.10	6.09	6.08	6.04
5 (cont.)	Mean	PROC MEANS		•	•	•	•	•	•
		PROC UNIVARIATE		•	•	•	•	•	•
		SAS/INSIGHT	Analyze: Distribution(Y)	•	•	•	•	•	•
	Median	PROC UNIVARIATE		•	•	•	•	•	•
		SAS/INSIGHT	Analyze: Distribution(Y)	•	•	•	•	•	•
		PROC MEANS		•	•	•	•	•	•
	Standard deviation	PROC UNIVARIATE		•	•	•	•	•	•
		SAS/INSIGHT	Analyze: Distribution(Y)	•	•	•	•	•	•
		PROC MEANS	CV*	•	•	•	•	•	•
	Coefficient of variation	PROC UNIVARIATE		•	•	•	•	•	•
		SAS/INSIGHT	Analyze: Distribution(Y)	•	•	•	•	•	•

*The coefficient of variation is not generated by default in PROC MEANS. If statistics are requested in the PROC MEANS statement, all those desired must be listed.

Page	Technique or Test	SAS Procedure or Macro	Relevant Statements, Options, or Menu Choices	SAS Release					
				6.12	6.11	6.10	6.09	6.08	6.04

Wilcoxon signed ranks test	PROC UNIVARIATE*	TABLES.../CMH	•	•	•	•	•	•
Friedman's chi-square test†	PROC FREQ	TABLES.../CMH	•	•	•	•	•	•
Coefficient from ordinal logit or probit regression	PROC LOGISTIC	LINK=LOGIT or LINK=PROBIT†	•	•	•	•	•	•
Somers' d	PROC FREQ	TABLES.../MEASURES	•	•	•	•	•	•
Likelihood ratio test**	PROC LOGISTIC		•	•	•	•	•	•
Test statistic for Somers' d††	PROC FREQ	TABLES.../MEASURES CL	•					

*The data must be arranged in SAS so that the values of the ordinal variable for matched cases are part of the same observations; then a new variable that is the difference between the matched values for the ordinal variable must be created. This new variable is the one that is analyzed in PROC UNIVARIATE.

†In order to obtain a Friedman's chi-square test in SAS, there must be three variables in the data set: one to identify the subject, another for the response, and another to identify the matched sample. The responses must first be ranked within each subject, and then analyzed in PROC FREQ; see pp. 887-888 of the SAS/STAT User's Guide, Vol. 1 (1990).

††This option is LINK=NORMIT in Release 6.04.

**The likelihood ratio test is printed as -2 log L in the Model Fitting and Global Null Hypothesis portion of the output.

††No hypothesis test is printed, but SAS prints a 95% confidence interval for the statistic when the CL option is specified.