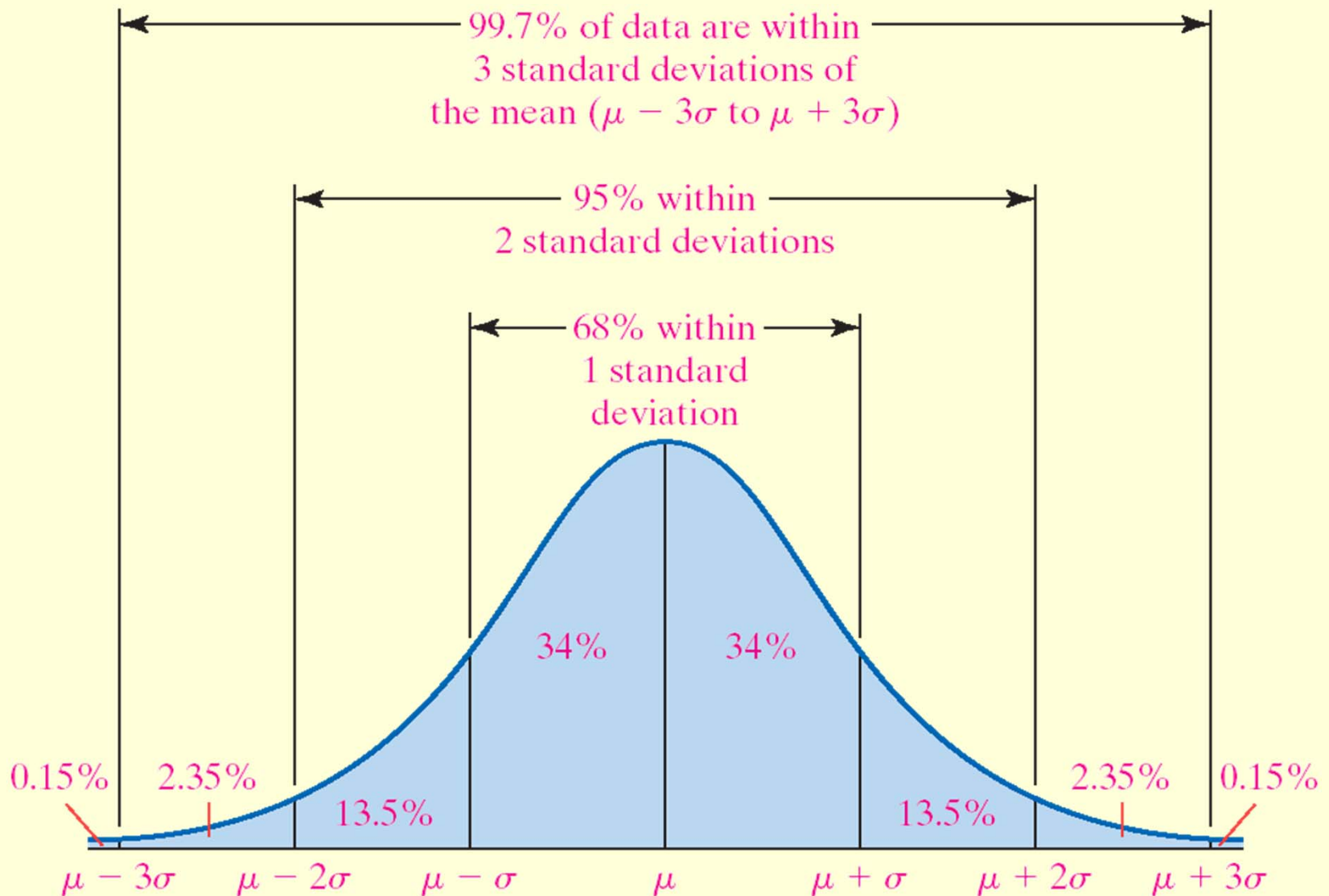


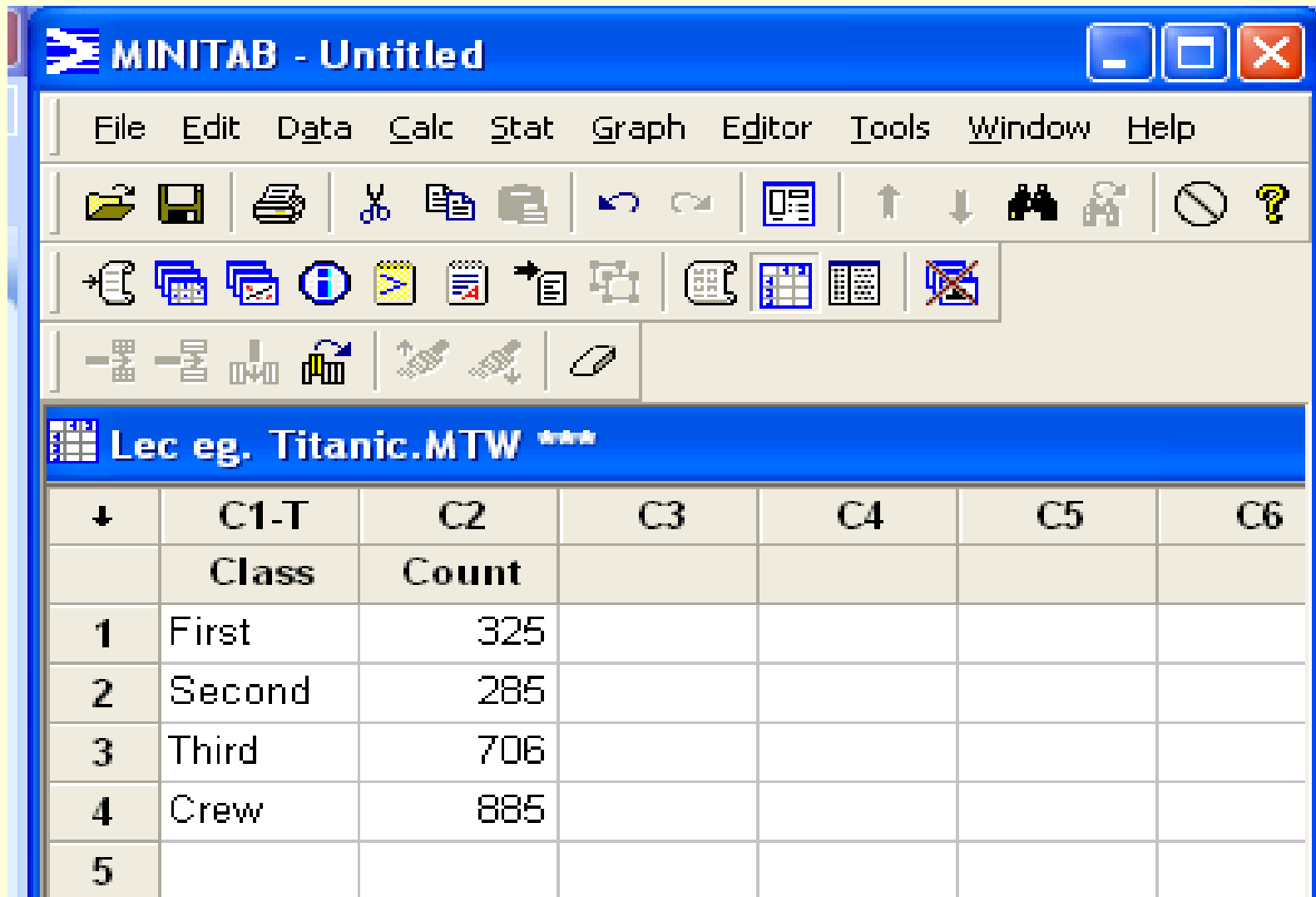
Parameters vs. Statistics

	Population	Sample
Size	N	n
Mean	μ	\bar{X}
Standard deviation	σ	s
Proportion	p	\hat{p}

The Empirical Rule or The 68–95–99.7 Rule



Using Minitab : Entering Data

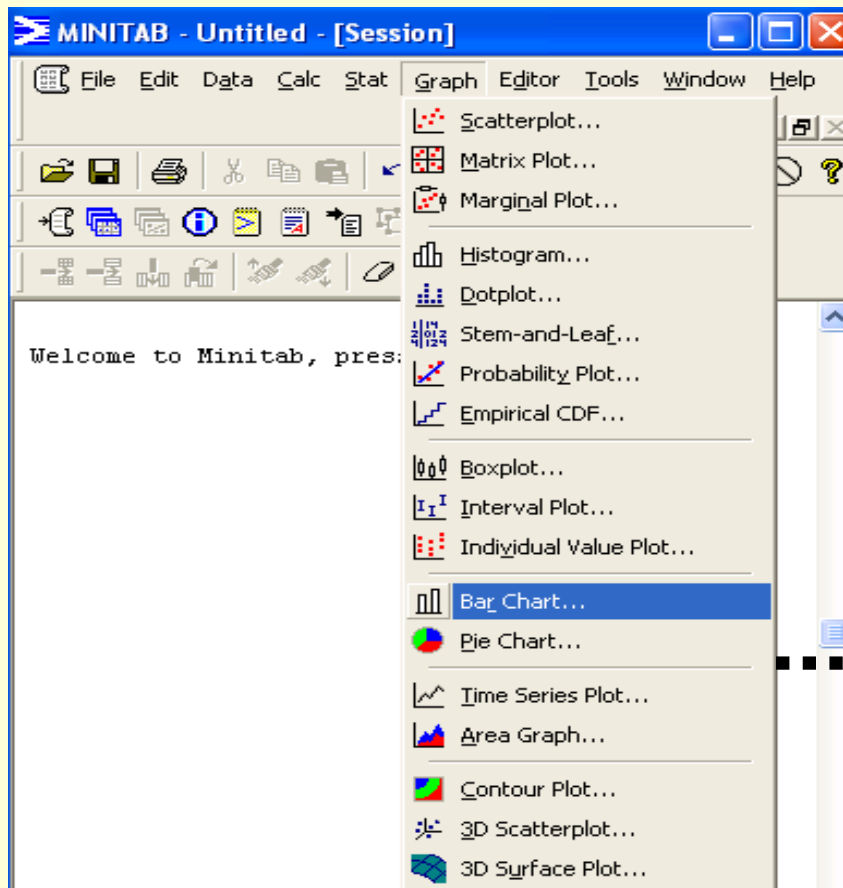


The screenshot shows the Minitab software interface. The title bar reads "MINITAB - Untitled". The menu bar includes File, Edit, Data, Calc, Stat, Graph, Editor, Tools, Window, and Help. The toolbar contains various icons for file operations, editing, and data analysis. The worksheet is titled "Lec eg. Titanic.MTW ***". The data table has 7 columns: a row indicator column, C1-T (Class), C2 (Count), C3, C4, C5, and C6. The data is as follows:

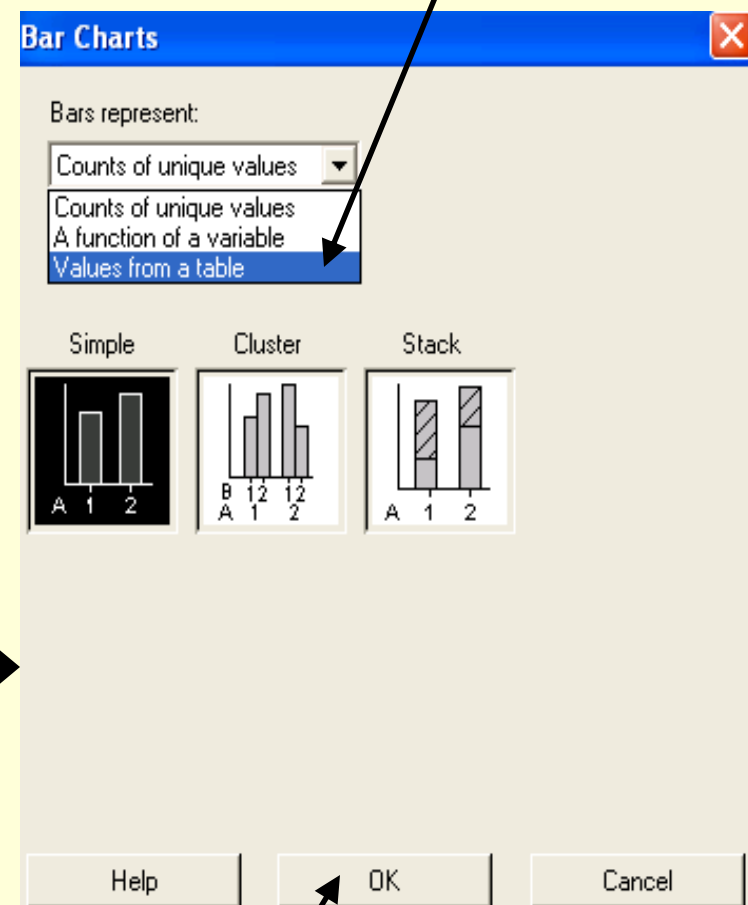
↓	C1-T	C2	C3	C4	C5	C6
	Class	Count				
1	First	325				
2	Second	285				
3	Third	706				
4	Crew	885				
5						

Using Minitab: Bar Chart

1. Choose Graph / Bar Chart...

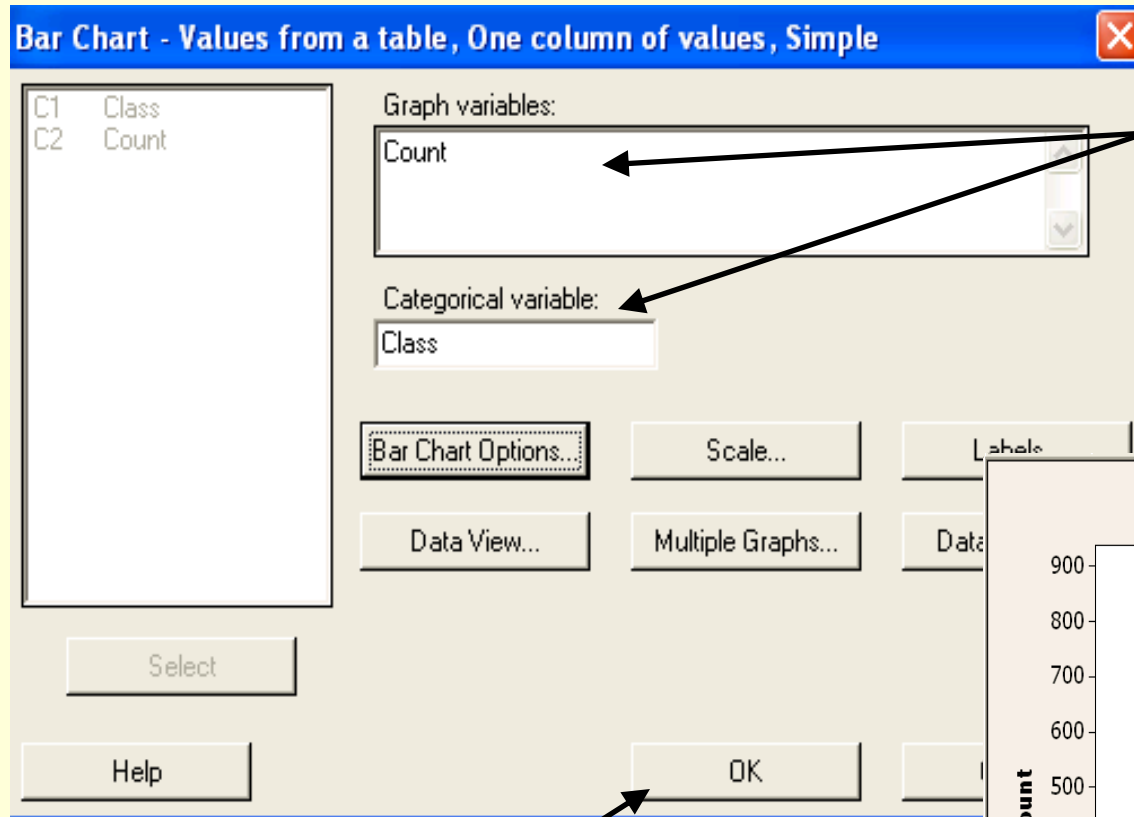


2. Select "value from a table"



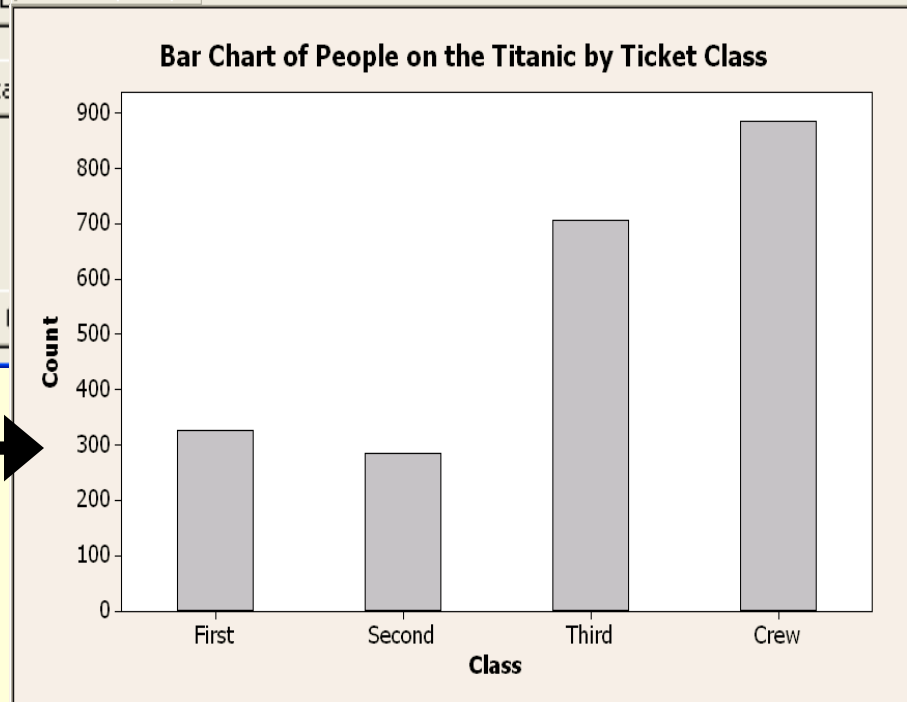
3. Click OK

Using Minitab: Bar Chart



4. Select appropriate data column for graph variable and categorical variable

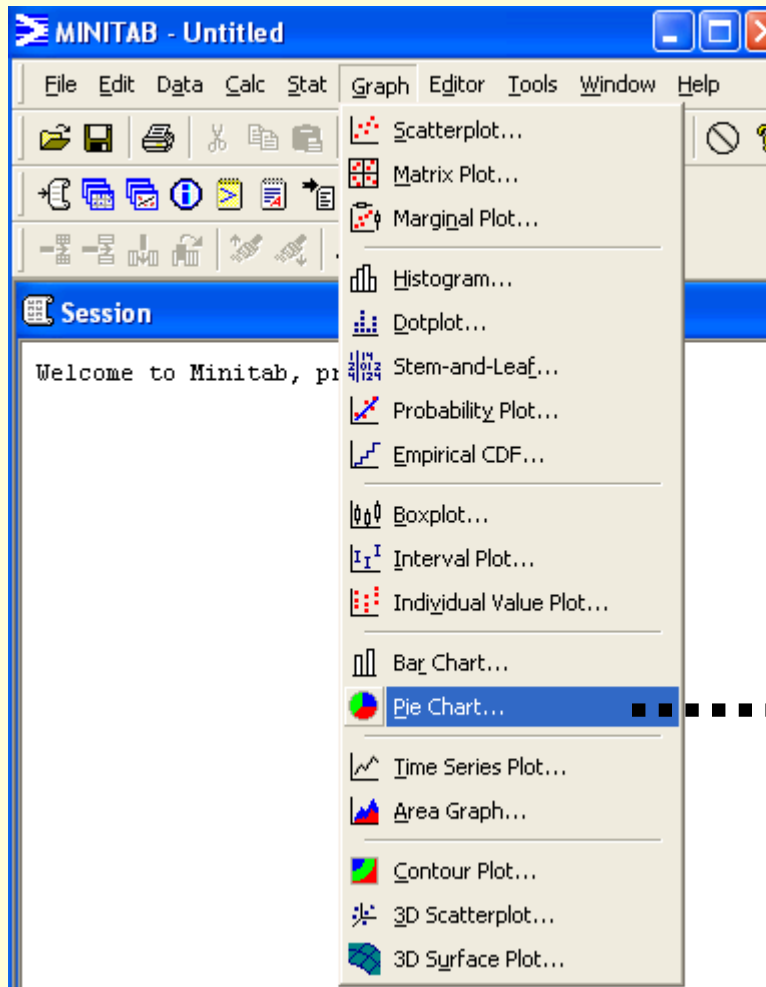
Minitab output:



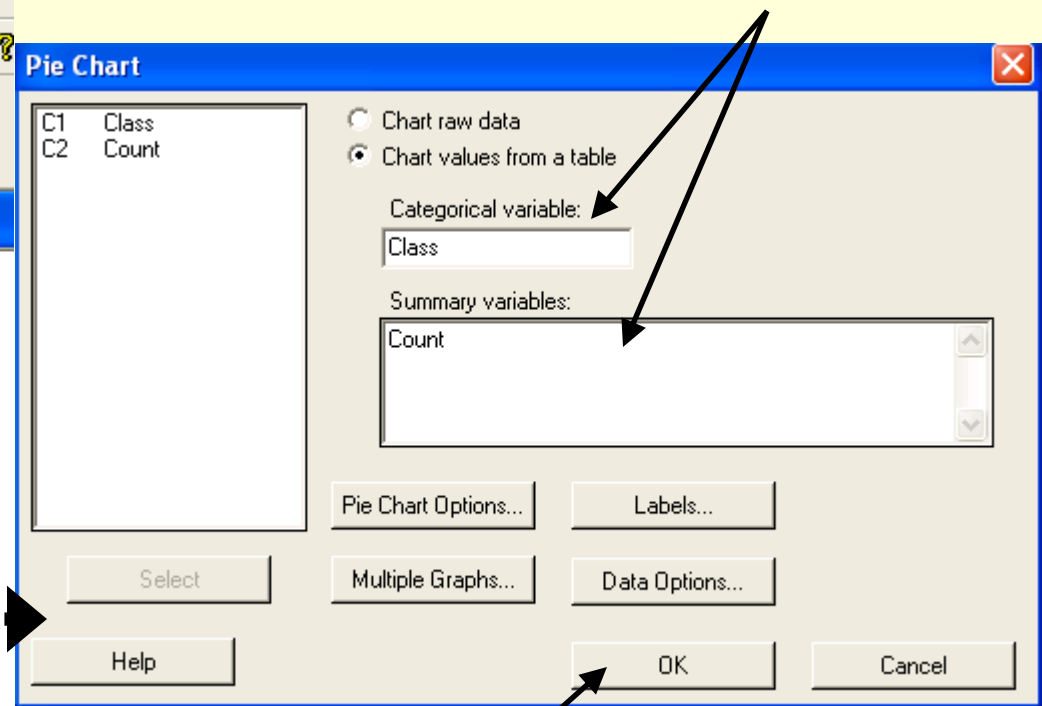
5. Click OK

Using Minitab: Pie Chart

1. Choose Graph / Pie Chart...



2. Select appropriate data column for categorical variable & summary variable

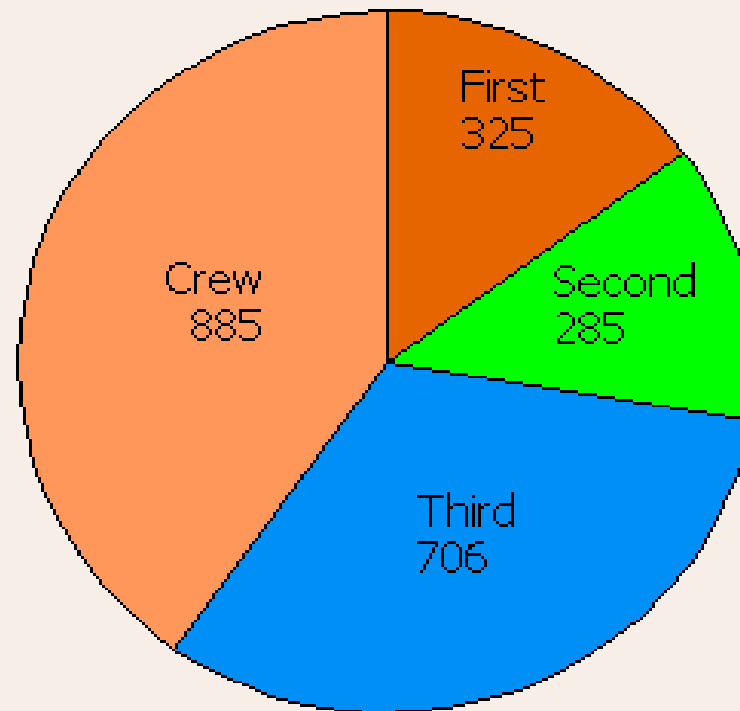


3. Click OK

Using Minitab: Pie Chart

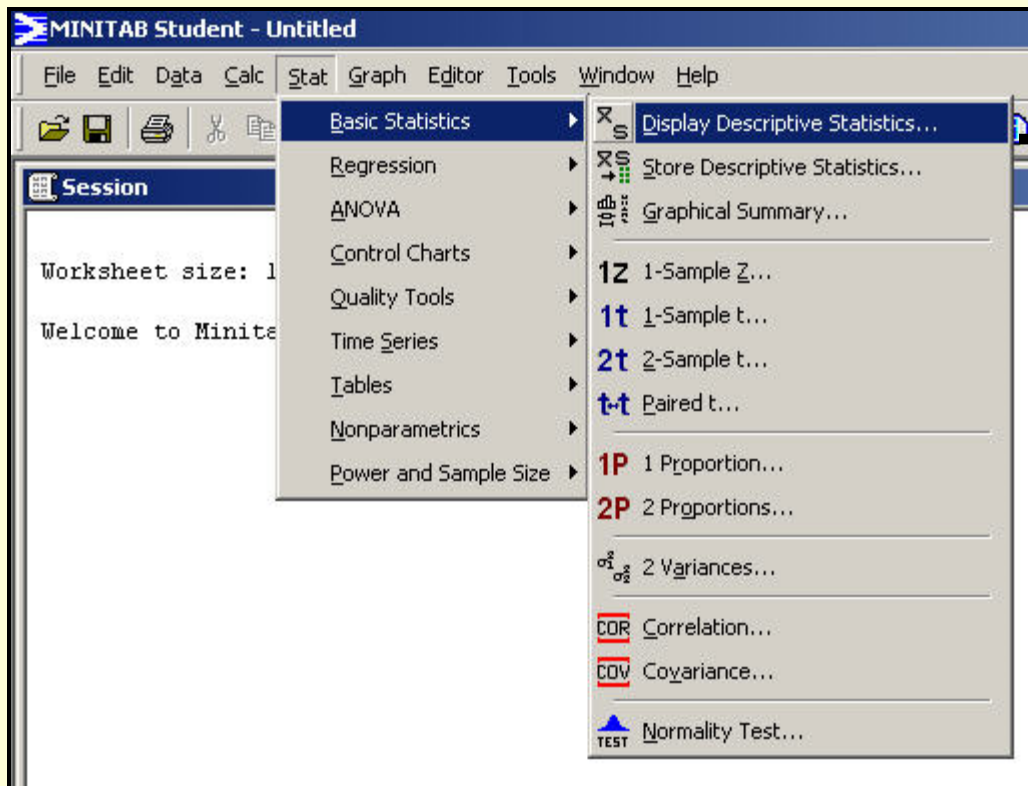
Minitab output:

Pie Chart of The People on The Titanic by Ticket Class

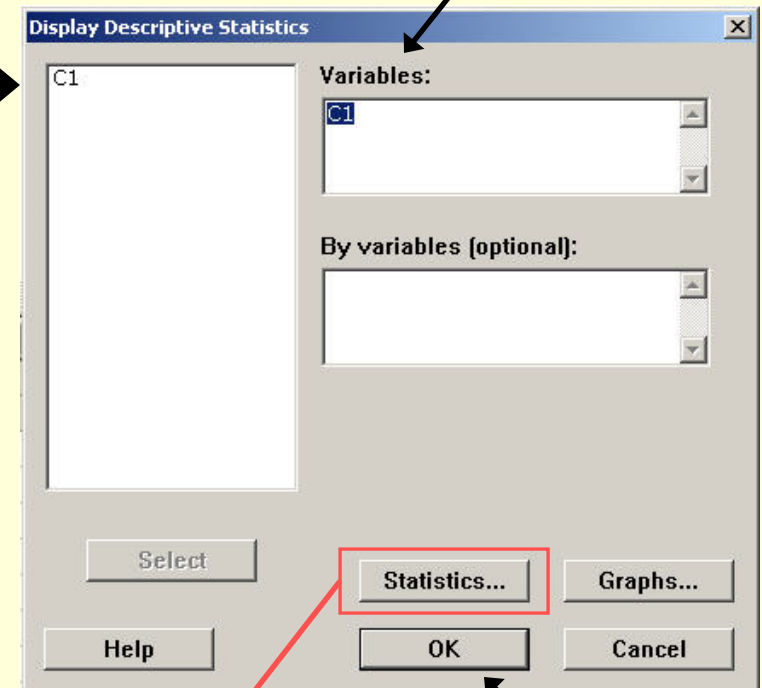


Using Minitab: Descriptive Statistics

1. Select Stat / Basic Statistics /
Display Descriptive statistics...



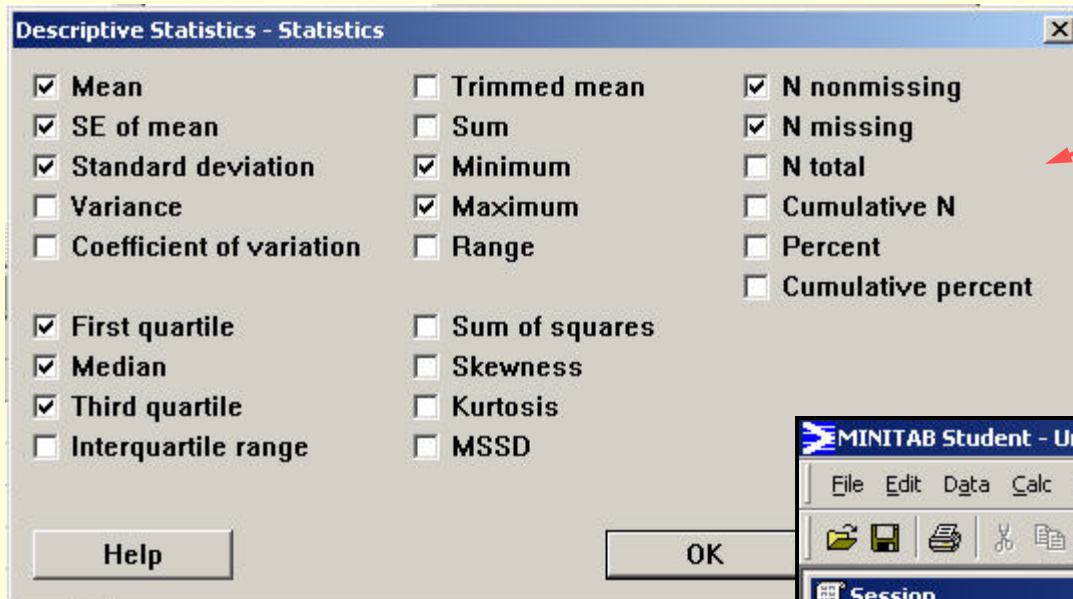
2. Choose appropriate data column



See next slide
for options

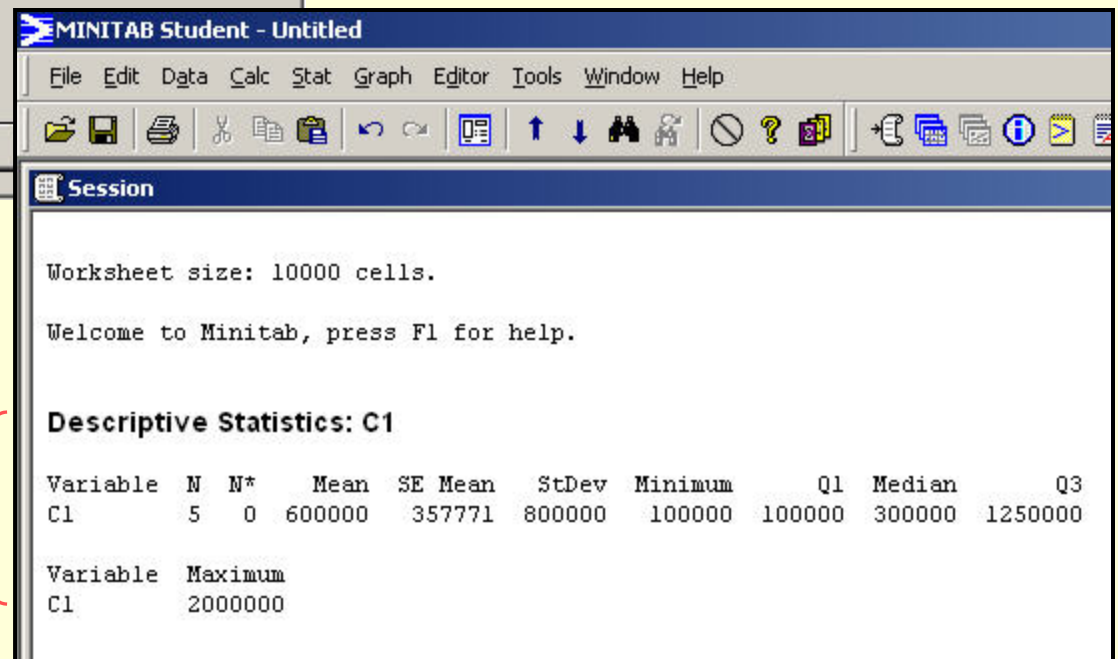
3. Click OK

Using Minitab: Descriptive Statistics



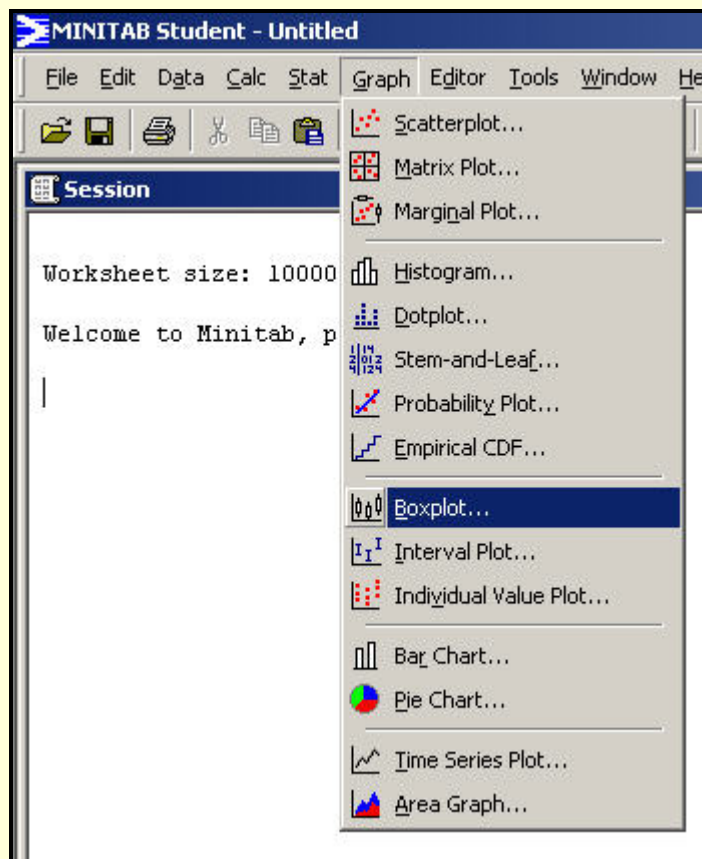
Descriptive
Statistics Options

Minitab
output

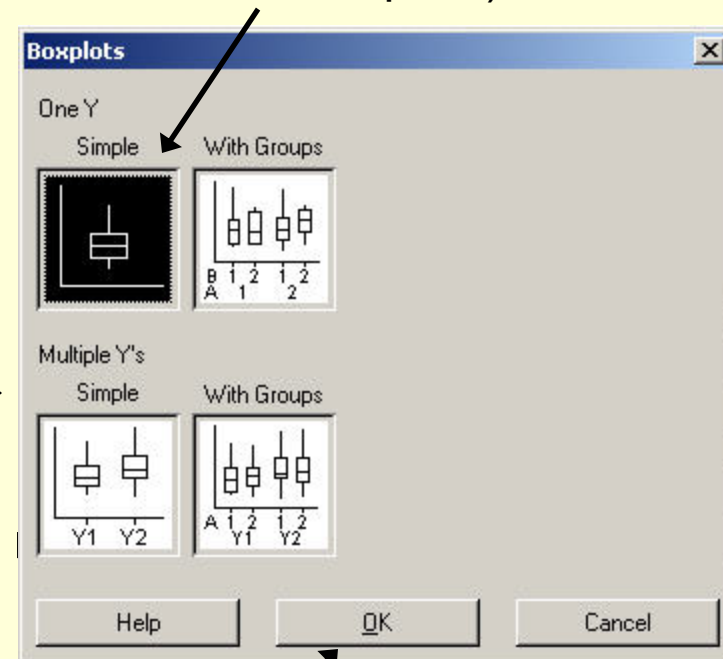


Using Minitab: Boxplot

1. Select Graph / Boxplot...



2. Choose desired plot type:
(note that Minitab uses a vertical
format for boxplots)



3. Click OK

Using Minitab: Boxplot

Minitab output:

Minitab displays outliers with a * symbol

Data:
27
10
5
5
4
3
3
2
2
2
0

