

# Instructions for carrying out statistical procedures and tests using Minitab

These instructions are closely linked to the author's book:

**Essential Statistics for the Pharmaceutical Sciences**  
**John Wiley & Sons Ltd <http://eu.wiley.com>**  
**2007**  
**ISBN: 978-0-470-03468-2**

For all references to chapters or tables, see the above book.

**Using Minitab to obtain a 95% confidence interval for a  
proportion**

## Using Minitab to obtain a 95% confidence interval for a proportion

### Example: Proportion of patients successfully treated (See Section 15.1.1)

This procedure assumes that a number of individuals have each been assigned to one of two categories. In the sample described, 42 out of 50 patients were classed as successfully treated (The remaining 8 as unsuccessful).

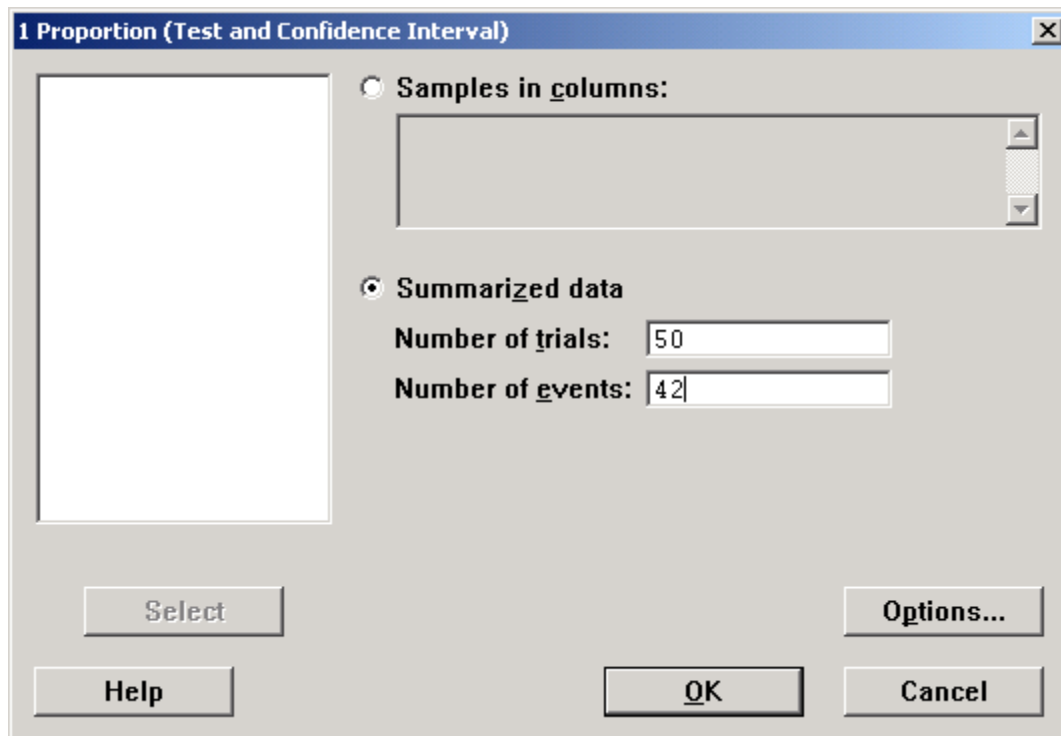
Follow the menus:

*Stat / Basic Statistics / 1 Proportion ...*

Selecting the 'Summarized data' radio button, will activate two boxes for completion.

Number of trials: Here you enter the number of individuals considered. In our case, we have results for 50 patients.

Number of events: Here you enter the number who fell into one of the categories. It does not matter which category you choose. It is more natural to think about proportion successfully treated than the proportion of failures, so we will enter the number of successes (42). The One proportion box will now appear as below:



The screenshot shows the '1 Proportion (Test and Confidence Interval)' dialog box in Minitab. The 'Summarized data' radio button is selected. The 'Number of trials' field is set to 50, and the 'Number of events' field is set to 42. The 'Select' button is disabled. The 'Options...' button is visible. The 'Help', 'OK', and 'Cancel' buttons are also visible.

Clicking OK, will produce the output on the next page.

### Test and CI for One Proportion

Test of  $p = 0.5$  vs  $p \text{ not } = 0.5$

Sample	X	N	Sample p	95% CI	Exact P-Value
1	42	50	0.840000	(0.708874, 0.928299)	0.000

Under 95% CI, you will find the lower and upper confidence limits of 70.9 to 92.8%.

There is a P value because Minitab automatically carries out an hypothesis test, considering a null hypothesis that the population proportion is 50%. This is of no interest in this instance and can be ignored.