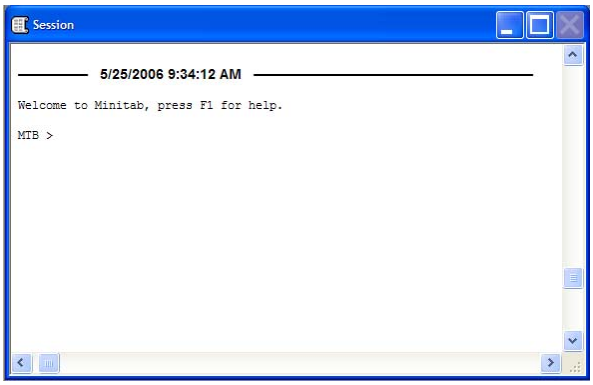
APPENDIX




# Minitab Session Commands

## Session Commands and the Session Window

Most functions in Minitab are accessible through menus, as well as through a command language called session commands. You can use menu commands and session commands interchangeably, or you can use one of the two exclusively. Menu commands provide clickable options through menus and dialog boxes. Session commands allow you to provide specific instructions, through a command language. Most session commands are simple, easy to remember words like PLOT, SAVE, or SORT.

The Session window is primarily used for displaying the results of commands, as text. However, you can also type session commands in the Session window by turning on the MTB> command prompt.

To turn on the MTB> command prompt, click on the Session window and select

**Editor ➤ Enable Command Language**

from the Minitab menu. If you pull down the Editor menu, there is a check box to the left of Enable Command Language. If there is already a check, selecting **Editor ➤ Enable Command**

**Language** will disable the command language. Type commands at the MTB> prompt in the last line of the Session window.

## Rules for Entering Session Commands

A session command consists of one main command and may have one or more subcommands. Arguments and symbols may also be included in the command. Subcommands, which further define how the main command should be carried out, are usually optional. Arguments specify data characteristics.

To execute a command, type the main command followed by any arguments. If the command has subcommands, end the command line with a semicolon. Type subcommands at the SUBC> prompt. Put a semicolon (;) after each subcommand. Put a period (.) after the last subcommand. Press <Enter> to execute a command.

Commands and column names are not case-sensitive; you can type them in lowercase, uppercase, or any combination. You can abbreviate any session command or subcommand by using the first four letters.

Arguments specify data characteristics, such as location or titles. They can be variables (columns or constants) as well as text strings or numbers. Enclose variable names in single quotation marks (for example, HISTOGRAM 'Salary'). In arguments, variable names and variable numbers can be used interchangeably. For example, DESCRIBE C1 C2 and DESCRIBE 'Sales' C2 do the same thing if C1 is named 'Sales.'

You can abbreviate a consecutive range of columns, stored constants, or matrices with a dash. For example, PRINT C2-C5 is equivalent to PRINT C2 C3 C4 C5. You can use a stored constant (such as K20) in place of any constant. You can even use stored constants to form a range such as K20:15, which represents all integers from the value of K20 to 15.

## Command Prompts

The prompts that appear in the Session window help you know what kind of input Minitab expects. There are five different prompts:

MTB> Command prompt; type the session commands here and press Enter.
SUBC> Subcommand prompt; type the subcommands here or type ABORT to cancel the entire command.
DATA> Data prompt; enter data here. To finish entering data and return to the MTB> prompt, type END and press Enter.
CONT> Continuation prompt; if the command from your previous line ends with the contin-

uation symbol &, Minitab displays CONT> on the next line so you can enter the rest of the command or data.

## Session Command Syntax and Menu Equivalents

In the following, commands are listed by function. In the session command syntax, K denotes a constant such as 8.3 or k14, C denotes a column, such as C12 or 'Height,' and E denotes either a constant or column. Square brackets [ ] enclose optional arguments. Menu equivalents follow each command or group of commands.

## General Information

**HELP** command
Help ➤ Search for Help on

**INFO** [C...C]
menu equivalent not available

**STOP**
File ➤ Exit

## Managing Data

**SET** data into C
Calc ➤ Make Patterned Data

**INSERT** data [between rows K and K] of C...C
Editor➤ Insert Cells

**END** of data
menu equivalent not available

**NAME** E = 'name' ... E = 'name'
In the Data window, click a column name cell and type the name

**PRINT** the data in E...E
Data ➤ Display Data

**SAVE** [in file in "filename" or K]
File ➤ Save Worksheet (As)

**RETRIEVE [file in "filename" or K]**
File ➤ Open Worksheet

## Editing and Manipulating Data

**CODE** (K...K) to K ... (K...K) to K for C...C, put in C...C
Data ➤ Code

**DELETE** rows K...K of C...C
Data ➤ Delete Rows

**ERASE** E...E
Data ➤ Erase Variables

**INSERT** data [between rows K and K] of C...C
Editor➤ Insert Cells

**LET** C(K) = K
Calc ➤ Calculator

**SORT** C [carry along C...C] put into C [and C...C]
Data ➤ Sort

**STACK** (E...E) on ... on (E...E), put in (C...C)
Data ➤ Stack ➤ Columns

**UNSTACK** (C...C) into (E...E) ... (E...E)
Data ➤ Unstack Columns

## Arithmetic

**LET** E = expression
**ADD** E to E...E, put into E
**SUBTRACT** E from E, put into E
**MULTIPLY** E by E...E, put into E
**DIVIDE** E by E, put into E
**RAISE** E to the power E put into E
**ABSOLUTE** value of E put into E
**SQRT** of E put into E
**LOGE** of E put into E
**LOGTEN** of E put into E
**EXPONENTIATE** E put into E
**ANTILOG** of E put into E
**ROUND** E put into E
Calc ➤ Calculator

**CENTER** the data in C...C put into C...C
Calc ➤ Standardize

**COUNT** the number of values in C [put into K]
**N** count the nonmissing values in C [put into K]
**NMISS** (number of missing values in) C [put into K]
**SUM** of the values in C [put into K]
**MEAN** of the values in C [put into K]
**STDEV** of the values in C [put into K]
**MEDIAN** of the values in C [put into K]
**MINIMUM** of the values in C [put into K]
**MAXIMUM** of the values in C [put into K]

Calc ➤ Column Statistics

**RCOUNT** of E...E put into C
**RN** of E...E put into C
**RNMISS** of E...E put into C
**RSUM** of E...E put into C
**RMEAN** of E...E put into C
**RSTDEV** of E...E put into C
**RMEDIAN** of E...E put into C
**RMINIMUM** of E...E put into C
**RMAXMUM** of E...E put into C

Calc ➤ Row Statistics

## Distributions and Random Data

**RANDOM** K observations into C...C

Calc ➤ Random Data

**PDF** for values in E...E [put results in E...E]

Calc➤ Probability Distributions

**CDF** for values in E...E [put results in E...E]

Calc ➤ Probability Distributions

**INVCDF** for values in E [put into E]

Calc ➤ Probability Distributions

**SAMPLE** K rows from C...C put into C...C

Calc ➤ Random Data ➤ Sample From Columns

## Graphics

**BOXPLOT** of C...C

Graph ➤ Boxplot

**CHART** C...C

Graph ➤ Chart

**HISTOGRAM** `of C...C`
Graph ➤ Histogram

**STEM-AND-LEAF** `of C...C`
Graph ➤ Stem-and-Leaf

**PIECHART** `C...C`
Graph ➤ Pie Chart

**PLOT** `C vs C`
Graph ➤ Scatterplot

**TSPLOT** `[period = K] of C`
Graph ➤ Time Series Plot

## Basic Statistics

**CORRELATION** `C...C`
Stat ➤ Basic Statistics ➤ Correlation

**DESCRIBE** `variables in C...C`
Stat ➤ Basic Statistics ➤ Descriptive Statistics

**ONET** `C...C`
Stat ➤ Basic Statistics ➤ 1-Sample t

**ONEZ** `C...C`
Stat ➤ Basic Statistics ➤ 1-Sample Z

**PAIR** `C C`
Stat ➤ Basic Statistics ➤ Paired t

**PONE** `C...C or K K...K`
Stat ➤ Basic Statistics ➤ 1 Proportion

**POWER**
Stat ➤ Power and Sample Size

**PTWO** `C C or K K K K`
Stat ➤ Basic Statistics ➤ 2 Proportions

**TWOSAMPLE** `test and CI [K% confidence] samples in C C`
Stat ➤ Basic Statistics ➤ 2-Sample t

**TWOT** test with [K% confidence] data in C, groups in C
Stat ➤ Basic Statistics ➤ 2-Sample t

**CORRELATION** between C...C
Stat ➤ Basic Statistics ➤ Correlation

## Regression

**REGRESS** C on K predictors C...C
Stat ➤ Regression ➤ Regression

**FITLINE** y in C, predictor in C
Stat ➤ Regression ➤ Fitted Line Plot

## Analysis of Variance

**ANOVONEWAY** for samples in C...C
Stat ➤ ANOVA ➤ Oneway (unstacked)

**ONEWAY** data in C, levels in C
Stat ➤ ANOVA ➤ Oneway

## Nonparametrics

**KRUSKAL-WALLIS** test for data in C, levels in C
Stat ➤ Nonparametrics ➤ Kruskal-Wallis

**MANN-WHITNEY** two-sample rank test with [K% confidence] on C C
Stat ➤ Nonparametrics ➤ Mann-Whitney

**WTEST** one-sample rank test [of median = K] on C...C
Stat ➤ Nonparametrics ➤ 1-Sample Wilcoxon

## Tables

**TALLY** the data in C...C
Stat ➤ Tables ➤ Tally

**TABLE** the data classified C...C
Stat ➤ Tables ➤ Cross Tabulation and Chi-Square

**CHISQUARE** `test on table stored in C...C`
Stat ➤ Tables ➤ Chi-Square Test (Table in Worksheet)

## Quality Control

**ICHART** `for C`
Stat ➤ Control Charts ➤ Variables Chart for Individuals ➤ Individuals

**PCHART** `number of nonconformities are in C...C, sample size = E`
Stat ➤ Control Charts ➤ Attributes chart ➤ P

**SCHART**
Stat ➤ Control Charts ➤ Variables Chart for Subgroups ➤ S

**XBARCHART**
Stat ➤ Control Charts ➤ Variables Chart for Subgroups ➤ Xbar

**XSCHART**
Stat ➤ Control Charts ➤ Variables Chart for Subgroups ➤ Xbar-S