

# Index

## • Symbols •

& (and) symbol, 253  
= (equal) symbol, 253  
/ forward slash, 296  
>= (greater than or equal to) symbol, 253  
> (greater than) symbol, 253  
<= (less than or equal to) symbol, 253  
< (less than) symbol, 253  
\n (newline) character, 277  
<> (not equal) symbol, 253  
~ (not) symbol, 253  
| (or) symbol, 253  
[] square brackets, 296

## • A •

Advanced Multivariate Models module, 311  
alignment of data, 69  
Amos module, 310  
analysis of covariance, 323  
analysis of variance, 323  
Anchor Bin option (Element Properties dialog box), 150  
ANCOVA, 323  
and (&) symbol, 253  
Angle option (Element Properties dialog box), 150  
ANOVA, 323  
area graphs  
  overview, 180  
  simple area graph, 181  
  stacked area chart, 182–183  
arithmetic in Python programming language, 274–276  
Arrow option (Element Properties dialog box), 148  
ascending, 323  
author, Web site for, 315  
Automatic option (Element Properties dialog box), 148

automatic recoding of variables, 115–117  
autoscript, 11, 305–306, 323  
AutoScripts option (Scripts tab), 39  
average, 323  
Axis Label option (Element Properties dialog box), 148

## • B •

bar chart map, 207–209  
bar graphs  
  clustered bar chart, 168–169  
  creating, 140–142  
  error bars, 172–174  
  overview, 56–58, 167  
  simple bar graph, 167–168  
  stacked bar chart, 169–170  
  three-dimensional bar chart, 171  
Bar style option (Element Properties dialog box), 149  
base, 323  
BASIC. *See also* scripts  
  overview, 299–300  
  programs written in, 11  
BEGIN DATA command, 250  
Bent, Dale H. (co-creator of SPSS), 10  
Bin Sizes option (Element Properties dialog box), 150  
binning, 117–122, 323  
bivariate, 323  
bivariate correlation, 237–238  
blocks, 283–284  
boxplots  
  clustered boxplot, 185–186  
  one-dimensional boxplot, 186–187  
  overview, 184  
  simple boxplot, 184–185  
BREAK command, 256  
break statement (Python), 287  
break variable, 213, 323



- cardinal numbers, 70
- case summary, 214–216, 323
- \$CASENUM variable, 249
- cases
  - defined, 323
  - identifiers for, creating, 106–107
  - occurrences, counting case, 107–110
  - overview, 46
  - sorting, 103–106, 268
  - splitting, 268–269
- case sensitivity, 294
- categorical values, 54, 72–74
- categorical variable, 96–97, 324
- Categories module, 312–313
- Categories option (Element Properties dialog box), 149
- category, 324
- Chart Builder
  - Basic Elements tab, 142–144
  - Element Properties dialog box, 146–150
  - Gallery tab, 140–142
  - Groups/Point ID tab, 145
  - Options tab, 151–152
  - overview, 140
  - Titles/Footnotes tab, 146
- Chart Editor, 154
- Chart tab
  - Chart Aspect Ratio option, 34
  - Chart Template option, 33
  - default settings, 33–34
  - described, 33
  - Font option, 33
  - Frame option, 34
  - Grid Lines option, 34
  - Launch JVM at Startup option, 34
  - Style Cycle Preference option, 34
  - Style Cycles option, 34
- ChartLook option (Interactive tab), 35
- charts. *See* graphs
- classes
  - ISpssApp class, 301, 302
  - ISpssChart class, 302
  - ISpssDataCells class, 302
  - ISpssDataDoc class, 302
  - ISpssDimension class, 302
  - ISpssDocuments class, 302
  - ISpssFootnotes class, 302
  - ISpssInfo class, 302
  - ISpssItem class, 302
  - ISpssItems class, 302
  - ISpssLabels class, 302
  - ISpssLayerLabels class, 302
  - ISpssOptions class, 302
  - ISpssOutputDoc class, 302
  - ISpssPivotMgr class, 302
  - ISpssPrintOptions class, 302
  - ISpssRtf class, 302
  - ISpssSyntaxDoc class, 302
  - overview, 300–301
  - PivotTable class, 302
- clustered bar chart, 168–169
- clustered boxplot, 185–186
- clustered sampling, 314
- clustering, 145
- coefficient of determination, 324
- Collapse option (Element Properties dialog box), 149
- column width, 69
- Column Width option (Draft Viewer tab), 32
- comma variable type, 63–64
- Command Syntax
  - commands, 247–248
  - comments, 250–251
  - data declaration, 249–250
  - data, examining, 269–270
  - defined, 329
  - EXAMINE command, 269
  - execution of commands, 251–252
  - files, 256–258
  - finding commands, 263
  - flow control and conditional execution, 252–256
  - help menu, finding commands in the, 263
  - as interface for SPSS, 11
  - keywords, 248
  - loading programs, 261
  - logical operators, 248, 253
  - menu, adding a Command Syntax program to the, 261–264
  - multiple commands, writing a program to perform, 265
  - PLOT command, 266–267
  - relational operators, 248, 253
  - restoring programs, 261
  - saving programs, 261
  - scratch variables, 249

- SORT command, 268
- SPLIT command, 268–269
- splitting cases, 267–269
- system variables, 248–249
- variables, 248–249
- Web sites for, 319
- writing a program in, 259–260
- Command Syntax Reference, 15
- commands. *See also specific commands*
  - accessing SPSS data and commands from
    - inside a Python program, 294
  - Command Syntax, 247–248
  - multiple commands performed with one
    - Submit function call, 296–297
  - multiple commands, writing a program to perform, 265
- commas, 297
- comments, 250–251
- comparison of means
  - independent-samples T test, 232–233
  - one-sample T test, 231
  - one-way ANOVA, 233–234
  - overview, 229
  - paired-samples T test, 233
  - simple mean compare, 230
- Complex Samples module, 314
- conditional execution. *See* flow control and conditional execution
- confidence interval, 324
- constant, 324. *See also* variables
- continue statement (Python), 287
- continuous variables, 54
- copying data properties, 99–102
- correlation
  - bivariate correlation, 237–238
  - defined, 324
  - overview, 237
  - partial correlation, 238
- covariance, 324
- covariate, 324
- Create Multiple Theme Map dialog box, 210
- creating scripts, 304–305
- cubed table, 223
- Currency tab
  - All Values option, 38
  - Custom Output Formats option, 38
  - Decimal Separator option, 38
  - default settings, 37–38
  - described, 37–38
  - Negative Values option, 38
  - Sample Output option, 38
- curve estimation, 240–242
- custom currency variable type, 65
- customer information, 22
- cutpoint, 324
- **D** •
- data. *See also* data entry
  - accessing SPSS data and commands from
    - inside a Python program, 294
  - alignment of data, 69
  - examining, 269–270
  - importance of, 16
  - periodicity of data, 94–96
  - properties, copying, 99–102
  - repetition pattern of, 94–96
- data declaration, 249–250
- Data Editor window
  - entering data in, 71–72
  - overview, 42–43
  - switching to, 71
- data entry
  - cases, 46
  - defining the data, 42–45
  - fields, 44
  - labels, 44–45
  - loading files, 48–49
  - names, 44
  - new row of data, inserting, 48
  - numeric data, entering, 46–49
  - overview, 42
  - time data field, creating new, 51–53
  - transforming data, 51–53
  - variables, 42–45
- DATA LIST command, 250
- Data Saved with Chart option (Interactive tab), 35
- data set, 324
- Data tab
  - default settings, 36–37
  - described, 36
  - Display Format for New Numeric Variables option, 36–37
  - Random Number Generator option, 37
  - Set Century Range for 2-Digit Years option, 37
  - Transformation and Merge option, 36

- data types, 92
  - Data View mode, 42–43
  - database, exporting SPSS data to a, 124
  - date formats, 91–94
  - \$DATE variable, 249
  - date variable type, 64
  - dBase files, 87
  - decimal point used in variable, 66
  - Decimal Separator option (Currency tab), 38
  - def command (Python), 281–282
  - default settings, 27–39
  - defining the data, 42–45
  - degrees of freedom, 324
  - delimiters, 76, 80, 324
  - dependent variable, 325
  - descending, 325
  - Developer Central, 316–317
  - deviation, 325
  - dichotomy, 325
  - dichotomy variables, multiple response set
    - based on, 96–99
  - differenced area graph, 190–191
  - different variable recoding, 113–115
  - directory for installation, 22
  - discrete values, 69
  - DO IF statement, 254
  - DO REPEAT statement, 254–255
  - dodging, 325
  - dollar variable type, 64
  - dot density map, 200–202
  - dot plot, 164
  - dot variable type, 64
  - double quotes, 276–277
  - downloading zip file, 14–15
  - Draft Viewer tab
    - Column Width option, 32
    - default settings, 31–32
    - described, 31
    - Display Box Character option, 32
    - Display Output Items option, 31
    - Font option, 31
    - Page Breaks Between option, 31
    - Repeat Column Headers option, 32
    - Tabular Output option, 31–32
    - Text Output option, 32
  - drop-line chart, 165–167
  - dual-axis graphs
    - dual Y-axes with categorical X-axis, 191–192
    - dual Y-axes with scale X-axis, 192–193
    - overview, 191
- *E* ●
- editing, 305
  - editing graphs, 154–155
  - Element Properties dialog box
    - Anchor Bin option, 150
    - Angle option, 150
    - Arrow option, 148
    - Automatic option, 148
    - Axis Label option, 148
    - Bar style option, 149
    - Bin Sizes option, 150
    - Categories option, 149
    - Collapse option, 149
    - Display Axis option, 150
    - Display Normal Curve option, 150
    - Display Vertical Drop Lines between Points option, 150
    - Edit Properties option, 148
    - Error Bars option, 149
    - Excluded option, 149
    - Interpolation option, 150
    - Major Increment option, 148
    - Maximum option, 148
    - Minimum option, 148
    - Order List option, 149
    - Origin option, 148
    - overview, 146–147
    - Plot Shape option, 150
    - Scale Type option, 148–149
    - Small/Empty Categories option, 150
    - Sort By option, 149
    - Stack Identical Values option, 150
    - Statistic option, 148
    - X option, 148
  - Element Properties dialog box (Chart Builder), 146–150
  - elif statement (Python), 284
  - END DATA command, 250
  - entering data in Data Editor window, 71–72
  - equal (=) symbol, 253

error, 325  
 error bars, 172–174  
 Error Bars option (Element Properties dialog box), 149  
 Exact Tests module, 312  
 EXAMINE command, 269  
 Excel files, 85–87, 129–130  
 Excluded option (Element Properties dialog box), 149  
 EXECUTE statement, 249  
 executing an analysis  
   overview, 213  
   pivot tables, 226–227  
   report generation, 213–226  
 execution of commands, 251–252  
 EXPORT command, 258  
 exporting  
   files, 88–90  
   SPSS data to a database, 124  
 extrapolation, 240

● **F** ●

faceting, 145  
 fields, 44  
 file format, 75–76  
 files  
   Command Syntax, 256–258  
   dBase files, 87  
   Excel files, 87  
   exporting, 88–90  
   Lotus files, 87  
   overview, 14–15  
   SAS files, 87  
   saving data and images, 88–90  
   SYLK files, 87  
   SYSTAT files, 87  
   transferring data from another program, 84–87  
   zip file, downloading, 14–15  
 flow control and conditional execution  
   BREAK command, 256  
   DO IF statement, 254  
   DO REPEAT statement, 254–255  
   EXPORT command, 258  
   GET command, 257

IF command, 252–253  
 IMPORT statement, 257  
 LOOP command, 255–256  
 overview, 252  
 SAVE command, 258  
 SELECT IF statement, 254  
 Font option, 31, 33  
 for loop, 285–286  
 formatting a text file for input into SPSS, 76  
 forward slash (/), 296  
 Frame option (Chart tab), 34  
 F-ratio, 325  
 frequency distribution, 325  
 frequency polygon, 178–179  
 functions, 281–283

● **G** ●

Gallery tab (Chart Builder), 140–142  
 General Linear Model (GLM), 325  
 General tab  
   described, 28  
   Language option, 29  
   Measurement System option, 29  
   Notification option, 29  
   Open the Syntax Window at Start-up option, 29  
   Output option, 29  
   Recently Used File List option, 29  
   Session Journal option, 29  
   Temporary Directory option, 29  
   Variable Lists option, 28  
   Viewer Type at Startup option, 29  
 Geoset Manager module, 196, 309–310  
 geosets, 196, 325  
 GET command, 257  
 GLM (General Linear Model), 325  
 global procedures file, 305  
 Global Procedures option (Scripts tab), 39  
 graduated symbol map, 202–205  
 graphical user interface (GUI), 11, 325  
 graphs  
   area graphs, 180–183  
   bar graphs, 56–58, 140–142, 167–174  
   boxplots, 184–187  
   Chart Builder, building graphs with, 140–152

graphs (*continued*)

- creating, 55–56
- defined, 325
- dual-axis graphs, 191–193
- editing, 154–155
- fast way to build, 152–153
- high-low graphs, 188–191
- histograms, 175–180
- Legacy method used to build, 153–154
- line charts, 157–160
- overview, 139
- pie charts, 55–56, 183–184
- scatterplots, 160–167
- templates, 151
- greater than or equal to ( $\geq$ ) symbol, 253
- greater than ( $>$ ) symbol, 253
- Grid Lines option (Chart tab), 34
- Groups/Point ID tab (Chart Builder), 145
- GUI (graphical user interface), 11, 325

## • H •

help

- in Case Studies, 15
- in Command Syntax Reference, 15
- menu, finding commands in the
  - help, 263
- overview, 15
- in Python, 15
- in Statistics Coach, 15
- in Topics, 15
- in Tutorial, 15
- high-low graphs
  - differenced area graph, 190–191
  - high-low close graph, 188
  - overview, 188
  - simple range bar graph, 188–190
- histograms
  - defined, 325
  - frequency polygon, 178–179
  - overview, 175
  - population pyramid, 179–180
  - simple histogram, 176–177
  - stacked histogram, 177–178
- history of SPSS, 10
- home page for the SPSS company, 316
- HTML Web page file, creating, 126–127
- Hull, C. Hadlai (creator of SPSS), 10
- humor about SPSS, 316

## • I •

- IDE (Integrated Development Environment), 298
- identifiers
  - for cases, 106–107
  - values, added to, 54–56
- IF command, 252–253
- if statement (Python), 283–285
- images, saving, 88–90
- IMPORT statement, 257
- import statement (Python), 298
- importance of data, 16
- independent variable, 326
- independent-samples T test, 232–233
- individual values map, 205–206
- installation
  - customer information, 22
  - directory for, 22
  - license agreement, 20
  - License Authorization Wizard, 24–25
  - modules, 296
  - overview, 17–18
  - progress indicator, 23
  - for Python integrated with SPSS, 289–293
  - ReadMe file, 21
  - registration, 25–26
  - requirements for, 18
  - starting, 18–19
  - steps for, 19–25
- Integrated Development Environment (IDE), 298
- interactive charts, 34–35
- Interactive tab
  - ChartLook option, 35
  - Data Saved with Chart option, 35
  - default settings, 34–35
  - described, 34
  - Measurement Units option, 35
  - Print Resolution option, 35
  - Reading Pre-8.0 Data Files option, 35
- interfaces for SPSS, 11
- interpolation, 240
- Interpolation option (Element Properties dialog box), 150
- interpreter, 274
- ISpssApp class, 301, 302
- ISpssChart class, 302
- ISpssDataCells class, 302

ISpssDataDoc class, 302  
 ISpssDimension class, 302  
 ISpssDocuments class, 302  
 ISpssFootnotes class, 302  
 ISpssInfo class, 302  
 ISpssItem class, 302  
 ISpssItems class, 302  
 ISpssLabels class, 302  
 ISpssLayerLabels class, 302  
 ISpssOptions class, 302  
 ISpssOutputDoc class, 302  
 ISpssPivotMgr class, 302  
 ISpssPrintOptions class, 302  
 ISpssRtf class, 302  
 ISpssSyntaxDoc class, 302  
 iteration, 285–287

## • J •

\$JDATE variable, 249

## • K •

keywords in Command Syntax, 248  
 known program type, reading from a, 87  
 kurtosis, 51, 326

## • L •

labels  
   defined for value of variable, 68  
   overview, 44–45, 66–67  
 language in Python programming language,  
 276–280  
 Language option (General tab), 29  
 Legacy method used to build graphs,  
 153–154  
 \$LENGTH variable, 249  
 less than or equal to ( $\leq$ ) symbol, 253  
 less than ( $<$ ) symbol, 253  
 level of detail, your choice of, 16  
 Levene test, 326  
 license agreement, 20  
 License Authorization Wizard, 24–25  
 line charts  
   multiline graph, 159–160  
   overview, 157  
   simple line chart, 158

linear, 326  
 linear model, 234–236  
 linear regression, 239–240  
 lists in Python programming language,  
 280–281  
 loading files, 48–49  
 loading programs, 261  
 log linear, 242–243  
 logical operators, 248, 253  
 LOOP command, 255–256  
 looping in Python programming language,  
 285–287  
 Lotus files, 87

## • M •

mailing lists, 317  
 Map module, 313  
 maps. *See* thematic maps  
 matrix of scatterplots, 165  
 Maximum option (Element Properties  
 dialog box), 148  
 mean, 326  
 Measure column, 69–70  
 Measurement System option  
 (General tab), 29  
 measurement, type of, 69–70  
 Measurement Units option  
 (Interactive tab), 35  
 menu, adding a Command Syntax program  
 to the, 261–264  
 methods, 302–304  
 Minimum option (Element Properties  
 dialog box), 148  
 missing data, 326  
 Missing Value Analysis module, 310–311  
 missing value, option for, 68–69  
 mode, 326  
 modules  
   Advanced Multivariate Models, 311  
   Amos, 310  
   Categories, 312–313  
   Complex Samples, 314  
   defined, 326  
   Exact Tests, 312  
   Geoset Manager, 309–310  
   installing, 296  
   Map, 313  
   Missing Value Analysis, 310–311

modules (*continued*)  
 overview, 295, 309  
 Python integrated with SPSS, 295–296  
 Regression Models, 311  
 spssaux module, 296  
 spssdata module, 296  
 Trends, 313  
 multiline graph, 159–160  
 multiple commands  
   Submit function call, performed with one, 296–297  
   writing a program to perform, 265  
 multiple regression, 239  
 multiple response set, 96–99, 326  
 multiple themes map, 209–210  
 multiple variable linear model, 235–236  
 multistage sampling, 314  
 multi-variable scatterplot, 162  
 multivariate, 326

## • N •

name of variable, entering, 62–63  
 names, 44  
 Negative Values option (Currency tab), 38  
 new row of data, inserting, 48  
 newline (\n) character, 277  
 newsgroups, 317–318  
 Nie, Norman H. (co-creator of SPSS), 10  
 nominal numbers, 70, 326  
 nonlinear, 326  
 not equal (<>) symbol, 253  
 not (~) symbol, 253  
 Notification option (General tab), 29  
 numeric data, entering, 46–49  
 numeric variable type, 63

## • O •

objects, 300–301  
 occurrences, counting case, 107–110  
 OLAP (Online Analytical Processing)  
   cubes, 223–226, 326  
 one variable linear model, 234–235  
 one-dimensional boxplot, 186–187  
 one-sample T test, 231  
 one-way ANOVA, 233–234

or (!) symbol, 253  
 Order List option (Element Properties dialog box), 149  
 order of sort keys, 106  
 ordinal numbers, 70, 327  
 Origin option (Element Properties dialog box), 148  
 outliers, 327  
 Output Labels tab, 32–33  
 outside, accessing SPSS from, 298

## • P •

Page Breaks Between option (Draft Viewer tab), 31  
 Page Title Font option (Viewer tab), 30  
 paired-samples T test, 233  
 paneling, 145, 327  
 partial correlation, 238  
 PDF document, creating, 133–135  
 Pearson's Product Moment Correlation, 327  
 performing an analysis, 49–51  
 periodicity, 94–96, 327  
 periods, 297  
 pie charts, 55–56, 183–184  
 Pivot Table Labeling option (Output Labels tab), 33  
 pivot tables, 213, 226–227, 327  
 Pivot Tables tab  
   Adjust Column Widths For option, 36  
   Default Editing Mode option, 36  
   default settings, 35–36  
   described, 35  
   Set TableLook Directory option, 35  
   TableLook option, 35  
 PivotTable class, 302  
 Plot Shape option (Element Properties dialog box), 150  
 point reference table, 196  
 population pyramid, 179–180  
 position numbers, 280  
 post hoc, 327  
 PowerPoint slide document, creating, 132–133  
 p-p plot, 266–267, 327  
 PLOT command, 266–267  
 primary sort keys, 103

- Print Resolution option (Interactive tab), 35  
 printing, 123  
 probit, 327  
 processing summaries, 214  
 programming, Web sites for general, 319  
 progress indicator, 23  
 properties, 302–304  
 PSPP, free SPSS download, 321  
 pyramid, 327  
 Python integrated with SPSS. *See also*  
   Python programming language  
   accessing SPSS data and commands from  
     inside a Python program, 294  
   case-sensitivity, 294  
   commas, 297  
   forward slash (/), 296  
   import statement, 298  
   installation for, 289–293  
   modules, 295–296  
   multiple commands performed with one  
     Submit function call, 296–297  
   outside, accessing SPSS from, 298  
   overview, 289  
   periods, 297  
   quotes, 296  
   square brackets ([ ]), 296  
   strings, 296–297  
   variables, working with SPSS, 297–298  
   writing Syntax programs with Python  
     programs included inside, 294–296  
 Python programming language. *See also*  
   Python integrated with SPSS  
   arithmetic in, 274–276  
   blocks, 283–284  
   break statement, 287  
   continue statement, 287  
   def command, 281–282  
   defined, 327  
   double quotes in, 276–277  
   elif statement, 284  
   for loop, 285–286  
   functions, 281–283  
   help in, 15  
   if statement, 283–285  
   as interface for SPSS, 11  
   iteration in, 285–287  
   language in, 276–280  
   lists in, 280–281  
   looping in, 285–287  
   newline (\n) character, 277  
   overview, 273–274  
   position numbers, 280  
   questions in, 283–285  
   range() function, 286  
   scripts, 274  
   single quotes in, 276–277  
   strings, 277–280  
   triple quotes in, 278  
   Web sites for, 318  
   while loop, 286–287
- **Q** •
- q-q plot, 266–267, 327  
 quantiles, 327  
 quartile, 328  
 questions in Python programming  
   language, 283–285  
 quotes, 296
- **R** •
- Random Number Generator option (Data  
 tab), 37  
 range() function, 286  
 range of values map, 198–200  
 reading simple data from a text file, 76–84  
 ReadMe file, 21  
 Recently Used File List option  
   (General tab), 29  
 recoding, 111–117, 328  
 record, 328  
 references, 300–301  
 registration, 25–26  
 regression  
   curve estimation, 240–242  
   defined, 328  
   linear regression, 239–240  
   multiple regression, 239  
   overview, 239  
   simple regression, 239  
 Regression Models module, 311  
 relational operators, 248, 253  
 repetition pattern of data, 94–96

- report generation
    - break variables, 213
    - case summaries, 214–216
    - OLAP (Online Analytical Processing)
      - cubes, 223–226
    - overview, 213
    - processing summaries, 214
    - row summary table, 217–220
    - summary in columns report, 221–223
  - requirements
    - for installation, 18
    - for thematic maps, 195
  - restoring programs, 261
  - row, 328
  - row summary table, 217–220
- S •
- same-variable recoding, 111–113
  - Sample Output option (Currency tab), 38
  - sampling
    - clustered sampling, 314
    - module for, 314
    - multistage sampling, 314
    - stratified sampling, 314
  - SAS files, 87
  - SAVE command, 258
  - saving
    - programs, 261
    - scripts, 305
  - scale, 328
  - scale option (Measure column), 70
  - Scale Type option (Element Properties dialog box), 148–149
  - scatterplots
    - dot plot, 164
    - drop-line chart, 165–167
    - matrix of scatterplots, 165
    - multi-variable scatterplot, 162
    - overview, 160
    - simple scatterplot, 160–161
    - three-dimensional scatterplot, 163
  - scientific notation variable type, 64
  - scratch variables, 249
  - scripts
    - autoscripts, 11, 305–306
    - classes, 300–302
    - creating, 304–305
    - defined, 328
    - editing, 305
    - global procedures file, 305
    - as interface for SPSS, 11
    - methods, 302–304
    - objects, 300–301
    - overview, 300
    - properties, 302–304
    - Python programming language, 274
    - references, 300–301
    - saving, 305
    - Web sites, 319
  - Scripts tab, 39, 103
  - SELECT IF statement, 254
  - Session Journal option (General tab), 29
  - single quotes, 276–277
  - skewness, 51, 328
  - Small/Empty Categories option (Element Properties dialog box), 150
  - Sort By option (Element Properties dialog box), 149
  - SORT command, 268
  - sort keys, 103–106
  - sorting cases, 103–106, 268
  - specifiers in date and time formats, 93
  - SPLIT command, 268–269
  - splitting cases, 267–269
  - SPSS (Statistical Package for the Social Sciences)
    - defined, 328
    - GUI for, 11
    - history of, 10
    - how it works, 12–13
    - interfaces for, 11
    - overview, 12
    - Python interface for, 11
    - scripts interface for, 11
    - Syntax interface for, 11
    - tutorials, 320
  - SPSS Viewer
    - Excel file, creating, 129–130
    - HTML Web page file, creating, 126–127
    - output through, 124–135
    - overview, 124–126
    - PDF document, creating, 133–135

- PowerPoint slide document, creating, 132–133
  - text file, creating, 127–129
  - Word document file, creating, 130–131
  - SPSS Wiki, 321
  - spssaux module, 296
  - spssdata module, 296
  - square brackets ([ ]), 296
  - Stack Identical Values option (Element Properties dialog box), 150
  - stacked area chart, 182–183
  - stacked bar chart, 169–170
  - stacked histogram, 177–178
  - standard deviation, 328
  - standard error, 328
  - starting, 26–27
  - statistic, 328
  - Statistic option (Element Properties dialog box), 148
  - statistical analysis, 9–10, 320
  - statistics, 328
  - Statistics Coach, 15
  - stratified sampling, 314
  - string variable type, 65
  - string variables used for thematic maps, 196
  - strings
    - defined, 328
    - Python integrated with SPSS, 296–297
    - Python programming language, 277–280
  - Style Cycle Preference option (Chart tab), 34
  - Style Cycles option (Chart tab), 34
  - summary in columns report, 221–223
  - switching to Data Editor window, 71
  - SYLK files, 87
  - Syntax. *See* Command Syntax
  - \$SYSMIS variable, 249
  - SYSTAT files, 87
  - system variables, 248–249
- T •**
- TableLook option (Pivot Tables tab), 35
  - Tabular Output option (Draft Viewer tab), 31–32
  - Tanana Classic, 41–42
  - template file, 117
  - templates, 151
  - Temporary Directory option (General tab), 29
  - terminology, 14
  - text file
    - creating, 127–129
    - formatting a text file for input into SPSS, 76
    - reading simple data from a, 76–84
  - Text Output Font option (Viewer tab), 30
  - Text Output option (Draft Viewer tab), 32
  - Text Output Page Size option (Viewer tab), 30
  - thematic maps
    - bar chart map, 207–209
    - defined, 329
    - dot density map, 200–202
    - geosets, 196
    - graduated symbol map, 202–205
    - individual values map, 205–206
    - multiple themes map, 209–210
    - overview, 195–197
    - point reference table, 196
    - range of values map, 198–200
    - requirements for, 195
    - string variables used for, 196
    - with symbols, 202–205
    - X/Y binding, using, 196
  - three-dimensional bar chart, 171
  - three-dimensional scatterplot, 163
  - time data field, creating new, 51–53
  - time formats, 91–94
  - \$TIME variable, 249
  - Title Font option (Viewer tab), 30
  - Titles/Footnotes tab (Chart Builder), 146
  - Topics, 15
  - transferring data from another program
    - Excel file, reading, 85–87
    - known program type, reading from a, 87
    - overview, 84
    - unknown program type, reading an, 85
  - transforming data, 51–53
  - Trends module, 313
  - triple quotes, 278
  - Tutorial, 15
  - tutorials, 319–320

## • U •

univariate, 329  
 unknown program type, reading an, 85  
 user groups, 317

## • V •

value of variable, 67–68  
 values, identifiers added to, 54–56  
 Variable Lists option (General tab), 28  
 variable type  
   comma variable type, 63–64  
   custom currency variable type, 65  
   date variable type, 64  
   dollar variable type, 64  
   dot variable type, 64  
   numeric variable type, 63  
   overview, 63  
   scientific notation variable type, 64  
   string variable type, 65  
 Variable View mode, 43  
 Variable View window  
   alignment of data, 69  
   column width, 69  
   Data Editor window, switching to, 71  
   decimal point used in variable, 66  
   label for variable, 66–67  
   measurement, type of, 69–70  
   missing value, option for, 68–69  
   name of variable, entering, 62–63  
   overview, 61–62  
   type of variable, 63–65  
   value of variable, 67–68  
   width of variable, 66  
 variables  
   automatic recoding, 115–117  
   binning, 117–122  
   Command Syntax, 248–249  
   data entry, 42–45  
   defined, 329  
   different variable recoding, 113–115  
   Python integrated with SPSS, 297–298  
   recoding, 111–117  
   same-variable recoding, 111–113  
   value of variable, 67–68  
 variance, 329

Viewer tab  
   described, 29  
   Initial Output State option, 30  
   Page Title Font option, 30  
   Text Output Font option, 30  
   Text Output Page Size option, 30  
   Title Font option, 30

## • W •

Web sites  
   for author, 315  
   Developer Central, 316–317  
   for general programming, 319  
   home page for the SPSS company, 316  
   links to, 315  
   mailing lists, 317  
   newsgroups, 317–318  
   overview, 315  
   PSPP, 321  
   Python Language, 318  
   for Python programming, 318  
   for scripts, 319  
   on SPSS humor, 316  
   SPSS Wiki, 321  
   for Syntax programming, 319  
   for tutorials, 319–320  
   user groups, 317  
 while loop, 286–287  
 width of variable, 66  
 \$WIDTH variable, 249  
 Word document file, creating, 130–131  
 writing programs  
   in Command Syntax, 259–260  
   Python programs included inside Syntax  
   programs, 294–296

## • X •

X option (Element Properties  
 dialog box), 148  
 X/Y binding, using, 196

## • Z •

zip file, downloading, 14–15