Symbols and Numerics

+ (addition) operator, 176
: (colon) range reference operator, 201
, (comma) union operator, 201
& (concatenation) operator, 176, 210
/ (division) operator, 176
#DIV/0! error value, 554–555
= (equal to) operator, 176
^ (exponentiation) operator, 176
> (greater than) operator, 176
>= (greater than or equal to) operator, 176
# (hash mark), denoting error values, 195, 552
< (less than) operator, 176
<= (less than or equal to) operator, 176
* (multiplication) operator, 176
#N/A error value, 555
#NAME? error value, 555–556
< (not equal to) operator, 176
#NULL! error value, 555–556
#REF! error value, 556
- (negative sign), 476–477
- (subtraction) operator, 176
3-D charts, 406–407
#VALUE! error value, 556
1900 date system, 224
1904 date system, 224

A
ABS function, 792
absolute cell references, 187–191, 556–557
absolute macro recording, 692
accelerator keys
dialog boxes, 16
UserForms, 732
accepting changes, 538
Access databases, importing, 576–578
accessing
CD-ROM, 800
external database files, 575
help system, 809
newsgroups, 811
Ribbon with keyboard, 12
worksheets, 4
Accounting format, 50
ACCRINT function, 789
ACCRINTM function, 789
accuracy of large values, 36
ACOS function, 792
ACOSH function, 792
actions
repeating, 13
undoing, 13
Activate event
workbooks, 747
worksheets, 751
activating
charts, 360
dialog box controls, 16
worksheets, 56–57
active area (of worksheets), 156
active cell, 7
active cell indicator, 6
ActiveX controls
CheckBox, 735, 739
ComboBox, 735, 740
CommandButton, 735, 740
defined, 734
design mode, 736
Image, 735, 741
inserting, 733–736
Label, 735, 741
linking to cells, 738
ListBox, 735, 741
listing, 735
macros, 738–739
OptionButton, 735, 741–742
properties, 736–738
ScrollBar, 735, 742
SpinButton, 735, 743
testing, 736
TextBox, 735, 743–744
ToggleButton, 735, 744
UserForms, 721–723
actual versus displayed values, 558
Add Constraint dialog box, 654–655
Add Scenario dialog box, 644–645
Add View dialog box, 172
adding
background images, 121
chart elements, 361
chart titles, 388
columns to tables, 101
columns to worksheets, 66–67
adding (continued)
commands to Quick Access Toolbar, 462–463
comments, 90–91
data series to a chart, 398–399
data to outlines, 496
digital signatures, 140
hours, minutes, or seconds to a time, 246–247
legend (charts), 389
records to databases, 588
rows to tables, 101
rows to worksheets, 66–67
scenarios, 644–645
text to Shapes, 444
worksheets to workbooks, 57
AddInInstall event, 747
add-ins
Add-In Manager, 772
Analysis ToolPak add-in
analysis of variance, 669–670
correlation, 670
covariance, 670
Data Analysis dialog box, 668
descriptive statistics, 670–671
exponential smoothing, 671
features, 667–668, 773
Fourier analysis, 672
frequency distributions, 263–264
F-Test, 671–672
histograms, 672
installing, 265, 668
moving average, 673
percentiles, 675
procedures, 668–669
random number generation, 673–674
ranks, 675
regression, 675
sampling, 676
t-Test, 676–677
z-Test, 677
Analysis ToolPak—VBA add-in, 773
closing, 772
Conditional Sum wizard add-in, 270, 773
converting workbooks into add-ins, 771–774
creating, 773–774
defined, 771
downloading, 773
Euro Currency Tools add-in, 773
examples, 775–781
installing, 775, 780–781
Internet Assistant VBA add-in, 773
Lookup Wizard add-in, 773
opening, 772
PDF add-in, 34, 546–547
Power Utility Pak add-in, 229
Solver add-in
appropriate problems for, 652
constraints, 654–655
defined, 649, 773
digital signatures, 140
examples, 653–666
resolution, 662
installing, 652
user interface, 773, 779–781
uses, 771–772
Add-Ins dialog box, 772
Add-Ins tab (Ribbon), 9
AddinUninstall event, 747
addition (+) operator, 176
ADDRESS function, 792
addresses of ranges
defined, 7
elements, 71
specifying, 71
adjusting
footer distance from the bottom of the page, 162
header distance from the top of the page, 162
page breaks, 157, 159
Adobe Systems, 546
alert messages in VBA, 767
aligning
headers and footers with margins, 168
Shapes, 446
text, 115–116
allocating resources, 662–664
alternate-row shading, 436–437
alternatives
to comments, 92
to UserForms, 716–720
AMORDEGRC function, 789
AMORLINC function, 789
amortization schedule, 297–299
Analysis ToolPak add-in
analysis of variance, 669–670
correlation, 670
covariance, 670
Data Analysis dialog box, 668
descriptive statistics, 670–671
exponential smoothing, 671
features, 667–668, 773
Fourier analysis, 672
frequency distributions, 263–264
F-Test, 671–672
histograms, 672
installing, 265, 668
moving average, 673
percentiles, 675
regression, 675
sampling, 676
t-Test, 676–677
z-Test, 677
sampling, 676
t-Test, 676–677
z-Test, 677
Analysis ToolPak—VBA add-in, 773
And criteria
counting formulas, 256–257
summing formulas, 271–272
AND function, 791
angled text, 117–118
animated border around ranges, 79
ANSl character set, 207–208
Application close button, 6
applications
minimizing, 6
multiuser, 532
applying
borders, 119–121
chart templates, 410–411
conditional formatting, 423
fonts to ranges, 114
named styles, 123
templates, 146–148
themes, 126–128
area charts, 373
AREAS function, 792
arguments
function procedures (VBA), 707–711
functions, 180–181, 185–186
Arrange Windows dialog box, 55, 62
arranging
Shapes, 445
windows, 55, 62
worksheets, 58–59
array formulas
advantages, 322
array constant elements, 317
array constants, 316–317
contracting multicell array formula, 322
defined, 313
disadvantages, 322
editing, 321–322
eliminating intermediate formulas, 330–331
entering, 320–321
errors, 552
expanding a multicell array formula, 322
Formula Evaluator, 342
functions, 325–327
multicell, 314–315, 323–327
range references, 331–332
ranking data, 344–345
selecting an array formula range, 321
single-cell, 315–316, 327–330
arrays
defined, 313
generating arrays of consecutive integers, 326
named arrays, 319–320
one-dimensional, 313, 317–318
three-dimensional, 313
transposing, 325–326
two-dimensional, 313, 318–319
arrow keys, 42
ASIN function, 792
ASINH function, 792
Assign Macro dialog box, 731
assigning
macros to buttons, 693–694
shortcut keys to macros, 693
user permissions, 542
values to variables, 696
ATAN function, 792
ATAN2 function, 792
ATANH function, 792
attributes of named styles, 122–123
AutoComplete feature, 32, 43–45, 181–183
AutoCorrect feature, 570–571
AutoFill feature, 43, 232
Automatic Calculation mode, 198
automatic number formatting, 47–48, 466
AutoRecover feature, 136
AutoSize property, 737
AVEDEV function, 794
AVERAGE function, 794
AVERAGEA function, 794
AVERAGEIF function, 34, 189, 794
AVERAGEIFS function, 34, 189, 794
axes (charts)
category axis, 354, 396–397
formatting, 362
modifying, 391–397
value axis, 354, 391–395

B

BackColor property, 737
background error-checking feature, 564–566
background images, 121–122, 163, 457
BackStyle property, 737
backups of workbook files, 136–137, 141–142
BAHTTEXT function, 797
Banded Columns, 102
Banded Rows, 102
bar charts, 367–368
BeforeClose event
workbooks, 747
worksheets, 750
BeforeDoubleClick event, 751
BeforePrint event, 747
BeforeRightClick event, 751, 753
BeforeSave event, 747, 750
BESSELI function, 787
BESSELJ function, 787
BESSELK function, 787
BESSELY function, 787
BETADIST function, 794
BETAINV function, 794
bin range (histogram), 672
BIN2DEC function, 787
BIN2HEX function, 787
BIN2OCT function, 788
BINOMDIST function, 794
bitmap images, 453
blank cells, 76, 252, 553
calendar, displaying calendar in a range, 347–348
case of text, changing, 214–215
case-sensitive lookup formula, 282–283
category axis (charts), 354, 396–397
CD-ROM
accessing, 800
demo versions of software, 800
eBook version of Excel 2007 Bible, 800
evaluation versions of software, 800
freeware programs, 800
GNU software, 800
ReadMe file, 799
sample files, 800–806
shareware programs, 800
system requirements, 799
technical support, 807
trial versions of software, 800
troubleshooting, 807
CEILING function, 792
CELL function, 791
cell pointer, moving, 41–42
cell ranges
addresses
defined, 7
elements of, 71
specifying, 71
array formulas, 331–332
contiguous, 73
copying, 78–83, 758–759
counting
characters in a range, 327–328
error values in a range, 253–254
number of differences in two ranges, 337
number of error values in a range, 334
selected cells, 763–764
text cells in a range, 329–330
defined, 71
determining
cell address of a value within a range, 287–288
closest value in a range, 343
type of selection, 762–763
whether a particular value appears in a range, 336–337
whether a range contains valid values, 338–339
displaying calendar in a range, 347–348
external data ranges, 585–586
finding row of a value’s nth occurrence in a range, 338
fonts, 114–115

BeforeRightClick event, 751, 753
BeforeSave event, 747, 750
BESSELI function, 787
BESSELJ function, 787
BESSELK function, 787
BESSELY function, 787
BETADIST function, 794
BETAINV function, 794
bin range (histogram), 672
BIN2DEC function, 787
BIN2HEX function, 787
BIN2OCT function, 788
BINOMDIST function, 794
bitmap images, 453
blank cells, 76, 252, 553
calendar, displaying calendar in a range, 347–348
case of text, changing, 214–215
case-sensitive lookup formula, 282–283
category axis (charts), 354, 396–397
CD-ROM
accessing, 800
demo versions of software, 800
eBook version of Excel 2007 Bible, 800
evaluation versions of software, 800
freeware programs, 800
GNU software, 800
ReadMe file, 799
sample files, 800–806
shareware programs, 800
system requirements, 799
technical support, 807
trial versions of software, 800
troubleshooting, 807
CEILING function, 792
CELL function, 791
cell pointer, moving, 41–42
cell ranges
addresses
defined, 7
elements of, 71
specifying, 71
array formulas, 331–332
contiguous, 73
copying, 78–83, 758–759
counting
characters in a range, 327–328
error values in a range, 253–254
number of differences in two ranges, 337
number of error values in a range, 334
selected cells, 763–764
text cells in a range, 329–330
defined, 71
determining
cell address of a value within a range, 287–288
closest value in a range, 343
type of selection, 762–763
whether a particular value appears in a range, 336–337
whether a range contains valid values, 338–339
displaying calendar in a range, 347–348
external data ranges, 585–586
finding row of a value’s nth occurrence in a range, 338
fonts, 114–115
<table>
<thead>
<tr>
<th>formulas, 183–184</th>
<th>borders animated border around ranges, 79</th>
</tr>
</thead>
<tbody>
<tr>
<td>identifying a multiple selection, 763</td>
<td>applying, 119–121</td>
</tr>
<tr>
<td>looping, 760–762</td>
<td>colors, 119</td>
</tr>
<tr>
<td>marching ants border, 79</td>
<td>drawing, 119</td>
</tr>
<tr>
<td>moving, 78–80, 760</td>
<td>styles, 119–120</td>
</tr>
<tr>
<td>moving within, 817</td>
<td>colors, 118–119</td>
</tr>
<tr>
<td>multisheet, 74–75</td>
<td>contents of</td>
</tr>
<tr>
<td>named ranges</td>
<td>character limits, 205</td>
</tr>
<tr>
<td>creating, 87–89</td>
<td>clearing, 40</td>
</tr>
<tr>
<td>deleting, 90</td>
<td>deleting, 39–40</td>
</tr>
<tr>
<td>editing, 90</td>
<td>editing, 40–41</td>
</tr>
<tr>
<td>filtering, 90</td>
<td>hiding, 119, 478–479</td>
</tr>
<tr>
<td>Name Manager, 89–90</td>
<td>replacing, 40</td>
</tr>
<tr>
<td>noncontiguous, 73–74</td>
<td>counting</td>
</tr>
<tr>
<td>pasting, 84–86</td>
<td>blank cells, 252</td>
</tr>
<tr>
<td>range intersections, 200–202</td>
<td>cells by using multiple criteria, 255</td>
</tr>
<tr>
<td>returning</td>
<td>nonblank cells, 253</td>
</tr>
<tr>
<td>last value in a column, 343–344</td>
<td>nontext cells, 253</td>
</tr>
<tr>
<td>last value in a row, 344</td>
<td>numeric cells, 253</td>
</tr>
<tr>
<td>list of unique items in a range, 347</td>
<td>selected cells, 763–764</td>
</tr>
<tr>
<td>location of the maximum value in a range, 337–338</td>
<td>text cells, 253</td>
</tr>
<tr>
<td>longest text in a range, 338</td>
<td>total number of cells, 252, 254–255</td>
</tr>
<tr>
<td>nonblank cells from a range, 346</td>
<td>data types</td>
</tr>
<tr>
<td>only positive values from a range, 343–346</td>
<td>formulas, 36–37</td>
</tr>
<tr>
<td>selecting, 42, 72–78</td>
<td>numerical values, 35–39</td>
</tr>
<tr>
<td>summing</td>
<td>text, 36–38</td>
</tr>
<tr>
<td>all cells in a range, 265–266</td>
<td>defined, 4, 7, 71</td>
</tr>
<tr>
<td>digits of an integer, 339–340</td>
<td>dependents, 563–564</td>
</tr>
<tr>
<td>every nth value in a range, 341–342</td>
<td>drop-down lists, 484–485</td>
</tr>
<tr>
<td>n largest values in a range, 335</td>
<td>filling with repeating characters, 479</td>
</tr>
<tr>
<td>range that contains errors, 333–334</td>
<td>finding, 77–78, 560–561</td>
</tr>
<tr>
<td>rounded values, 340–341</td>
<td>gridlines, printing, 165</td>
</tr>
<tr>
<td>three smallest values in a range, 328–329</td>
<td>joining, 210</td>
</tr>
<tr>
<td>tables</td>
<td>linking controls to cells, 738</td>
</tr>
<tr>
<td>converting cell ranges into tables, 95–98</td>
<td>locking, 540–541</td>
</tr>
<tr>
<td>converting tables into cell ranges, 107</td>
<td>merging, 117</td>
</tr>
<tr>
<td>taking a “picture” of a range, 457</td>
<td>monitoring, 65–66</td>
</tr>
<tr>
<td>transposing, 86</td>
<td>Name box, 6–7</td>
</tr>
<tr>
<td>VBA, 757–758</td>
<td>number of, 35</td>
</tr>
<tr>
<td>cell references</td>
<td>precedents, 562–563</td>
</tr>
<tr>
<td>absolute, 187–191, 556–557</td>
<td>preventing certain cells from printing, 170</td>
</tr>
<tr>
<td>circular references, 196–197, 552</td>
<td>prompting for a cell value, 762</td>
</tr>
<tr>
<td>colors, 557</td>
<td>protecting, 540–541</td>
</tr>
<tr>
<td>data validation, 485–487</td>
<td>scenarios, 645</td>
</tr>
<tr>
<td>mixed, 187–190</td>
<td>shrinking text to fit a cell, 116–117</td>
</tr>
<tr>
<td>names, 202–203</td>
<td>tracing cell relationships, 562–564</td>
</tr>
<tr>
<td>pivot tables, 624–626</td>
<td>unlocking, 540–541</td>
</tr>
<tr>
<td>relative, 187–188, 191, 556–557</td>
<td>wrapping text to fit a cell, 116</td>
</tr>
<tr>
<td>cells</td>
<td>zeros, distinguishing from blank cells, 279</td>
</tr>
<tr>
<td>active cell (defined), 7</td>
<td>Change Chart Type dialog box, 358–359</td>
</tr>
<tr>
<td>active cell indicator, 6</td>
<td>Change event, 751–752</td>
</tr>
<tr>
<td>addresses of, 7</td>
<td>change history, 535</td>
</tr>
<tr>
<td>blank cells, 76, 252, 553</td>
<td></td>
</tr>
</tbody>
</table>
changing
  case of text, 214–215
  chart types, 358–359, 365
  column widths in worksheets, 68–69
  data used by a data series in a chart, 399–401
  default number of worksheets in workbooks, 58
  fonts, 113
  row heights in worksheets, 68–69
  shape of comments, 92–93
CHAR function, 207–210, 797
characters
  ANSI character set, 207–208
  code numbers, 207–208
  counting
    characters in a range, 327–328
    characters in a text string, 214
    specific characters in a cell, 217
  extracting characters from a text string, 215
  nonprinting characters, 214
  number a cell can hold, 205
  removing non-numeric characters from a string, 342
  repeating, 212, 479
  special characters, 209
Chart Element control, 383–384
charts
  activating, 360
  area charts, 373
  axes
    category axis, 354, 396–397
    formatting, 362
    modifying, 391–397
    value axis, 354, 391–395
  bar charts, 367–368
  bubble charts, 377–378
  callouts, 389
  chart area
    defined, 355
    modifying, 386
  chart sheets, 4, 353
  colors, 414–415
  combination charts, 407–409
  comparisons, 363
  copying, 361
  creating, 21–22, 355–356
  data labels, 354, 401–402
  data points
    defined, 354
    missing data, 402–403
  data series
    adding, 398–399
    callouts, 389–390
    changing data, 399–401
    defined, 352–354
    deleting, 398
  editing, 389, 399–401
  legend, 352, 354, 389
  selecting, 398
  data tables, 409–410
  defined, 351
  deleting, 361
  doughnut charts, 374
  elements
    adding, 361
    deleting, 361–362
    formatting, 362
    modifying, 384–386
    moving, 361–362
    resetting formatting, 387
    selecting, 381–384
  embedded, 353
  error bars, 403–404
  experimentation, 398
  formatting, 390
  Ganit charts, 417–418
  gauge chart, 413–414
  gridlines, 354, 391
  histograms, 212–213, 415–416
  layout, 357–358
  legend, 352, 354, 389
  line charts, 368–370
  mathematical functions, 418–420
  moving, 353, 361
  new features, 28, 351
  picture charts, 411–412
  pie charts, 370–371
  pivot charts
    creating, 626
    examples, 627–632
    formatting, 33
    reports, 632–634
  plot area
    defined, 355
    modifying, 387–388
  printing, 363
  radar charts, 374–376
  resizing, 361
  scale values, 354
  Shapes, 441
  stock charts, 379–380
  styles, 360
  surface charts, 379–380
  templates
    applying, 410–411
    creating, 390, 410–411
  text, 388
  thermometer chart, 412–413
  3-D charts, 406–407
  titles, 354, 358, 388
  trendlines, 404–405
types
  changing, 358–359, 365
  choosing, 356–357, 363–364
  layout, 358
  layouts, 357
uses, 351–352
VBA, 765–766
XY (scatter) charts, 371–372

CheckBox control, 735, 739
checkerboard shading, 437
checking spelling, 569–570
CHIDIST function, 794
CHIINV function, 794
CHITEST function, 794
Choose Data Source dialog box, 579–581
CHOOSE function, 274, 792
choosing
  chart types, 356, 363–364
  data sources, 579–581
  printers, 169
circular references, 196–197, 552, 564
CLEAN function, 214, 797
clearing
  conditional formatting, 439–440
  contents of cells, 40
circular references, 196–197, 552, 564
CLEAN function, 214, 797
closing
  conditional formatting, 439–440
  contents of cells, 40
circular references, 196–197, 552, 564
CLEAN function, 214, 797
closing add-ins, 772
Excel 2007, 6
windows, 6, 54, 56
workbooks, 6, 141, 764–765
clustered column chart, 365
code
  assigning values to variables, 696
  editing, 694
  entering, 694–695
  events, 745–747, 750
  object model, 696
  parts of, 695–696
  writing, 694–695
CODE function, 207–208, 797
codes
  character codes, 207–208
  headers and footers, 167
  number format string, 469–471
collaboration features, 33
collapsing outlines, 492–493, 496
collections, 696–697
colon (:) range reference operator, 201
color scales conditional formatting, 423, 428–430
color schemes, 34
colors
  borders, 119
  cell references, 557
  cells, 118–119
  charts, 414–415
  gridlines, 391
  sheet tabs, 58
  SmartArt, 452
tables, 98–99, 119
text, 118–119
themes, 129
column charts
  clustered, 356–358, 365
  conditional colors, 414–415
defined, 365
stacked, 366
3-D, 367
COLUMN function, 792
column labels (pivot tables), 598
Column Width dialog box, 68
COLUMNS function, 792
columns (tables)
  adding, 101
  Banded Columns, 102
  defined, 95
deleting, 101
  First Column, 102
  Last Column, 102
  selecting, 100
columns (worksheets)
  adding, 66–67
deleting, 67
  headers, printing, 166
  hiding, 67–68
  inserting, 66–67
  letters, 6–7
  selecting, 73, 760
  selecting to the end of a column, 759–760
titles, printing, 164–165
unhiding, 68
widths
  changing, 68–69
  pasting, 85
COMBIN function, 793
combination charts, 407–409
ComboBox control, 735, 740
comma (,) union operator, 201
CommandButton control, 735, 740
commands
  dialog boxes, 15–18
  Quick Access Toolbar, 15, 462–464
  repeating, 13
  Ribbon, 6, 9–13
  shortcut menus, 13–14
undoing, 13
Index

C

comments
adding, 90–91
alternative options, 92
changing shape of, 92–93
deleting, 93
displaying, 91, 93
editing, 93
formatting, 91
hiding, 93
inserting, 90–91
pasting, 85
reading, 93
scenarios, 645
selecting, 76
shapes, 92–93
unhiding, 93
comparative histogram charts, 415–416
Compare Side by Side feature, 63
comparing worksheets, 56, 63
comparison charts, 363
Compatibility Checker, 33, 140–141
Compatibility Checker dialog box, 140–141
Compatibility Pack, 142–143
COMPLEX function, 788
compound interest, 304–306
computer networks, 531–532
CONCATENATE function, 797
concatenation, 210
concatenation (&) operator, 176, 210
conditional formatting
alternate-row shading, 436–437
applying, 422–423
checkerboard shading, 437
clearing, 439–440
color scales, 423, 428–430
copying, 439
data bars, 423, 425–427
derived, 421–422
deleting, 439–440
finding, 440
formulas, 434–438
highlight cell rules, 422
icon sets, 423, 430–433
new features, 30, 423
replacing, 440
rule management, 439
rules, 422–425
top bottom rules, 423
Conditional Formatting Rules Manager dialog box, 433–434, 439
Conditional Sum Wizard add-in, 270, 773
conditional sums, 268–271
CONFIDENCE function, 795
Consolidate dialog box, 507–509
consolidated options, 31
consolidating worksheets
data sources, 511
examples, 505
by using Consolidate command, 507–511
by using formulas, 505–506
by using Paste Special, 506–507
constants
names, 199
selecting, 76
smoothing constant, 671
constraints, setting, 654–655
contextual tabs, 10–11
contiguous ranges, 73
continuous compounding, 307
contracting a multicell array formula, 322
control structures
For-Next loop, 699–700
If-Then construct, 699
Select Case construct, 700
With-End With construct, 700
controls
ActiveX controls, 734
Chart Element control, 383–384
CheckBox, 735, 739
ComboBox, 735, 740
CommandButton, 735, 740
design mode, 736
Form controls, 734
Image, 735, 741
inserting, 733–736
Label, 735, 741
linking to cells, 738
ListBox, 735, 741
listing, 735
macros, 738–739
OptionButton, 735, 741–742
properties, 736–738
Scenarios, 646
ScrollBar, 735, 742
SpinButton, 735, 743
testing, 736
TextBox, 735, 743–744
ToggleButton, 735, 744
user input, 733
UserForms, 721–723, 733–734
CONVERT function, 788
converting
formulas to values, 204
non-date string to a date, 233
ranges into tables, 95–98
tables into ranges, 107
times
decimal hours, minutes, or seconds to a time, 246
military time into regular time, 246
workbooks into add-ins, 771–774
copying
chart formatting, 390
charts, 361
conditional formatting, 439
data between applications, 521–522
Excel to Word, 522–523
formatting, 122
formulas, 204
pictures, 456–457
pivot tables, 602
ranges, 78–83, 758–759
worksheets, 59
copyright restrictions on graphics files, 454
corporate networks, 531
CORREL function, 795
correlation, 670
COS function, 793
COSH function, 793
COUNT function, 250, 795
COUNTA function, 250, 795
COUNTBLANK function, 250, 795
COUNTIF function, 250, 254–255, 259, 795
COUNTIFS function, 34, 180, 250, 795
counting formulas
And criterion, 256–257
blank cells, 252
cells by using multiple criteria, 255
characters in a range, 327–328
characters in a text string, 214
defined, 249
error values in a range, 253–254
frequency distributions, 260–264
logical values, 253
most frequently occurring entry, 257–258
nonblank cells, 253
nontext cells, 253
number of error values in a range, 334
number of unique values, 260
number of words in a cell, 220–221
numeric cells, 253
occurrences of a substring in a cell, 217–218
occurrences of specific text, 258–260
Or criterion, 257
quick counts, 251
selected cells, 763–764
specific characters in a cell, 217
text cells, 253
text cells in a range, 329–330
total number of cells, 252, 254–255
COUPDAYBS function, 789
COUPDAYS function, 789
COUPDAYSNC function, 789
COUPNCD function, 789
COUPNUM function, 789
COUPPD function, 789
COVAR function, 795
covariance, 670
cracking passwords, 539
Create Names From Selection dialog box, 88–89
Create New Data Source dialog box, 579–580
Create PivotTable dialog box, 595–596
Create Table dialog box, 21, 97–98
creating
add-ins, 773–774
chart templates, 390, 410–411
charts, 21–22, 355–356
data sources, 579–580
data tables, 637
drop-down lists, 484–485
frequency distributions, 260–264, 616–618
function procedures, 686, 704–706
histograms, 212–213
HTML files, 514–515
macros, 687–689
named arrays, 319–320
named ranges, 87–89
named styles, 124–125
named views, 172
ordinal numbers, 220
outlines, 491–496
pivot charts, 626
pivot tables, 595–597
queries, 581–584, 587–588
Shapes, 442
tables, 21–22, 95–98
templates, 149–153
UserForms, 720–721, 724–725, 727–728
Web queries, 518–519
workbooks, 19, 131–132
worksheets, 19–20
credit-card numbers, 36
credit-card payment calculations, 296–297
CRITBINOM function, 795
criteria for data validation, 482–483
CUBEBEKeith function, 786
CUBEKMEM function, 786
CUBEKMEM function, 786
CUBEMEMBER function, 786
CUBEMEMBERPROPERTY function, 786
CUBERANK function, 786
CUBEBEKeith function, 786
CUBESET function, 786
CUBESETCOUNT function, 786
CUBEVALUE function, 786
cumulative sums, 266–267
currency
   Currency data type (VBA), 768
   Euro Currency Tools add-in, 773
   number formats, 50
current date, displaying, 231
current time, displaying, 242
custom error bars, 404
custom number formatting, 51, 468–477
custom table styles, 99–100
custom templates, 149–153
custom views, 171–172
Custom Views dialog box, 172
customizing
   Quick Access Toolbar, 14–15, 461–464
   SmartArt, 449–450
   table styles, 99
   themes, 128–129

d
Daily Dose of Excel blog, 814
damping factor, 671
Data Analysis dialog box, 668
data bars conditional formatting, 423, 425–427
data entry
   arrow keys, 42
   AutoComplete feature, 43–45
   AutoFill feature, 43
   automatically moving the cell pointer, 41–42
   date-stamp, 46
   decimal points, 42–43
   forcing text to appear on a new line within a cell, 44
   forms, 45–46
   fractions, 45
   functions, 186
   placing information into multiple cells simultaneously, 42
   selecting range of input cells, 42
   shortcuts, 44–45
   step-by-step example, 19–21
   time-stamp, 46
data labels (charts), 354, 401–402
data points (charts)
   defined, 354
   missing data, 402–403
data series (charts)
   adding, 398–399
   callouts, 389–390
   changing data, 399–401
   defined, 352–354
   deleting, 398
   editing, 389, 399–401
   legend, 352, 354, 389
   selecting, 398
data sharing
   copying and pasting, 521–522
   destination application, 521–522

Excel to Word, 522–526
Object Linking and Embedding (OLE), 526–527
source application, 521–522
data sources
   choosing, 579–581
   creating, 580
   listing, 579
   pivot tables, 598
Data tab (Ribbon), 9
Data Table dialog box, 300, 638–639
data tables. See also tables
   charts, 409–410
   creating, 637
   defined, 637
   one-input data table, 299–300, 637–640
   two-input data table, 300–301, 640–642
data types
   formulas
      defined, 36–37
      entering, 176, 181–183
   numerical values
      dates, 38–39
      defined, 35–36
      entering, 37
      times, 38–39
   text
      defined, 36
      entering, 37–38
   VBA, 768–769
data validation
   cell references, 485–487
   criteria, 482–483
   defined, 481–482
   drop-down lists, 484–485
   examples, 487–489
   formulas, 485–489
   invalid data, 483–484
   limitations of, 481
   pasting criteria, 85
Data Validation dialog box, 482–483
Databases
   Access, importing, 576–578
   external database files
      accessing, 575
      defined, 576
      formatting, 588
      pivot tables, 594–595
   fields, 576
   OLAP Cube, 576
   Open DataBase Connectivity (ODBC), 576
   pivot tables
      calculations, 600
      column labels, 598
      copying, 602
      creating, 595–597
data sources, 598
defined, 591
editing, 601–602
examples, 592–594, 602–607
external database files, 594–595
formatting, 599
grand totals, 598
groups, 598
items, 598
layout, 597
modifying, 601–602
new features, 33, 592
refreshing, 591, 598
row labels, 598
specifying location of, 596
styles, 599
subtotals, 598
table filters, 599
updating, 591, 598
value areas, 599
queries
creating, 581–584, 586–588
defined, 576
deleting, 586
editing, 586
examples, 578–579, 582–584
external data ranges, 585–586
Microsoft Query, 578–580
multiple database tables, 588
Query Wizard, 581, 583–584
refreshing, 585–586
relational databases, 588
result sets, 576, 584
records
adding, 588
defined, 576
editing, 588
refreshing, 576
relational databases, 576, 588
SQL (Structured Query Language), 576
tables, 576
dates
AutoFill feature, 232
calculating
number of days between two dates, 233–234
number of work days between two dates, 234–235
number of years between two dates, 235
person's age, 236
converting non-date string to a date, 233
current date, displaying, 231
date-stamp, 46
determining
date of the most recent Sunday, 237
dates of holidays, 238–240
date's quarter, 241
day of the week, 237
day of the year, 237
first day of the week after a date, 237–238
last day of a month, 240
nth occurrence of a day of the week in a month, 238
whether a year is a leap year, 241
displaying, 231–232
entering
acceptable formats, 224–225
into header or footer, 167
into worksheets, 38–39
formatting, 228–229
generating a series of dates, 232–233
inconsistent entries, 230
leap year bug, 229
1900 date system, 224
1904 date system, 224
numerical values, 38–39
offsetting a date using only work days, 234–235
pre-1900 dates, 229–230
searching, 226
serial numbers, 223–224
short date format, 224
supported dates, 223–224
United States English date format, 223
DATEVALUE function, 230, 787
DAVERAGE function, 786
David McRitchie’s Excel Pages Web site, 814
DAY function, 230, 787
DAYS360 function, 230, 787
DB function, 310, 789
DCOUNT function, 250, 786
DCOUNTA function, 250, 786
DDB function, 310, 789
Deactivate event
workbooks, 747
worksheets, 751
debugging function procedures (VBA), 711
DEC2BIN function, 788
DEC2HEX function, 788
DEC2OCT function, 788
Decimal data type (VBA), 768
decimal points, 42–43
declaring variable types, 768–769
default templates, 149–151
defining scenarios, 643–644
DEGREES function, 793
deleting. See also removing
chart elements, 361–362
charts, 361
columns from tables, 101
deleting (continued)  
columns (worksheets), 67  
comments, 93  
conditional formatting, 439–440  
contasts of cells, 39–40  
data series (charts), 398  
information, 568  
legend (charts), 389  
named ranges, 90  
named views, 172  
nonprinting characters, 214  
outlines, 494, 496  
queries, 586  
rows from tables, 101, 103–104  
rows (worksheets), 67  
spacing, 214  
text, 568  
worksheets, 57
DELTA function, 788

demo versions of software, 800
depreciation calculations, 310–312
descriptive statistics, 670–671
design mode, 736
designating  
trusted folders, 683  
workbooks as shared, 534  
destination application, 521–522  
developer tab, 9, 681–682  
DEVSQ function, 250, 795
DGET function, 786
diagrams. See SmartArt
dialog boxes, 15–18. See also UserForms
dialog launcher, 12
digital signatures, 140, 548–549
dimensions of tables, 98
direct cell dependents, 563
direct cell precedent, 562
direction keys, 7–8
disabling macros, 34, 683
DISC function, 789
display screen, 4–6
displaying  
Add-In Manager, 772  
calendar in a range, 347–348  
comments, 91, 93  
current date, 231  
current time, 242  
dates, 231–232  
formulas, 562  
result sets, 584  
scenarios, 645  
times, 242  
UserForms, 724, 728–729
#DIV/0! error value, 554–555  
division (/) operator, 176
DMAX function, 786
DMIN function, 786
Document Inspector, 140, 547–548
Document Inspector dialog box, 140
document themes  
applying, 126–128  
colors, 129  
customizing, 128–129  
defined, 28, 126  
fonts, 128–129  
SmartArt, 452

tables, 98
DOLLAR function, 212, 797
DOLLARDE function, 789
DOLLARFR function, 789
duplicate rows in tables, deleting, 103–104
drawing borders, 119
drop-down lists, 484–485
dSSDEV function, 786
dSSDEV function, 786
duplicate rows in tables, deleting, 103–104
DURATION function, 789
dVAR function, 786
dVAR function, 786
dynamic models, 635

E
eBook version of Excel 2007 Bible, 800
EDATE function, 231, 787
Edit Criteria dialog box, 587
Edit Links dialog box, 502–504, 560
edit mode, 40–41
Edit Scenario dialog box, 645
Edit Series dialog box, 389, 400–401
editing. See also modifying  
accepting changes, 538
array formulas, 321–322
change history, 535
code, 694
comments, 93
contents of cells, 40–41
contents of cells, 40–41
data series (charts), 389, 399–401
formulas, 187
links, 560
macros, 689–690
named ranges, 90
pivot tables, 601–602
queries, 586
records in databases, 588
rejecting changes, 538
scenarios, 645
tracking changes, 535–538
EFFECT function, 789
element codes for headers and footers, 167
embedded charts, 353
embedding objects, 527
Word documents in workbooks, 526–527
workbooks in Word documents, 527–530
embedding objects, 526
Enable Interactive Calculation setting feature, 197
Encrypt Document dialog box, 543–544
encrypting workbooks, 140, 543–544
engineering functions, 787–788
entering array formulas, 320–321
dates, 224–225
text, 205
times, 227–228
entering data
arrow keys, 42
AutoComplete feature, 43–45
AutoFill feature, 43
automatically moving the cell pointer, 41–42
date-stamp, 46
decimal points, 42–43
forcing text to appear on a new line within a cell, 44
forms, 45–46
formulas, 176, 181–183
fractions, 45
functions, 186
numerical values, 37
placing information into multiple cells simultaneously, 42
selecting range of input cells, 42
shortcuts, 44–45
step-by-step example, 19–21
text, 37–38
time-stamp, 46
entering VBA code, 694–695
EOMONTH function, 231, 787
equal to (=) operator, 176
erasing. See deleting
ERF function, 788
ERFC function, 788
error bars in charts, 403–404
Error Checking dialog box, 564–566
ERROR.TYPE function, 791
errors in formulas
absolute relative reference problems, 556–557
actual versus displayed values, 558
array formulas, 552
background error-checking feature, 564–566
blank cells, 553
circular references, 552, 564
error values
defined, 196
#DIV/0!, 554–555
hash marks (#), 195, 552
#N/A, 555
#NAME?, 555
#NULL!, 555–556
#NUM!, 556
printing, 554
#REF!, 556
ripple effect, 195
tracking, 554, 564
#VALUE!, 556
extra space characters, 553
floating point numbers, 559
incomplete calculation errors, 552
incorrect reference errors, 551
logical errors, 551
mismatched parentheses, 552
operator precedence, 557–558
phantom links, 560
semantic errors, 551
syntax errors, 551–553
Euro Currency Tools add-in, 773
Evaluate Formula dialog box, 566
evaluating formulas, 342, 566
evaluation versions of software, 800
EVEN function, 793
events
code modules, 745–747, 750
non-object events
OnKey, 754–755
OnTime event, 754
types of, 745
UserForms, 723, 726, 729–730
workbooks
Activate, 747
AddinInstall, 747
AddinUninstall, 747
BeforeClose, 747, 750
BeforePrint, 747
BeforeSave, 747, 750
Deactivate, 747
NewSheet, 747, 749
Open, 748–749
SheetActivate, 748–749
SheetBeforeDoubleClick, 748
SheetBeforeRightClick, 748
SheetCalculate, 748
SheetChange, 748
SheetDeactivate, 748
filling cells with repeating characters, 479
filtering
  named ranges, 90
  names, 560
  table data, 104, 106–107
finalizing workbooks, 140, 547
financial formulas
  credit-card payments, 296–297
  depreciation, 310–312
  investment calculations, 305–306
  investments, 303–304, 307–309
  loans, 292–301, 303
  time value of money, 291–292
financial functions, 789–790
Find And Replace dialog box, 567–569
Find Format dialog box, 569
FIND function, 216, 797
Find What text box, 567
finding
  cells of a particular type, 77–78, 560–561
  clip art, 454–455
  conditional formatting, 440
  formatting, 568–569
  information, 567–568
  row of a value's nth occurrence in a range, 338
  spelling errors, 569–570
  text, 216, 567–568
FINV function, 795
First Column, 102
FISHER function, 795
FISHERINV function, 795
FIXED function, 797
fixed value error bars, 403
fixing circular references, 564
floating point number errors, 559
FLOOR function, 793
folders, trusted, 683
FollowHyperlink event, 751
fonts
  applying to ranges, 114–115
  changing, 113
  default font, 112
  defined, 112
  new fonts for Excel 2007, 26, 113
  sizes, 112–113
  styles, 113–114
  symbols, 209
  themes, 128–129
footers
  adjusting distance from the bottom of the page, 162
  aligning with margins, 168
  date, 167
  different footers for odd/even pages, 168
  element codes, 167
  excluding from first page, 168
  file name, 167
  file path, 167
  formatting, 167
  inserting, 166–167
  multiline, 167
  page numbers, 167
  pictures, 167
  predefined, 166
  scaling, 168
  time, 167
forcing
  numbers to be treated as actual numbers, 206
  page breaks, 162
  recalculation of formulas, 558
  text to appear on a new line within a cell, 44
FORECAST function, 795
Form controls, 734
Format Axis dialog box, 362
Format Cells dialog box, 49–50, 112, 467–468, 541
Format Comment dialog box, 91
Format Error Bars dialog box, 402
Format dialog box, 384–386
Format Error Bars dialog box, 403
Format Painter button, 122
formatting
  background images, 121–122, 163, 457
  borders
    animated border around ranges, 79
    applying, 119–121
    colors, 119
    drawing, 119
    styles, 119–120
  chart elements, 362
  charts, 390
  comments, 91
  conditional formatting
    alternate-row shading, 436–437
    applying, 422–423
    checkerboard shading, 437
    clearing, 439–440
    color scales, 423, 428–430
    copying, 439
    data bars, 423, 425–427
    defined, 421–422
    deleting, 439–440
    finding, 440
    formulas, 434–438
    highlight cell rules, 422
    icon sets, 423, 430–433
    new features, 30, 423
    replacing, 440
    rule management, 439
    rules, 423–425
    top bottom rules, 423
formatting (continued)
copying, 122
dates, 228–229
external database files, 588
finding, 568–569
fonts
  applying to ranges, 114–115
  changing, 113
default font, 112
defined, 112
  new fonts for Excel 2007, 26, 113
  sizes, 112–113
  styles, 113–114
footers, 167
headers, 167
multiple formatting styles in a single cell, 115
named styles
  applying, 123
  attributes of, 122–123
  creating, 124–125
  merging, 125
  modifying, 124
numbers
  Accounting format, 50
  automatically, 47–48, 466
  calculations, 50
  Currency format, 50
custom, 51, 468–477
Date formats, 50, 477
Format Cells dialog box, 49–50, 467–468
Fraction format, 51
fractions, 476
General format, 50, 465
hiding entries, 478–479
keyboard shortcuts, 48, 467
leading zeros, 475
negative sign (−), 476–477
Number format, 50
number format string, 469–471
Percentage format, 50
readability, 21, 47
Ribbon, 48, 466
Scientific format, 51
Special format, 51
Text format, 51, 478
TEXT function, 478
Time formats, 50, 477
pasting, 85
pivot charts, 33
pivot tables, 599
replacing, 569
Shapes, 445
shortcut keys, 818
tables, 98–99, 102, 119
templates, 125–126
text alignment, 115–116
themes
  applying, 126–128
colors, 129
customizing, 128–129
defined, 28, 126
fonts, 128–129
SmartArt, 452
tables, 98
times, 228–229
worksheets, 21–22
formatting tools
  Format Cells dialog box, 112
  Home Tab, 110
  Mini toolbar, 110–111
forms
data entry, 45–46
UserForms
  accelerator keys, 732
  alternatives, 716–720
controls, 721–723, 733–734
creating, 720–721, 724–725, 727–728
displaying, 724, 728–729
event handling, 723, 726, 729–730
examples, 724–731
help, 723, 732
tab order, 732
testing, 725–726, 728, 730–731
uses, 715–716
Formula AutoComplete feature, 32, 181–183
Formula AutoCorrect feature, 178–179, 553
Formula bar
calculations, 203
defined, 6
edit mode, 40–41
formula display, 176
resizing, 34
shortcut keys, 817–818
Formula Evaluator, 342, 566
formulas
  array formulas
    advantages, 322
    array constant elements, 317
    array constants, 316–317
    contracting multicell array formula, 322
defined, 313
disadvantages, 322
ingesting, 321–322
eliminating intermediate formulas, 330–331
errors, 552
expanding a multicell array formula, 322
Formula Evaluator, 342
functions, 325–327
multicell, 314–315, 323–327
range references, 331–332
ranking data, 344–345
selecting an array formula range, 321
single-cell, 315–316, 327–330
Automatic Calculation mode, 198
cell dependents, 563–564
cell precedents, 562–563
cell references, 187–191, 202–203
circular references, 196–197, 552, 564
conditional formatting, 434–438
converting to values, 204
copying, 204
counting formulas
And criterion, 256–257
blank cells, 252
cells by using multiple criteria, 255
characters in a range, 327–328
characters in a text string, 214
defined, 249
error values in a range, 253–254
frequency distributions, 260–264
logical values, 253
most frequently occurring entry, 257–258
nonblank cells, 253
nontext cells, 253
number of error values in a range, 334
number of unique values, 260
number of words in a cell, 220–221
numeric cells, 253
occurrences of a substring in a cell, 217–218
occurrences of specific text, 258–260
Or criterion, 257
quick counts, 251
selected cells, 763–764
specific characters in a cell, 217
text cells, 253
text cells in a range, 329–330
total number of cells, 252, 254–255
data validation, 485–489
defined, 36–37, 175
displaying, 562
dynamic models, 635
editing, 187
elements of, 175
entering, 176, 181–183
error values
defined, 196
#DIV/0!, 554–555
hash marks (#), 195, 552
#N/A, 555
#NAME?, 555
#NULL!, 555–556
#NUM!, 556
printing, 554
#REF!, 556
ripple effect, 195
tracing, 554, 564
#VALUE!, 556
errors
absolute-relative reference problems, 556–557
actual versus displayed values, 558
Array formulas, 552
background error-checking feature, 564–566
blank cells, 553
circular references, 196–197, 552, 564
extra space characters, 553
floating point numbers, 559
incomplete calculation errors, 552
incorrect reference errors, 551
logical errors, 551
mismatched parentheses, 552
operator precedence, 557–558
phantom links, 560
semantic errors, 551
syntax errors, 551–553
evaluating, 342, 566
examples of, 176
external reference formulas, 500–505
financial formulas
credit-card payments, 296–297
depreciation, 310–312
investments, 303–309
loans, 292–301, 303
time value of money, 291–292
Formula bar, 176
functions, 179–180, 184–186
hard-coded values, 203, 636
locking formula cells, 152
lookup formulas
case-sensitive lookup, 282–283
CHOOSE function, 274, 792
closest match values, 288–289
defined, 273–274
determining the cell address of a value within a range, 287–288
determined the cell address of a value within a range, 287–288
exact values, 280–281
grade-point average (GPA), 284–285
HLOOKUP function, 274, 277, 792
IF function, 274–275, 791
IFERROR function, 34, 180, 274, 555, 791
INDEX function, 274, 278–280, 792
letter grades for test scores, 283–284
LOOKUP function, 275, 277–278, 792
MATCH function, 275, 278, 792
multiple lookup tables, 283
OFFSET function, 275, 792
two-column lookups, 286–287
two-way lookups, 285–286
value to the left, 281–282
VLOOKUP function, 275–277, 792
formulas (continued)
  Manual Calculation mode, 198
  names, 199–200
  naming techniques, 199–203
  operator precedence, 177–179, 557
  operators, 176–177
  pasting, 85–86
  range intersections, 200–202
  ranges, 183–184
  recalculating, 558
  selecting, 76
  summing formulas
    all cells in a range, 265–266
    And criteria, 271–272
    conditional sums, 268–271
    cumulative sums, 266–267
    defined, 249
    digits of an integer, 339–340
    every nth value in a range, 341–342
    n largest values in a range, 335
    negative values, 269
    Or criteria, 272
    quick sums, 251
    range that contains errors, 333–334
    rounded values, 340–341
    three smallest values in a range, 328–329
    times that exceed 24 hours, 244–245
    "top n" values, 268
    values based on a date comparison, 270
    values based on a different range, 269
    values based on a text comparison, 269
  tables, 191–195
  values, 85
  viewing, 562
  what-if analysis
    data tables, 637–642
    defined, 635, 649
    examples, 635–636
    goal seeking, 649–652
    manual, 637
    Scenario Manager, 643–647
    Solver, 649, 652–666, 773
  Formulas tab (Ribbon), 9
  For–Next loop, 699–700
  Fourier analysis, 672
  Fraction format, 51
  fractions, 45, 476
  Freeform Shape, 446–447
  freeware programs, 800
  freezing panes, 64–65
  frequency distribution, 260–264, 616–618
  FREQUENCY function, 250, 261–262, 795
  Frontline Systems Web site, 662
  F-Test, 671–672
  FTEST function, 795
  Full Screen mode, 461
  Function Arguments dialog box, 185–186, 712–713
  function keys, 820–821
  function procedures (VBA)
    arguments, 707–711
    creating, 686, 704–706
    debugging, 711
    defined, 685
    executing, 685, 706–707
    inserting, 712–713
    uses, 703
    values, 705–706
  functions
    ABS, 792
    ACCRINT, 789
    ACCRINTM, 789
    ACOS, 792
    ACOSH function, 792
    ADDRESS, 792
    AMORDEGRC, 789
    AMORLINC, 789
    AND, 791
    AREAS, 792
    arguments, 180–181, 185–186
    array formulas, 325–327
    ASIN, 792
    ASINH, 792
    ATAN, 792
    ATAN2, 792
    ATANH, 792
    AVEDEV, 794
    AVERAGE, 794
    AVERAGEA, 794
    AVERAGEIF, 34, 180, 794
    AVERAGEIFS, 34, 180, 794
    BAHTTEXT, 797
    BESSELI, 787
    BESSELJ, 787
    BESSELY, 787
    BETADIST, 794
    BETAINV, 794
    BIN2DEC, 787
    BIN2HEX, 787
    BIN2OCT, 788
    BINOMDIST, 794
    CEILING, 792
    CELL, 791
    CHAR, 207–210, 797
    CHIDIST, 794
    CHIINV, 794
    CHITEST, 794
    CHOOSE, 274, 792
    CLEAN, 214, 797
    CODE, 207–208, 797
functions (continued)
IMARGUMENT, 788
IMCONJUGATE, 788
IMCOS, 788
IMDIV, 788
IMEXP, 788
IMLN, 788
IMLOG2, 788
IMLOG10, 788
IMPOWER, 788
IMPRODUCT, 788
IMREAL, 788
IMSIGN, 788
IMSUM, 788
INDEX, 274, 278–280, 792
INDIRECT, 326, 792
INFO, 791
inserting, 184–186
INT, 793
INTERCEPT, 795
INTRATE, 789
IPMT, 294, 789
IRR, 789
ISBLANK, 791
ISERR, 791
ISERROR, 791
ISEVEN, 791
ISLOGICAL, 791
ISNA, 791
ISNONTEXT, 791
ISNUMBER, 791
ISODD, 791
ISPMT, 789
ISREF, 791
ISTEXT, 207, 791
KURT, 795
LARGE, 795
LCM, 793
LEFT, 215, 797
LEN, 214, 797
LINEST, 795
LN, 793
LOG, 793
LOG10, 793
LOGEST, 795
LOGINV, 795
LOGNORMDIST, 795
LOOKUP, 275, 277–278, 792
LOWER, 214, 797
MATCH, 275, 278, 792
MAX, 795
MAXA, 795
MDETERM, 793
MDURATION, 789
MEDIAN, 796
MID, 215, 797
MIN, 796
MINA, 796
MINUTE, 241, 787
MINVERSE, 793
MIRR, 790
MMULT, 793
MOD, 793
MODE, 257–258, 796
MONTH, 231, 241, 787
MROUND, 793
MULTINOMIAL, 793
N, 791
NA, 791
NEGBINOMDIST, 796
NETWORKDAYS, 231, 787
new functions in Excel 2007, 34, 180
NOMINAL, 790
NORMDIST, 796
NORMINV, 796
NORMSINV, 796
NOT, 791
NOW, 231, 241, 787
NPER, 294, 790
NPV, 790
OCT2BIN, 788
OCT2DEC, 788
OCT2HEX, 788
ODD, 793
ODDFPRICE, 790
ODDFYIELD, 790
ODDLPRICE, 790
ODDLYIELD, 790
OFFSET, 275, 792
OR, 791
PEARSON, 796
PERCENTILE, 796
PERCENTRANK, 796
PERMUT, 796
PI, 793
PMT, 293, 790
POISSON, 796
POWER, 793
PPMT, 293, 790
PRICE, 790
PRICEDISC, 790
PRICEMAT, 790
PROB, 796
PRODUCT, 793
PROPER, 214, 797
PV, 294–295, 790
QUARTILE, 796
QUOTIENT, 793
RADIANS, 793
INDEX

G

GAMMA.DIST function, 795
GAMMA.INV function, 795
GAMMALN function, 795
Gantt charts, 417–418
gauge chart, 413–414
GCD function, 793
General number format, 50, 465
General Options dialog box, 137–138
generating
arrays of consecutive integers, 326
random numbers, 673–674
scenario reports, 647
series of dates, 232–233
GEOMEAN function, 795
TINV, 796
today, 231, 787
TRANSPOSE, 325–326, 792
trend, 796
TRIM, 214, 797
TRIMMEAN, 796
true, 791
TRUNC, 794
ttest, 796
type, 791
upper, 214–215, 797
value, 797
var, 796
vara, 797
varp, 797
varpa, 797
vdb, 310, 790
vlookup, 275–277, 792
weekday, 231, 787
weeknum, 231, 787
weibull, 797
workday, 231, 787
xirr, 790
xnpv, 790
year, 231, 787
yearfrac, 231, 787
yield, 790
yielddisc, 790
yielddisc, 790
yieldmat, 790
ztest, 797
functions (VBA)
function procedures, 703–713
inputbox, 716–717
msgbox, 717–720
future value
of a series of deposits, 307–309
of a single deposit, 303–307
FV function, 789
FVSCHEDULE function, 789
GESTEP function, 788
GETPIVOTDATA function, 625–626, 792
GNU software, 800
Go To dialog box, 553
Go To Special dialog box, 76, 553, 560–561
Goal Seek dialog box, 651
goal seeking
   defined, 649
   single-cell goal seeking, 650–651
   troubleshooting, 651–652
Google Groups, 811–812
grade-point average (GPA), 284–285
grand totals (pivot tables), 598
graphics. See also objects
   background images, 121–122, 163, 457
   bitmap images, 453
   Clip Art task pane, 454–455
   Clip Organizer, 455
   conditional formatting
      color scales, 423, 428–430
      data bars, 423, 425–427
      icon sets, 423, 430–433
   exporting, 448
graphics files, 453
   pictures
      copying, 456–457
      footers, 167
      headers, 167
      inserting, 455
      styles, 456
Shapes
   aligning, 446
   arranging, 445
   charts, 441
   creating, 442
   defined, 441
   draw layer, 441, 443
   formatting, 445
   Freeform Shape, 446–447
   grouping, 446
   hiding, 443
   inserting, 441–442
   printing, 447
   reshaping, 446
   resizing, 445
   rotating, 446
   selecting, 442
   spacing, 446
   text, 444
   ungrouping, 446
SmartArt
   colors, 452
   customizing, 449–450
   defined, 31–32
   inserting, 448–449
   layout, 450–451
   selecting, 449
   styles, 452
   text, 450
   vector images, 453
   watermarks, 163–164
WordArt
   inserting, 452–453
   selecting, 453
graphics files, 454
graphics viewers, 454
graphs
   activating, 360
   area charts, 373
   axes
      category axis, 354, 396–397
      formatting, 362
      modifying, 391–397
      value axis, 354, 391–395
   bar charts, 367–368
   bubble charts, 377–378
callouts, 389
   chart area
      defined, 355
      modifying, 386
   chart sheets, 4, 353
   colors, 414–415
   combination charts, 407–409
   comparisons, 363
   copying, 361
   creating, 21–22, 355–356
   data labels, 354, 401–402
data points
   defined, 354
   missing data, 402–403
data series
   adding, 398–399
   callouts, 389–390
   changing data, 399–401
   defined, 352–354
   deleting, 398
   editing, 389, 399–401
   legend, 352, 354, 389
   selecting, 398
data tables, 409–410
   defined, 351
deleting, 361
doughnut charts, 374
elements
   adding, 361
deleing, 361–362
   formatting, 362
   modifying, 384–386
   moving, 361–362
resetting formatting, 387
  selecting, 381–384
embedded, 353
error bars, 403–404
experimentation, 398
formatting, 390
Gantt charts, 417–418
gauge chart, 413–414
gridlines, 354, 391
histograms, 212–213, 415–416
layout, 357–358
legend, 352, 354, 389
line charts, 368–370
mathematical functions, 418–420
moving, 353, 361
new features, 28, 351
picture charts, 411–412
pie charts, 370–371
pivot charts
  creating, 626
  examples, 627–632
  formatting, 33
  reports, 632–634
plot area
  defined, 355
  modifying, 387–388
printing, 363
radar charts, 374–376
resizing, 361
scale values, 354
Shapes, 441
stock charts, 379–380
styles, 360
surface charts, 377
templates
  applying, 410–411
  creating, 390, 410–411
text, 388
thermometer chart, 412–413
3-D, 406–407
titles, 354, 358, 388
trendlines, 404–405
types
  changing, 358–359, 365
  choosing, 356–357, 363–364
  layout, 358
  layouts, 357
uses, 351–352
VBA, 765–766
XY (scatter) charts, 371–372
greater than (>) operator, 176
greater than or equal to (>=) operator, 176
gridlines
  charts, 354, 391
  printing, 165
grouping
  pivot table items, 611–616
  Shapes, 446
Grouping dialog box, 612–614
groups (pivot tables), 598
GROWTH function, 795

H
handling events in UserForms, 723, 726, 729–730
hard-coded values in formulas, 203, 636
HARMEAN function, 795
hash mark (#), denoting error values, 195, 552
Header Row, 101–102
headers
  adjusting distance from top of page, 162
  aligning with margins, 168
date, 167
different headers for odd/even pages, 168
element codes, 167
excluding from first page, 168
file name, 167
file path, 167
formatting, 167
inserting, 166–167
multiline, 167
page numbers, 167
pictures, 167
predefined, 166
scaling, 168
time, 167
height of rows, changing in worksheet, 68–69
Height property, 738
help
  Excel 2007, 809–810
  functions, 785
  UserForms, 723, 732
  VBA, 757
HEX2BIN function, 788
HEX2DEC function, 788
HEX2OCT function, 788
hiding
  cell contents, 478–479
  columns (worksheets), 67–68
  comments, 93
  contents of cells, 119
  Mini toolbar, 14, 111
  objects, 444
  outline symbols, 494, 497
  Ribbon, 10
  rows (worksheets), 67–68
  scenarios, 645
  Shapes, 443
  worksheets, 59–60
highlight cell rules conditional formatting, 422
Highlight Changes dialog box, 536–537
histograms, 212–213, 415–416, 672
HLOOKUP function, 274, 277, 792
holidays, determining dates of, 238–240
Home tab
   defined, 9–10
   formatting tools, 110
horizontal scrollbar, 6
hot keys, 16
HOUR function, 241, 787
HTML files, 513–516
HYPERLINK function, 792
hyperlinks, 516–518
HYPGEOMDIST function, 795
icon sets conditional formatting, 423, 430–433
identifying a multiple selection, 763
IF function, 274–275, 791
IFERROR function, 54, 180, 274, 555, 791
IF-Then construct, 699
IMABS function, 788
Image control, 735, 741
IMAGINARY function, 788
IMARGUMENT function, 788
IMCONJUGATE function, 788
IMCOS function, 788
IMDIV function, 788
IMEXP function, 788
IMLN function, 788
IMLOG2 function, 788
IMLOG10 function, 788
Import Data dialog box, 577, 584
importing Access databases, 576–578
IMPOWER function, 788
IMPRODUCT function, 788
IMREAL function, 788
IMSIGN function, 788
IMREAL function, 788
IMSUB function, 788
incomplete calculation errors, 552
incorrect reference errors in formulas, 551
INDEX function, 274, 278–280, 792
indirect cell dependents, 563
indirect cell precedent, 562
INDIRECT function, 326, 792
INFO function, 791
information
   deleting, 568
   finding, 567–568
   replacing, 568
Information Rights Management (IRM), 140, 540
input ranges
   correlation, 670
   descriptive statistics, 670
histogram, 672
moving average, 673
random number generation, 674
sampling, 676
specifying, 669
t-Test, 676–677
z-Test, 677
InputBox function (VBA), 716–717
Insert Calculated Field dialog box, 620
Insert Calculated Item dialog box, 622
Insert dialog box, 67
Insert Function dialog box, 185, 712–713, 785
Insert Hyperlink dialog box, 517
Insert tab (Ribbon), 9
inserting
   background images, 121
   columns
      in tables, 101
      in worksheets, 66–67
   comments, 90–91
   controls, 733–736
   footers, 166–167
   function procedures (VBA), 712–713
   functions, 184–186
   headers, 166–167
   hyperlinks, 517
   page breaks, 162–163
   pictures, 455
   rows
      in tables, 101
      in worksheets, 66–67
   Shapes, 441–442
   sheet tabs, 6
   SmartArt, 448–449
   special characters, 209
   tabs, 6
   watermarks, 163–164
   WordArt, 452–453
   worksheets, 57
inspecting workbooks, 547–548
installing
   add-ins, 775, 780–781
   Analysis ToolPak add-in, 668
   Analysis Toolpak add-in, 265
   Microsoft Query, 578
   Solver add-in, 652
   INT function, 793
Integer data type (VBA), 768
INTERCEPT function, 795
intermediary links, 505
Internet Assistant VBA add-in, 773
Internet newsgroups, 811–813
intersection operator, 200–201
INTRATE function, 789
invalid data, 483–484
investments
calculations
  future value of a series of deposits, 307–309
  future value of a single deposit, 303–307
  Rule of 72, 308
  optimizing investment portfolio, 664–666
invisible digital signatures, 548–549
IPMT function, 789
IPMT function, 294
IrfanView graphics file viewer, 454
IRM (Information Rights Management), 140, 540
IRR function, 789
irregular payments for loans, calculating, 302–303
ISBLANK function, 791
ISERR function, 791
ISERROR function, 791
ISEVEN function, 791
ISLOGICAL function, 791
ISNA function, 791
ISNONTEXT function, 791
ISNUMBER function, 791
ISODD function, 791
ISREF function, 791
ISTEXT function, 207, 791
items (pivot tables), 598

J
joining cells, 210
Jon Peltier’s Excel Page Web site, 814

K
keyboard
direction keys, 7–8
Num Lock key, 7
OnKey event, 754–755
Ribbon, 12–13, 815
Scroll Lock key, 7
shortcut keys, 815–821
shortcuts for number formatting, 48, 467
keytips, 12–13
Knowledge Base, 810
KURT function, 795
Kusleika, Dick (blogger), 814

L
Label control, 735, 741
landscape orientation, 162
LARGE function, 795
large values, accuracy of, 36
Last Column, 102
layout
  charts, 357–358
  pivot tables, 597
  SmartArt, 450–451
LCM function, 793
leading zeros, 475
leap year bug, 229
LEFT function, 215, 797
Left property, 738
legend (charts), 352, 354, 389
LEN function, 214, 797
less than (<) operator, 176
less than or equal to (<=) operator, 176
letter grades for test scores, 283–284
letters in columns, 6–7
levels of outlines, 494–496
line charts, 368–370
linear equations, solving simultaneous, 658–659
LINEST function, 795
LinkedCell property, 737–738
linking
  controls to cells, 738
  workbooks, 499–505
links
  breaking, 560
  editing, 560
  phantom link errors, 560
ListBox control, 735, 741
ListFillRange property, 737
ListFormulas macro, 701–702
listing
  controls, 735
  data sources, 579
  hidden worksheets, 59
  named views, 172
  scenarios, 646
  worksheets, 56
lists, 96
LN function, 793
loan calculations
  amortization schedule, 297–299
  credit-card payments, 296–297
  examples, 295–296
  functions, 292–296
  interest amount, 294
  irregular payments, 302–303
  loan options, 299–301
  number of payment periods, 294
  payment amount, 293
  periodic interest rate amount, 294
  present value, 294–295
  principal amount, 293
locking cells, 152, 540–541
LOG function, 793
LOG10 function, 793
LOGEST function, 795
logical comparison operators, 176
logical errors in formulas, 551
logical functions, 791
logical values, counting, 253
INDEX

LOGINV function, 795
LOGNORMDIST function, 795
Long data type (VBA), 768
lookup formulas
  case-sensitive lookup, 282–283
  CHOOSE function, 274, 792
  closest match values, 288–289
  defined, 273–274
  determining the cell address of a value within a range, 287–288
  exact values, 280–281
  grade-point average (GPA), 284–285
  HLOOKUP function, 274, 277, 792
  IF function, 274–275, 791
  IFERROR function, 34, 180, 274, 555, 791
  INDEX function, 274, 278–280, 792
  letter grades for test scores, 283–284
  LOOKUP function, 275, 277–278, 792
  MATCH function, 275, 278, 792
  multiple lookup tables, 283
  OFFSET function, 275, 792
  two-column lookups, 286–287
  two-way lookups, 285–286
  value to the left, 281–282
  VLOOKUP function, 275–277, 792
  LOOKUP function, 275, 277–278, 792
  Lookup Wizard add-in, 773
looping ranges, 760–762
loops, 699–700
Lotus 1-2-3 Transition Navigation Keys, 815
LOWER function, 214, 797

M
Macro dialog box, 685
Macro Options dialog box, 693
macros
  alert messages, 767
  buttons, 693–694
  controls, 738–739
  copying a range, 758–759
  counting selected cells, 763–764
  creating, 687–689
  defined, 681, 686
  description of, 687
  determining the type of range selection, 762–763
  Developer tab, 9, 681–682
  disabling, 34, 683
  editing, 689–690
  executing, 731
  function procedures
    arguments, 707–711
    creating, 686, 704–706
    debugging, 711
    executing, 685, 706–707
  InputBox, 716–717
  inserting, 712–713
  MsgBox, 717–720
  uses, 703
  values, 705–706
  identifying a multiple selection, 763
  ListFormulas macro, 701–702
  looping ranges, 760–762
  moving ranges, 760
  names, 687
  object references, 767–768
  Personal Macro Workbook, 692–693
  prompting for a cell value, 762
  Quick Access Toolbar, 464, 731
  recording, 687–689, 692
  saving, 684
  screen updating, 767
  security, 682–683
  selecting rows or columns, 760
  selecting to the end of a row or column, 759–760
  shortcut keys, 687, 693
  stopping recording, 687
  storage options, 687, 692–693
  Sub procedures
    defined, 684–685
    executing, 685
  suggested uses, 682
  testing, 689, 691
  UserForms
    accelerator keys, 732
    ActiveX controls, 721–723
    alternatives, 716–720
    creating, 720–721, 724–725, 727–728
    displaying, 724, 728–729
    event handling, 723, 726, 729–730
    examples, 724–731
    help, 723
    testing, 725–726, 728, 730–731
    uses, 715–716
    viewing code, 688–691
  Manual Calculation mode, 198
  manual what-if analysis, 637
  marching ants border around ranges, 79
  margins
    adjusting, 156, 160–161
    aligning headers and footers with margins, 168
    viewing, 156
  MATCH function, 275, 278, 792
  mathematical functions
    list of, 792–794
    plotting, 418–420
  MAX function, 795
  MAXA function, 795
  Maximize button, 6
  maximizing windows, 6, 54

848
MDETERM function, 793
MDURATION function, 789
MEDIAN function, 796
menu shortcuts, 13–14
Merge Scenarios dialog box, 646
merging
   cells, 117
   named styles from other workbooks, 125
   scenarios, 646
methods, 696, 699
Microsoft Clip Organizer, 455
Microsoft newsgroups, 811–812
Microsoft Office Share Point Server product, 33
Microsoft Office Web site, 811
Microsoft Query. See also queries
data sources
   choosing, 579–581
   creating, 579–580
   listing, 579
external data ranges, 585–586
installing, 578
manual query creation, 586–588
multiple database tables, 588
Query window, 586–588
Query Wizard, 581–584
Microsoft technical support
   Knowledge Base, 810
   support options, 810
   Web site, 811
MID function, 215, 797
military time, 246
MIN function, 796
MINA function, 796
Mini toolbar
   defined, 26
   formatting tools, 110–111
   hiding, 111
   turning on/off, 14, 111
Minimize application button, 6
Minimize window button, 6
minimizing
   applications, 6
   windows, 6, 54
MINUTE function, 241, 787
MINVERSE function, 793
MIRR function, 790
mismatched parentheses in formulas, 552
missing data points in charts, 402–403
mixed cell references, 187–190
MMULT function, 793
MOD function, 793
modal dialog boxes, 16
MODE function, 257–258, 796
modeless dialog boxes, 16
modifying. See also editing
   charts
      axes, 391–397
      chart area, 386
      elements of, 384–386
      plot area, 387–388
      3-D charts, 406–407
      named styles, 124
      pivot tables, 601–602
      scenarios, 645
      templates, 148–149, 152
   monitoring cells, 65–66
   MONTH function, 231, 241, 787
   mouse, 8
   Move Chart dialog box, 353, 361
   Move or Copy dialog box, 59
   moving
      around in tables, 100
      around in worksheets, 7–8, 816
      cell pointer, 41–42
      chart elements, 361–362
      charts, 353, 361
      legend (charts), 389
      Quick Access Toolbar, 461–462
      ranges, 78–80, 760
      within ranges, 817
      tables, 101
      windows, 55
      worksheets, 59
moving average, 673
Mr. Excel Web site, 814
MROUND function, 793
MsgBox function (VBA), 717–720
multicell array formulas, 314–315, 323–327
multiline headers and footers, 167
MULTINOMIAL function, 793
multiplication (*) operator, 176
multisheet ranges, 74–75
multituser applications, 532

N

N function, 791
#N/A error value, 555
NA function, 791
Name box, 6–7
#NAME? error value, 555
Name Manager, 89–90
Name Manager dialog box, 560
Name property, 738
named arrays, 319–320
named ranges
   creating, 87–89
   deleting, 90
   editing, 90
named ranges (continued)
  filtering, 90
  Name Manager, 89–90
named styles
  applying, 123
  attributes of, 122–123
  creating, 124–125
  merging with named styles from other workbooks, 125
  modifying, 124
named views, 171–172
names
  cell references, 202–203
  constants, 199
  extracting, 219–220
  filtering, 560
  formulas, 199–200
  macros, 687
  New Name dialog box, 199–200
  scenarios, 645
  workbooks, 137
naming techniques for formulas, 199–203
navigating
  dialog boxes, 16
  tables, 100
  worksheets, 7–8, 816
negative sign (-), 476–477
NEGBINOMDIST function, 796
NETWORKDAYS function, 231, 787
networks, 531–532
new features
  charts, 28, 351
  color schemes, 34
  Compatibility Checker, 33
  conditional formatting, 30, 423
  consolidated options, 31
  Document Inspector, 547–548
  Excel Services, 33
  fonts, 26, 113
  Formula AutoComplete, 32
  formula bar, 34
  functions, 34, 180
  larger worksheets, 26
  Mini toolbar, 14, 26
  Name Manager, 89–90
  Page Layout view, 29, 157
  pivot tables, 33, 592
  predefined styles, 28
  Quick Access Toolbar, 6, 13–15, 26
  SmartArt, 31–32
  status bar, 34
  supported file formats, 27
  tables, 95
  templates, 34
  themes, 28
  tools for tables, 27–28
  Trust Center, 34
  user interface, 25–26
  Zoom control, 34
  New Formatting Rule dialog box, 424
  New Name dialog box, 87–88, 199–200
  New Table Quick Style dialog box, 99
  New Web Query dialog box, 518–519
  New Workbook dialog box, 132, 145
  newsgroups, 811–813
  NewSheet event, 747, 749
  newsreaders, 811
  1900 date system, 224
  1904 date system, 224
  NOMINAL function, 790
  noncontiguous ranges, 73–74
  non-object events, 754–755
  nonprinting characters, 214
  non-time-of-day values, 248
  Normal View, 157–158
  NORMDIST function, 796
  NORMINV function, 796
  NORMSINV function, 796
  not equal to (<>), 176
  NOT function, 791
  NOW function, 231, 241, 787
  NPER function, 294, 790
  NPV function, 790
  #NULL! error value, 555–556
  #NUM! error value, 556
  Num Lock key, 7
  Number format, 50
  number formatting
    Accounting format, 50
    automatic, 47–48, 466
    calculations, 50
    Currency format, 50
    custom, 51, 468–477
    Date formats, 50, 477
    Format Cells dialog box, 49–50, 467–468
    Fraction format, 51
    fractions, 476
    General format, 50, 465
    hiding entries, 478–479
    keyboard shortcuts, 48, 467
    leading zeros, 475
    negative sign (-), 476–477
    Number format, 50
    number format string, 469–471
    Percentage format, 50
    readability, 21, 47
    Ribbon, 48, 466
    Scientific format, 51
    Special format, 51
    Text format, 51, 478
    TEXT function, 478
    Time formats, 50, 477
    numbering of rows, 6–7
numbering pages, 167
numbers
  forcing numbers to be treated as actual numbers, 206
  ordinal numbers, 220
  padding, 213–214
text, 206
numerical values
dates, 38–39
defined, 35–36
entering, 37
times, 38–39

O
Object data type (VBA), 768
Object dialog box, 526–527
Object Linking and Embedding (OLE), 526–527
object model, 696
object references in macros, 767–768
objects. See also graphics
  embedding, 526–527
  hiding, 444
  preventing objects from printing, 170–171
  printing, 447
  selecting, 444
  VBA (Visual Basic for Applications), 696–697
OCT2BIN function, 788
OCT2DEC function, 788
OCT2HEX function, 788
ODBC (Open DataBase Connectivity), 576
ODD function, 793
ODDFPRICE function, 790
ODDFYIELD function, 790
ODDLPRICE function, 790
ODDLYIELD function, 790
Office button, 6
Office Clipboard, 80, 82–83, 522
Office Web site, 811
OFFSET function, 275, 792
OLAP Cube, 576
OLAP (OnLine Analytical Processing), 576
OLE (Object Linking and Embedding), 526–527
one-dimensional arrays, 313, 317–318
one-input data table, 299–300, 637–640
OnKey event, 754–755
OnTime event, 754
Open DataBase Connectivity (ODBC), 576
Open dialog box, 132–135
Open event, 748–749
opening
  add-ins, 772
  HTML files, 516
templates, 148
workbooks, 53–54, 132–135
operators
  addition (+), 176
  concatenation (&), 176, 210
division (/), 176
equal to (=), 176
exponentiation (^), 176
formulas, 176–177
greater than, 176
greater than or equal to, 176
intersection operator, 200–201
less than, 176
less than or equal to, 176
multiplication (*), 176
not equal to (<>, 176
precedence, 177–179, 557–558
subtraction (-), 176
union operator (U), 201
optimizing investment portfolio, 664–666
OptionButton control, 735, 741–742
Or criteria
  counting formulas, 257
  summing formulas, 272
OR function, 791
ordinal numbers, 220
orientation (for print jobs), 162
outlines
  adding data to, 496
  collapsing, 492–493, 496
  creating, 491–496
  defined, 491
  deleting, 494, 496
  expanding, 496
  hiding outline symbols, 494, 497
  levels of, 494–496
output ranges, 669

P
padding numbers, 213–214
Page Break Preview, 157, 159–160
time breaks
  adjusting, 157, 159
  forcing, 162
  inserting, 162–163
  previewing, 157–160
  removing, 163
Page Layout tab (Ribbon), 9
Page Layout View, 29, 157–159
time margins
  adjusting, 156, 160–161
  aligning headers and footers with margins, 168
  viewing, 156
page numbers, 167
page orientation, 162
Page Setup dialog box, 160–161
Page view buttons, 6
paper sizes, 162
parentheses, mismatched, 552
password-cracking utilities, 539
password-protection
  VBA code, 539, 545–546
  workbooks, 137–138, 539, 543–544
  worksheets, 539–541
Paste Name dialog box, 183–184
Paste Special dialog box, 85–86, 506–507
pasting
  comments, 85
  data between applications, 521–522
  data validation criteria, 85
  Excel to Word, 523–526
  formatting, 85
  formulas, 85–86
  ranges, 84–86
  values, 85
  widths of columns, 85
PDF add-in, 34, 546–547
PEARSON function, 796
Pearson Software Consulting Web site, 814
peer-to-peer networks, 532
percentage error bars, 403
Percentage format, 50
PERCENTILE function, 796
percentiles, 675
PERCENTRANK function, 796
permissions
  IRM (Information Rights Management), 140, 540
  user permissions, 542–543
PERMUT function, 796
Personal Macro Workbook, 692–693
phantom link errors, 560
PI function, 793
picture charts, 411–412
Picture property, 738
pictures
  copying, 456–457
  footers, 167
  headers, 167
  inserting, 455
  styles, 456
pie charts, 370–371
pivot charts
  creating, 626
  examples, 627–632
  formatting, 33
  reports, 632–634
pivot tables
  calculated fields, 618–621
  calculated items, 618–619, 621–623
  calculations, 600
  cell references, 624–626
  column labels, 598
  copying, 602
  creating, 595–597
  data sources, 598
  defined, 591
  editing, 601–602
  examples, 592–594, 602–607
  external database files, 594–595
  formatting, 599
  frequency distributions, 264, 616–618
  grand totals, 598
  grouping items, 611–616
  groups, 598
  items, 598
  layout, 597
  modifying, 601–602
  new features, 33, 592
  non-numeric data, 609–610
  refreshing, 591, 598
  reverse pivot tables, 624
  row labels, 598
  specifying location of, 596
  styles, 599
  subtotals, 598
  table filters, 599
  updating, 591, 598
  value areas, 599
PivotTable Options dialog box, 599
PivotTableUpdate event, 751
placing information into multiple cells simultaneously, 42
plot area (charts)
  defined, 355
  modifying, 387–388
plotting mathematical functions, 418–420
PMT function, 293, 790
POISSON function, 796
portrait orientation, 162
posting to a newsgroup, 813
POWER function, 793
Power Utility Pak add-in, 229
PPMT function, 293, 790
pre-1900 dates, 229–230
precedence of operators, 177–179, 557–558
predefined styles, 28
preventing
  alert messages in VBA, 767
  certain cells from printing, 170
  objects from printing, 170–171
previewing
  page breaks, 157–160
  print jobs, 156
PRICE function, 790
PRICEDISC function, 790
PRICEMAT function, 790
print area, 162
Print dialog box, 168–169
printers, choosing, 169
queries
- creating, 581–584, 586–588
- defined, 576
- deleting, 586
- editing, 586
- examples, 578–584
- external data ranges, 585–586
- Microsoft Query, 578–581
- multiple database tables, 588
- Query Wizard, 581–584
- refreshing, 585–586
- relational databases, 588
- result sets
  - defined, 576
  - displaying, 584
- Query window, 586–588
- Query Wizard, 581–582
- Quick Access Toolbar (QAT)
  - Camera tool, 457
  - commands, 462–464
  - customizing, 14–15, 461–464
  - defined, 6, 26
  - Excel12.ribbonx file, 464
  - macros, 464, 731
  - moving, 461–462
  - rearranging icons, 464
  - removing icons, 464
  - Repeat button, 13
  - resetting, 464
  - Scenarios control, 646
  - Undo button, 13
- quick counts or sums, 251
- Quick Print, 155–156
- QUOTIENT function, 793

Q
- QAT (Quick Access Toolbar). See Quick Access Toolbar (QAT)
- QUARTILE function, 796

R
- radar charts, 374–376
- RADIANS function, 793
- RAND function, 793
- RANDBETWEEN function, 793
- random number generation, 673–674
- ranges. See also cell references
  - addresses
    - defined, 7
    - examples of, 71
    - specifying, 71
  - array formulas, 331–332
  - contiguous, 73
  - copying, 78–83, 758–759
  - counting
    - characters in a range, 327–328
    - error values in a range, 253–254
    - number of differences in two ranges, 337
    - number of error values in a range, 334
ranges, counting (continued)
   selected cells, 763–764
   text cells in a range, 329–330
defined, 71
determining
   cell address of a value within a range, 287–288
   closest value in a range, 343
type of selection, 762–763
   whether a particular value appears in a range,
      336–337
   whether a range contains valid values, 338–339
displaying calendar in a range, 347–348
external data ranges, 585–586
finding row of a value's nth occurrence in a range, 338
fonts, 114–115
formulas, 183–184
identifying a multiple selection, 763
looping, 760–762
marching ants border, 79
moving, 78–80, 760
moving within, 817
multisheet, 74–75
named ranges
   creating, 87–89
   deleting, 90
   editing, 90
   filtering, 90
   Name Manager, 89–90
noncontiguous, 73–74
pasting, 84–86
range intersections, 200–202
returning
   last value in a column, 343–344
   last value in a row, 344
   list of unique items in a range, 347
   location of the maximum value in a range, 337–338
   longest text in a range, 338
   nonblank cells from a range, 346
   only positive values from a range, 345–346
selecting, 42, 72–78
summing
   all cells in a range, 265–266
digits of an integer, 339–340
every nth value in a range, 341–342
n largest values in a range, 335
range that contains errors, 333–334
rounded values, 340–341
three smallest values in a range, 328–329
tables
   converting ranges into tables, 95–98
   converting tables into ranges, 107
taking a "picture" of a range, 457
transposing, 86
VBA, 757–758
RANK function, 796
ranking data, 344–345
ranks, 675
RATE function, 294, 790
readability of worksheets, 21, 47
reading all comments, 93
ReadMe file (CD-ROM), 799
read-only files, 532–533
rearranging
   icons on Quick Access Toolbar, 464
   worksheets, 58–59
recalculating formulas, 558
RECEIVED function, 790
Record Macro dialog box, 687
recording macros, 687–689, 692
records (databases)
   adding, 588
defined, 576
editing, 588
#REF! error value, 556
references to cells. See cell references
references to objects in macros, 767–768
refreshing
   consolidated worksheets, 509
databases, 576
   pivot tables, 591, 598
   queries, 585–586
   Web queries, 518–520
regression, 675
rejecting changes, 538
relational databases, 576, 588
relative cell references, 187–188, 191, 556–557
relative macro recording, 692
removing. See also deleting
   icons from Quick Access Toolbar, 464
   non-numeric characters from a string, 342
   nonprinting characters, 214
   page breaks, 163
   spacing, 214
titles from names, 220
renaming worksheets, 58
Repeat command, 13
repeating
   actions or commands, 13
   characters, 212, 479
REPLACE function, 216–217, 797
replacing
   conditional formatting, 440
   contents of cells, 40
   formatting, 569
   information, 568
   text, 216–217, 568
reports
   pivot charts, 632–634
   scenario report, 647
REPT function, 212–214, 797
reserving files, 532–533
resetting
  chart element formatting, 387
  Quick Access Toolbar, 464
reshaping Shapes, 446
resizing
  charts, 361
  Formula bar, 34
  Shapes, 445
  windows, 55
resource allocation, 662–664
Restore button, 6
restoring windows, 6, 54
result sets of queries
  defined, 576
  displaying, 584
returning
  last value in a column, 343–344
  last value in a row, 344
  list of unique items in a range, 347
  location of the maximum value in a range, 337–338
  longest text in a range, 338
  nonblank cells from a range, 346
  only positive values from a range, 345–346
reverse pivot tables, 624
Review tab (Ribbon), 9
Ribbon
  Add-ins tab, 9
  buttons, 11–12
  commands, 11–12
  contextual tabs, 10–11
  Date tab, 9
  defined, 6
  Developer tab, 9
  Formulas tab, 9
  hiding, 10
  Home tab, 9–10
  Insert tab, 9
  keyboard access, 12, 815
  keytips, 12–13
  number formatting, 48, 466
  Page Layout tab, 9
  Review tab, 9
  turning on/off, 10
  View tab, 9
RIGHT function, 215, 797
Rights Management Services (RMS), 540
ripple effect, 195
ROMAN function, 793
rotating Shapes, 446
ROUND function, 793
ROUNDDOWN function, 793
rounding time values, 247
ROUNDUP function, 793
ROW function, 792
row labels (pivot tables), 598
ROWS function, 792
rows (tables)
  adding, 101
  Banded Rows, 102
  defined, 95
  deleting, 101, 103–104
  duplicate rows, 103–104
  Header Row, 101–102
  selecting, 100
  Total Row, 102–103
rows (worksheets)
  adding, 66–67
  alternate-row shading, 436–437
  deleting, 67
  headers, printing, 166
  height, changing, 68–69
  hiding, 67–68
  inserting, 66–67
  numbers, 6–7
  selecting, 73, 759–760
  titles, printing, 164–165
  unhiding, 68
RSQ function, 796
RTD function, 792
Rule of 72, 308
rules for conditional formatting, 422–425, 439
S
sample files on CD-ROM, 800–806
sampling, 676
saving
  macros, 684
  named views, 172
  templates, 152–153
workbooks
  all workbooks, 764–765
  for older version of Excel, 143
  options for saving, 136
  as PDF file, 546–547
  suggested frequency of saves, 24, 136
  as XPS file, 547
scale values (charts), 354
scaling
  footers, 168
  headers, 168
  print jobs, 165
scatter (XY) charts, 371–372
Scenario Manager, 643–647
Scenario Manager dialog box, 644–645
Scenario Summary dialog box, 647
Scenario Values dialog box, 645
Scenarios control, 646
Scientific format, 51
screen display, 4–6
screen updating, 767
scroll buttons for sheet tabs, 6
Scroll Lock key, 7
ScrollBar control, 735, 742
scrollbars, 6
Search button, 809–810
SEARCH function, 216–217, 797
searching
Clip Art task pane, 454–455
dates, 226
Find What text box, 567
help system, 809–810
Microsoft Knowledge Base, 810
newsgroups, 812
text, 216–217
SECOND function, 787
SECOND function, 241
security
macros, 682–683
passwords, 539
Select Case construct, 700
Select Changes to Accept or Reject dialog box, 538
Select Data Source dialog box, 389, 576
selecting
array formula range, 321
cells, 76–77, 816–817
chart elements, 381–384
columns
in tables, 100
in worksheets, 73, 759–760
comments, 76
constants, 76
data series (charts), 398
formulas, 76
named views, 172
objects, 444
range of input cells, 42
ranges, 72–78
rows
in tables, 100
in worksheets, 73, 759–760
Shapes, 442
SmartArt, 449
tables, 101
WordArt, 453
SelectionChange event, 751–753
selections
determining the type of selection, 762–763
identifying a multiple selection, 762
semantic errors in formulas, 551
serial numbers
dates, 223–224
times, 226–227
SERIESUM function, 793
settings for shared workbooks, 535–536
severing workbook links, 503
Shapes
aligning, 446
arranging, 445
charts, 441
creating, 442
defined, 441
draw layer, 441, 443
formatting, 445
Freeform Shape, 446–447
grouping, 446
hiding, 443
inserting, 441–442
printing, 447
reshaping, 446
resizing, 445
rotating, 446
selecting, 442
spacing, 446
text, 444
ungrouping, 446
shapes of comments, 92–93
Share Point Server product, 33
Share Workbook dialog box, 534–536
shareware programs, 800
sharing data
copying and pasting, 521–522
destination application, 521–522
Excel to Word, 522–526
Object Linking and Embedding (OLE), 526–527
source application, 521–522
sharing files, 532–533
sharing workbooks, 33, 533–536
sheet tabs
colors, 58
defined, 4
inserting, 6
scroll buttons, 6
SheetActivate event, 748–749
SheetBeforeDoubleClick event, 748
SheetBeforeRightClick event, 748
SheetCalculate event, 748
SheetChange event, 748
SheetDeactivate event, 748
SheetFollowHyperlink event, 748
sheets. See worksheets
SheetSelectionChange event, 748
shipping costs, 660–662
short date format, 224
shortcut keys
cell selection, 816–817
Formula Bar, 817–818
function keys, 820–821
macros, 687, 693
miscellaneous, 819
range navigation, 817
Transition Navigation Keys, 815
worksheet navigation, 816
shortcut menus, 13–14
shortcuts
  data entry, 44–45
  number formatting, 48, 467
shrinking text to fit a cell, 116–117
SIGN function, 793
signing workbooks with digital signatures, 140, 548–549
simple interest, 303–304
simultaneous linear equations, solving, 658–659
SIN function, 794
Single data type (VBA), 768–769
single file Web Page, 514–516
single-cell array formulas, 315–316, 327–330
single-cell goal seeking, 650–651
SINH function, 794
Size And Properties dialog box, 170–171, 363, 447
size limits for worksheets, 26
sizes of fonts, 112–113
SKW function, 796
SLN function, 310, 790
SLOPE function, 796
SMALL function, 796
Smart Tags
  defined, 81
  turning on/off, 81
SmartArt
  colors, 452
  customizing, 449–450
  defined, 31–32
  inserting, 448–449
  layout, 450–451
  selecting, 449
  styles, 452
  text, 450
  themes, 452
smoothing constant, 671
Solver add-in
  appropriate problems for, 652
  constraints, 654–655
  defined, 649, 773
  examples, 653–666
  Frontline Systems Web site, 662
  installing, 652
Solver Options dialog box, 656–657
Solver Parameters dialog box, 654
solving simultaneous linear equations, 658–659
Sort dialog box, 105–106
sorting table data, 104–106
source application, 521–522
space characters, 553
spacing
  removing excess spacing, 214
  Shapes, 446
special characters, 209
Special format for number formatting, 51
specifying
  location of pivot tables, 596
  ranges
    addresses, 71
    input ranges, 669
    output ranges, 669
speeding up VBA, 766–767
spell checking, 569–570
Spelling dialog box, 570
SpinButton control, 735, 743
splitting
  text strings, 221
  windows into panes, 63–64
Spreadsheet Page Web site, 813
spreadsheets. See worksheets
SQL (Structured Query Language), 576
SQRT function, 794
SQRTPI function, 794
stacked column chart, 366
standard deviation error bars, 404
standard error bars, 404
STANDARDIZE function, 796
starting Excel 2007
  Startup Prompt dialog box, 503
  without an empty workbook, 133
statistics
  descriptive statistics, 670–671
  F-Test, 671–672
  statistical functions, 794–797
  t-Test, 676–677
  z-Test, 677
status bar, 6, 34, 251
STDEV function, 796
STDEVA function, 796
STDEV function, 796
STDEVP function, 796
STDEVP function, 796
Stephen Bullen’s Excel Page Web site, 814
STEYX function, 796
stock charts, 379–380
stopping macro recording, 687
storage options for macros, 687, 692–693
String data type (VBA), 768
strings. See text
Structured Query Language (SQL), 576
Style dialog box, 124
styles
  borders, 119–120
  fonts, 113–114
styles (continued)
  named styles
    applying, 123
    attributes of, 122–123
    creating, 124–125
    merging with named styles from other workbooks, 125
    modifying, 124
pictures, 456
pivot tables, 599
predefined styles, 28
SmartArt, 452
tables, 22, 98–100, 119
templates, 125–126
Sub procedures
  defined, 684–685
  executing, 685
SUBSTITUTE function, 216–217, 797
SUBTOTAL function, 250, 794
subtraction (-) operator, 176
SUM function, 250, 794
SUMIF function, 250, 794
SUMIFS function, 34, 180, 250, 794
summing formulas
  all cells in a range, 265–266
  And criteria, 271–272
  conditional sums, 268–271
  cumulative sums, 266–267
  defined, 249
  digits of an integer, 339–340
  every nth value in a range, 341–342
  n largest values in a range, 335
  negative values, 269
  or criteria, 272
  quick sums, 251
  range that contains errors, 333–334
  rounded values, 340–341
  three smallest values in a range, 328–329
  times that exceed 24 hours, 244–245
  “top n” values, 268
  values based on a date comparison, 270
  values based on a different range, 269
  values based on a text comparison, 269
SUMPRODUCT function, 250, 794
SUMSQ function, 250, 794
SUMX2MY2 function, 250, 794
SUMX2PY2 function, 250, 794
SYD function, 310, 790
Symbol dialog box, 209
symbols, 209
syntax errors in formulas, 551–553
system requirements for CD-ROM, 799
T
  T function, 797
tab list, 6
tab order in UserForms, 732
tabbed dialog boxes, 17–18
table filters (pivot tables), 599
tables. See also data tables
colors, 98–99, 119
  columns
    adding, 101
    Banded Columns, 102
    defined, 95
    deleting, 101
    First Column, 102
    Last Column, 102
    selecting, 100
  creating, 21–22, 95–98
custom styles, 99–100
databases, 576
defined, 27, 95
dimensions, 98
filtering data, 104, 106–107
formatting, 98–99, 102, 119
formulas, 191–195
lists, 96
moving, 101
moving around in, 100
navigating, 100
new features, 27–28, 95
printing, 169
ranges
  converting ranges into tables, 95–98
  converting tables into ranges, 107
  adding, 101
  Banded Rows, 102
  defined, 95
  deleting, 101, 103–104
duplicate rows, 103–104
Header Row, 101–102
selecting, 100
Total Row, 102–103
selecting, 101
sorting data, 104–106
styles, 22, 98–100, 119
themes, 98
tabs
  colors, 58
  defined, 4
  inserting, 6
  scroll buttons, 6
taking a “picture” of a range, 457
TAN function, 794
TANH function, 794
taskbar, 18–19
TBILLEQ function, 790
TBILLPRICE function, 790
TBILLYIELD function, 790
TDIST function, 796
technical support
CD-ROM, 807
Microsoft Knowledge Base, 810
Microsoft Web site, 811
support options from Microsoft, 810
Wiley Product Technical Support, 807
templates
charts
applying, 410–411
creating, 390, 410–411
worksheets
applying, 146–148
creating, 149–153
custom, 149–153
default templates, 149–151
defined, 145
downloading, 146
locking formula cells, 152
Microsoft Office Online, 146
modifying, 148–149, 152
new templates in Excel 2007, 34
opening, 148
saving, 152–153
styles, 125–126
viewing, 145–146
test scores and letter grades, 283–284
testing
controls, 736
custom number formats, 477
macros, 689, 691
UserForms, 725–726, 728, 730–731
text
aligning, 115–116
angled text, 117–118
AutoCorrect feature, 570–571
changing case of, 214–215
charts, 388
colors, 118–119
concatenation, 210
counting
characters in a text string, 214
occurrences of specific text, 258–260
defined, 36
deleting, 568
direction options, 118
entering, 37–38, 205
extracting characters from a text string, 215
finding, 216, 567–568
fonts
applying to ranges, 114–115
changing, 113
default font, 112
defined, 112
new fonts for Excel 2007, 26, 113
sizes, 112–113
styles, 113–114
symbols, 209
forcing to appear on a new line within a cell, 44
functions
CHAR, 207–210, 797
CLEAN, 214, 797
CODE, 207–208, 797
DOLLAR, 212, 797
EXACT, 210, 797
FIND, 216, 797
ISTEXT, 207, 791
LEFT, 215, 797
LEN, 214, 797
LOWER, 214, 797
MID, 215, 797
PROPER, 214, 797
REPLACE, 216–217, 797
REPT, 212–214, 797
RIGHT, 215, 797
SEARCH, 216–217, 797
SUBSTITUTE, 216–217, 797
TEXT, 211, 478, 797
TRIM, 214, 797
UPPER, 214–215, 797
histograms, 212–213
number formatting, 51, 478
numbers, 206
removing non-numeric characters from a string, 342
replacing, 216–217, 568
searching, 216–217
Shapes, 444
shrinking text to fit a cell, 116–117
SmartArt, 450
spell checking, 569–570
splitting text strings, 221
TEXT function, 211, 478, 797
TextBox control, 735, 743–744
themes
applying, 126–128
colors, 129
customizing, 128–129
defined, 28, 126
fonts, 128–129
SmartArt, 452
tables, 98
thermometer chart, 412–413
3-D charts, 406–407
three-dimensional arrays, 313
TIME function, 241, 787

time value of money, 291–292
times
  adding hours, minutes, or seconds to a time, 246–247
  calculating difference between two times, 243
  converting
    decimal hours, minutes, or seconds to a time, 246
    military time into regular time, 246
  current time, displaying, 242
displaying, 242
  entering
    acceptable formats, 227–228
    into header or footer, 167
    into worksheets, 38–39
formatting, 228–229
  non-time-of-day values, 248
number formats, 50, 477
numerical values, 38–39
OnTime event, 754
rounding time values, 247
serial numbers, 226–227
summing times that exceed 24 hours, 244–245
time-stamp, 46
TIMEVALUE function, 241, 787
TINV function, 796
title bar, 6
titles
  charts, 354, 358, 388
  removing from names, 220
TODAY function, 231, 787
ToggleButton control, 735, 744
toolbars
  Mini toolbar
    defined, 26
    formatting tools, 110–111
    hiding, 111
    turning on/off, 14, 111
  Quick Access Toolbar
    Camera tool, 457
    commands, 462–464
    customizing, 14–15, 461–464
    defined, 6, 26
    macros, 464, 731
    moving, 461–462
    rearranging icons, 464
    removing icons, 464
    Repeat button, 13
    resetting, 464
    Scenarios control, 646
    Undo button, 13
top bottom rules conditional formatting, 423
Top property, 738
Total Row, 102–103

tracing
  cell relationships, 562–564
  error values, 554, 564
  tracking changes, 533–538
Transition Navigation Keys, 815
TRANSPOSE function, 325–326, 792
transposing
  arrays, 325–326
  ranges, 86
TREND function, 796
trendlines, 404–405
trial versions of software, 800
trigonometry functions, 792–794
TRIM function, 214, 797
TRIMMEAN function, 796
troubleshooting
  CD-ROM problems, 807
  goal seeking, 651–652
TRUE function, 791
TRUNC function, 791
Trust Center, 34
Trust Center dialog box, 682–683
trusted folders, 683
T-Test, 676–677
TTEST function, 796
turning on/off
  Mini toolbar, 14, 111
  Ribbon, 10
  Smart Tags, 81
two-column lookups, 286–287
two-dimensional arrays, 313, 318–319
two-input data table, 300–301, 640–642
two-way lookups, 285–286
TYPE function, 791
typefaces, 112
types of data. See data types

U

Undo command, 13
undoing actions or commands, 13
ungrouping Shapes, 446
Unhide dialog box, 59–60
unhiding
  columns (worksheets), 68
  comments, 93
  rows (worksheets), 68
  worksheets, 59–60
union operator (,), 201
unlinking workbooks, 503
unlocking cells, 540–541
unprotecting
  windows, 545
  workbooks, 545
  worksheets, 542
Index

V
validation of data
  cell references, 485–487
  criteria, 482–483
  defined, 481–482
  drop-down lists, 484–485
  examples, 487–489
  formulas, 485–489
  invalid data, 483–484
  limitations of, 481
  pasting criteria, 85
  value areas (pivot tables), 599
  value axis (charts), 354, 391–395
  #VALUE! error value, 556
  VALUE function, 797
  Value property, 738
  values
    assigning to variables, 696
    formulas
      actual versus displayed values, 558
      converting formulas to values, 204
      error values, 195–196
      hard-coded, 203, 636
      pasting, 85
    function procedures (VBA), 705–706
    lookup formulas
      case-sensitive lookup, 282–283
      CHOOSE function, 274, 792
      closest match values, 288–289
      defined, 273–274
determining the cell address of a value within a range, 287–288
  exact values, 280–281
  grade-point average (GPA), 284–285
  HLOOKUP function, 274, 277, 792
  IF function, 274–275, 791
  IFERROR function, 34, 180, 274, 555, 791
  INDEX function, 274, 278–280, 792
  letter grades for test scores, 283–284
  LOOKUP function, 275, 277–278, 792
  MATCH function, 275, 278, 792
  multiple lookup tables, 283
  OFFSET function, 275, 792
  two-column lookups, 286–287
  two-way lookups, 285–286
  value to the left, 281–282
  VLOOKUP function, 275–277, 792
  scenarios, 645
  summing three smallest values in a range, 328–329
VAR function, 796
VARA function, 797
variable types, declaring, 768–769
variables, 699
Variant data type (VBA), 768–769
VARP function, 797
VARPA function, 797
VB Editor, 685–686
VBA (Visual Basic for Applications)
  alert messages, 767
  Analysis ToolPak—VBA add-in, 773
  capabilities, 682
  charts, 765–766
  code
    assigning values to variables, 696
    editing, 694
    entering, 694–695
    events, 745–747, 750
    parts of, 695–696
    password-protection, 539, 545–546
    protecting, 539, 545–546
    writing, 694–695
  collections, 696–697
  control structures
    For-Next loop, 699–700
    If-Then construct, 699
    Select Case construct, 700
    With-End With construct, 700
  data types, 768–769
  defined, 686
  Developer tab, 9, 681–682
  events
    Activate, 747, 751
    AddinInstall, 747
    AddinUninstall, 747
    BeforeClose, 747, 750
VBA (Visual Basic for Applications), events (continued)

BeforeDoubleClick, 751
BeforePrint, 747
BeforeRightClick, 751, 753
BeforeSave, 747, 750
Calculate, 751
Change, 751–752
code modules, 745–747, 750
Deactivate, 747, 751
FollowHyperlink, 751
NewSheet, 747, 749
OnKey, 754
OnTime, 754
Open, 748–749
PivotTableUpdate, 751
SelectionChange, 751–753
SheetActivate, 748–749
SheetBeforeDoubleClick, 748
SheetBeforeRightClick, 748
SheetCalculate, 748
SheetChange, 748
SheetDeactivate, 748
SheetFollowHyperlink, 748
SheetSelectionChange, 748
types of, 745
UserForms, 723, 726, 729–730
WindowActivate, 748
WindowDeactivate, 748
WindowResize, 748
help, 757
Internet Assistant VBA add-in, 773
methods, 696, 699
object model, 696
objects, 696–697
properties, 696–699
ranges, 757–758
screen updating, 767
security features, 682–683
speeding up, 766–767
UserForms
accelerator keys, 732
ActiveX controls, 721–723
alternatives, 716–720
creating, 720–721, 724–725, 727–728
displaying, 724, 728–729
event handling, 723, 726, 729–730
examples, 724–731
help, 723, 732
tab order, 732
testing, 725–726, 728, 730–731
uses, 715–716
variables, 699
workbooks, 764–765

VBA function procedures
arguments, 707–711
creating, 686, 704–706
debugging, 711
executing, 706–707
InputBox, 716–717
inserting, 712–713
MsgBox, 717–720
uses, 703
values, 705–706

VBA macros
alert messages, 767
buttons, 693–694
controls, 738–739
copying a range, 758–759
counting selected cells, 763–764
creating, 687–689
defined, 681, 686
description of, 687
determining the type of range selection, 762–763
Developer tab, 9, 681–682
disabling, 34, 683
displaying, 724, 728–729
event handling, 723, 726, 729–730
examples, 724–731
help, 723, 732
tab order, 732
testing, 725–726, 728, 730–731
uses, 703
values, 705–706
identifying a multiple selection, 763
ListFormulas macro, 701–702
looping ranges, 760–762
moving ranges, 760
names, 687
object references, 767–768
Personal Macro Workbook, 692–693
prompting for a cell value, 762
Quick Access Toolbar, 464, 731
recording, 687–689, 692
saving, 684
screen updating, 767
security, 682–683
selecting rows or columns, 760
selecting to the end of a row or column, 759–760
shortcut keys, 687, 693
stopping recording, 687
storage options, 687, 692–693
Sub procedures
creating, 686–689, 704–706
debugging, 711
defining, 681, 686
executing, 731
identifying a multiple selection, 763
objects, 696–699
properties, 696–699
ranges, 757–758
screen updating, 767
security features, 682–683
speeding up, 766–767
UserForms
accelerator keys, 732
ActiveX controls, 721–723
alternatives, 716–720
creating, 720–721, 724–725, 727–728
displaying, 724, 728–729
event handling, 723, 726, 729–730
examples, 724–731
help, 723, 732
tab order, 732
testing, 725–726, 728, 730–731
uses, 715–716
variables, 699
workbooks, 764–765
suggested uses, 682

testing, 689, 691

UserForms

  accelerator keys, 732
  ActiveX controls, 721–723
  alternatives, 716–720
  creating, 720–721, 724–725, 727–728
  displaying, 724, 728–729
  event handling, 723, 726, 729–730
  examples, 724–731
  help, 723
  testing, 725–726, 728, 730–731
  uses, 715–716

viewing code, 688–691

VBA Sub procedures

  defined, 684–685
  executing, 685

VDB function, 310, 790

vector images, 453

vertical scrollbar, 6

View tab (Ribbon), 9

viewing

  formulas, 562
  macro code, 688–691
  margins, 156
  templates, 145–146

views

  custom views, 171–172
  freezing panes, 64–65
  multiple views of same worksheet, 62–63
  named views, 171–172
  Normal View, 157–158
  Page Break Preview, 157, 159–160
  Page Layout View, 29, 157–159
  split panes, 63–64
  worksheet comparisons, 56, 63
  zoom percentage, 61–62

visible digital signatures, 548–549

Visible property, 738

Visual Basic Editor, 685–686

Visual Basic for Applications. See VBA

VLOOKUP function, 275–277, 792

W

Watch Window, 65–66

watermarks, 163–164

Web formats

  HTML file, 513–516
  single file Web Page, 514–516

Web Options dialog box, 515

Web queries, 518–520

Web Query Options dialog box, 519

Web sites

  Daily Dose of Excel, 814
  David McRitchie’s Excel Pages, 814

Excel 2007, 811

Frontline Systems Web site, 662

Google Groups, 811–812

IrfanView graphics file viewer, 454

Jon Peltier's Excel Page, 814

Microsoft newsgroups, 811–812

Microsoft Office, 811

Microsoft technical support, 811

Mr. Excel, 814

Pearson Software Consulting, 814

Spreadsheet Page, 813

Stephen Bullen's Excel Page, 814

Wiley Product Technical Support, 807

weblog for Daily Dose of Excel, 814

WEEKDAY function, 231, 787

WEEKNUM function, 231, 787

WEIBULL function, 797

what-if analysis

  data tables
    creating, 637
    defined, 637
    one-input data table, 637–640
    two-input data table, 640–642
    defined, 635, 649
    examples, 635–636
  goal seeking
    defined, 649
    single-cell goal seeking, 650–651
    troubleshooting, 651–652
    manual, 637
    Scenario Manager, 643–647
  Solver
    appropriate problems for, 652
    constraints, 654–655
    defined, 649, 773
    examples, 653–666
    installing, 652
  Width property, 738
  widths of columns
    changing, 68–69
    pasting, 85

Wiley Product Technical Support, 807

Wiley Publishing, Inc. (Excel 2007 Power Programming with VBA), 694

Window close button, 6

WindowActivate event, 748

WindowDeactivate event, 748

WindowResize event, 748

windows

  arranging, 55, 62
  closing, 6, 54, 56
  freezing panes, 64–65
  maximizing, 6, 54
  minimizing, 6, 54
  moving, 55
windows (continued)
  protecting, 545
  resizing, 55
  restoring, 6, 54
  splitting into panes, 63–64
  switching among, 55–56
  unprotecting, 545
  Watch Window, 65–66
  worksheet comparisons, 56, 63
Windows Clipboard, 80, 522
With-End With construct, 700
Word documents
  data sharing, 522–526
  embedding
    Word documents in workbooks, 526–527
    workbooks in Word documents, 527–530
WordArt
  inserting, 452–453
  selecting, 453
workbooks
  accepting changes, 538
  adding worksheets, 57
  add-ins, 771–774
  AutoRecover feature, 136
  backups, 136–137, 141–142
  change history, 535
  changing default number of worksheets, 58
  chart sheets, 4
  closing, 6, 141, 764–765
  Compatibility Checker, 140–141
  Compatibility Pack, 142–143
  converting into add-ins, 771–774
  creating, 19, 131–132
  defined, 4
  deleting worksheets, 57
  digital signatures, 140, 548–549
  Document Inspector, 140, 547–548
  embedding in Word documents, 527–530
  encrypting, 140, 543–544
  events
    Activate, 747
    AddinInstall, 747
    AddinUninstall, 747
    BeforeClose, 747, 750
    BeforePrint, 747
    BeforeSave, 747, 750
    Deactivate, 747
    NewSheet, 747, 749
    Open, 748–749
    SheetActivate, 748–749
    SheetBeforeDoubleClick, 748
    SheetBeforeRightClick, 748
    SheetCalculate, 748
    SheetChange, 748
    SheetDeactivate, 748
    SheetFollowHyperlink, 748
    SheetSelectionChange, 748
    WindowActivate, 748
    WindowDeactivate, 748
    WindowResize, 748
  file formats, 142
  finalizing, 140, 547
  hyperlinks, 516–518
  inspecting, 547–548
  linking, 499–505
  names, 137
  opening, 53–54, 132–135
  password-protection, 137–138, 539, 543–544
  permissions, 140, 540
  Personal Macro Workbook, 692–693
  printing, 169
  properties, 139
  protecting, 60, 137–138, 539, 543–545
  read-only, 532–533
  rejecting changes, 538
  samples on CD-ROM, 800–806
  saving
    all workbooks, 764–765
    for older version of Excel, 143
    options for saving, 136
    as PDF file, 546–547
    suggested frequency of saves, 24, 136
    as XPS file, 547
  sharing, 33, 533–536
  sheet tabs, 4, 6
  tabs, 4, 6
  templates
    applying, 146–148
    creating, 149–153
    custom, 149–153
    default templates, 149–151
    defined, 145
    downloading, 146
    locking formula cells, 152
    Microsoft Office Online, 146
    modifying, 148–149, 152
    opening template files, 148
    saving, 152–153
    viewing, 145–146
  worksheets, 149, 151
  tracking changes, 535–538
  unlinking, 503
  unprotecting, 545
  updating, 535
  VBA, 764–765
  worksheets, 4
  XLSX file extension, 4
  WORKDAY function, 231, 787
workgroups
  accepting changes, 538
  file reservation, 532–533
  file sharing, 532–533
  multiuser applications, 532
  networks, 531–532
  rejecting changes, 538
  shared workbooks, 33, 533–536
  tracking changes, 535–538

worksheets
  accessing, 4
  activating, 56–57
  active area, 156
  adding to workbooks, 57
  arranging, 58–59
  background images, 121–122, 457

  cells
    active cell (defined), 7
    active cell indicator, 6
    addresses of, 7
    blank cells, 76, 252, 553
    borders, 79, 119–121
    colors, 118–119
    contents of, 39–41, 119, 205, 478–479
    counting, 252–255, 763–764
    data types, 35–39
    defined, 4, 7, 71
    dependents, 563–564
    drop-down lists, 484–485
    filling with repeating characters, 479
    finding, 77–78, 560–561
    gridlines, printing, 165
    joining, 210
    linking controls to cells, 738
    locking, 540–541
    merging, 117
    monitoring, 65–66
    Name box, 6–7
    number of, 35
    precedents, 562–563
    preventing certain cells from printing, 170
    prompting for a cell value, 762
    protecting, 540–541
    scenarios, 645
    selecting, 76–77, 816–817
    shrinking text to fit a cell, 116–117
    tracing cell relationships, 562–564
    unlocking, 540–541
    wrapping text to fit a cell, 116
    zeros, distinguishing from blank cells, 279
  changing default number of, 58

  columns
    adding, 66–67
    deleting, 67
    headers, 166

  hiding, 67–68
  inserting, 66–67
  letters, 6–7
  selecting, 73, 759–760
  titles, 164–165
  unhiding, 68
  widths, 68–69, 85

  comparing, 56, 63
  consolidating, 505–511
  copying, 59
  creating, 19–20
  data entry, 19–21
  defined, 4
  deleting, 57
  draw layer
    defined, 4, 35, 443
    Shapes, 441, 443
  events
    Activate, 751
    BeforeDoubleClick, 751
    BeforeRightClick, 751, 753
    Calculate, 751
    Change, 751–752
    Deactivate, 751
    FollowHyperlink, 751
    PivotTableUpdate, 751
    SelectionChange, 751–753
  formatting, 21–22
  hiding, 59–60
  hyperlinks, 516–518
  inserting, 57
  listing, 56
  moving, 59
  moving around in, 7–8, 816
  navigating, 7–8, 816
  outlines
    adding data to, 496
    collapsing, 492–493, 496
    creating, 491–496
    defined, 491
    deleting, 494, 496
    expanding, 496
    hiding outline symbols, 494, 497
    levels of, 494–496
  password-protection, 539–541
  printing
    active sheet(s), 169
    background images, 163
    cell gridlines, 165
    entire workbook, 169
    preventing certain cells from printing, 170
    preventing objects from printing, 170–171
    print area, 162
    Print Preview, 156
    Quick Print, 155–156
worksheets, printing (continued)
  row and column headers, 166
  row and column titles, 164–165
  scaling printed output, 165
  selection, 169
  step-by-step example, 23–24
  watermarks, 163–164
  protecting, 539–541
  rearranging, 58–59
  renaming, 58
  rows
    adding, 66–67
    alternate-row shading, 436–437
    deleting, 67
    headers, 166
    height, changing, 68–69
    hiding, 67–68
    inserting, 66–67
    numbers, 6–7
    selecting, 73, 759–760
    titles, 164–165
    unhiding, 68
  sheet tabs
    colors, 58
    defined, 4
    inserting, 6
    scroll buttons, 6
  size limits, 26
  spell checking, 569–570
  templates, 149, 151
  unhiding, 59–60
  unprotecting, 542
  user permissions, 542–543
  views
    custom views, 171–172
    freezing panes, 64–65
    multiple views of same worksheet, 62–63
    named views, 171–172
    Normal View, 157–158
    Page Break Preview, 157, 159–160
    Page Layout View, 29, 157–159
    split panes, 63–64
    worksheet comparisons, 56, 63
    zoom percentage, 61–62
    zooming in/out, 61–62
    wrapping text to fit a cell, 116
    writing VBA code, 694–695

X
  XIRR function, 790
  XLSX file extension, 4
  XNPV function, 790
  XPS file, 547
  XY (scatter) charts, 371–372

Y
  YEAR function, 231, 787
  YEARFRAC function, 231, 787
  YIELD function, 790
  YIELDDISC function, 790
  YIELDMAT function, 790

Z
  zeros
    distinguishing from blank cells, 279
    leading zeros, 475
  Zoom control, 6, 34
  zoom percentage, 61–62
  zooming in/out on worksheets, 61–62
  z-Test, 677
  ZTEST function, 797