

Learn Numbers on the Mac

1. What is Numbers?

- 1.1. The spreadsheet for the rest of us. A nice, free alternative to Microsoft Excel.
- 1.2. What are spreadsheets for?
 - 1.2.1. Manipulating numbers
 - 1.2.2. Creating charts
 - 1.2.3. Organizing columns of data—kind of a poor man's database
- 1.3. A spreadsheet done the Apple way
 - 1.3.1. Numbers document is composed of sheets
 - 1.3.2. Work on a blank canvas rather than a huge spreadsheet
 - 1.3.3. Everything placed on the sheet is an object
 - 1.3.4. Select the object and use the sidebar to change its characteristics
- 1.4. Tables are the basic building block
- 1.5. Tables are made up of cells, the intersection of lettered columns and numbered rows
 - 1.5.1. Individual cells are named by the intersection of row and column
- 1.6. Add multiple objects (tables, charts, graphics, text, pictures, etc.) to sheets

2. Getting started

- 2.1. Pick a template (File > New...)
- 2.2. Or pick a blank spreadsheet and get started
- 2.3. Some templates contain placeholders for text or media

- 2.3.1. Click and type to replace the text
- 2.3.2. Click Media button in Toolbar to open media browser
- 2.3.3. Drag photos into media placeholders

3. A tour of the interface

Open the file named Fun with Numbers and follow along

- 3.1. Rest pointer on a control to get a tooltip
- 3.2. Toolbar
 - 3.2.1. One-click access to common commands
 - 3.2.2. View (to change how the window appears)
 - 3.2.3. Zoom (to make the contents of the sheet larger on the screen)
 - 3.2.4. Add Category (useful for grouping)
 - 3.2.5. Insert (to put common functions into cells)
 - 3.2.6. Table (to add a table)
 - 3.2.7. Chart (based on numerical data in a table)
 - 3.2.8. Text (to add a text box to a sheet)
 - 3.2.9. Shape (to add a shape to a sheet)
 - 3.2.9.1. Add a shape, type text right in it
 - 3.2.9.2. Text formatting options are available
 - 3.2.10. Media (to add audio, photos, movies, and more to a sheet)
 - 3.2.11. Comment (to add a comment to an object or a cell)
 - 3.2.12. Share

- 3.2.12.1. Send Copy (a quick way to send a copy of a document to someone else)
- 3.2.12.2. Collaborate (to share with others a document stored on iCloud Drive)
- 3.2.13. Format (to show and hide the Inspector's tools particular to the selected object)
- 3.2.14. Organize (to group rows into categories to organize and summarize the data in a table)
- 3.2.15. Customize it: View > Customize Toolbar...
 - 3.2.15.1. Drag tools on or off toolbar, or drag to rearrange them
- 3.3. Along the top
 - 3.3.1. Tabs that contain names of sheets
 - 3.3.2. Click the + button to add another sheet
 - 3.3.3. Drag to re-order sheets
 - 3.3.4. Hover the pointer over a tab, then click the down arrow to manipulate the sheet (rename, delete, copy, duplicate, etc.)
 - 3.3.5. Sheets can each contain multiple tables
- 3.4. Table interface
 - 3.4.1. Rows and columns
 - 3.4.1.1. Letter labels for columns, number labels for rows
 - 3.4.1.2. Click a row or column label to highlight the entire row or column
 - 3.4.1.2.1. Drag columns and rows to reorder them
 - 3.4.1.3. Drag column and row dividers to make them larger or smaller

- 3.4.1.4. Hover the pointer over a label, click the down arrow for options (add rows/columns, sort, delete or hide rows/columns)
- 3.4.1.5. Drag the = or II button to add or delete rows or columns
- 3.4.1.6. Drag selected cells to move them
- 3.4.1.7. Option-drag selected cells to copy them
- 3.4.2. Click the double-circle icon to select a table
 - 3.4.2.1. Move a table by dragging the double circle
 - 3.4.2.2. Use handles to resize the table
 - 3.4.2.3. Drag the Arrow button at the bottom right of the table to add or remove both rows and columns
- 3.5. Along the bottom
 - 3.5.1. Clicking a non-empty cell will reveal its contents (text, actual number, formula, formula result)
 - 3.5.2. Selecting a range of cells displays the results of common functions (sum, average, minimum, maximum, and a count of the number of selected cells)
 - 3.5.3. Add different functions using the gear button in the lower right hand corner
- 3.6. The Inspector Sidebar
 - 3.6.1. Click Format button to show and hide the inspector sidebar
 - 3.6.2. Many inspectors are identical to those in Pages and Keynote
 - 3.6.3. Controls will change depending on the selected object
 - 3.6.4. Table

3.6.4.1. Styles

- 3.6.4.1.1. Quickly change the look of a table
- 3.6.4.1.2. Add a title or caption
- 3.6.4.1.3. Designate Header and Footer rows and columns
- 3.6.4.1.4. Add or delete rows and columns
- 3.6.4.1.5. Pick a font size
- 3.6.4.1.6. Change the table outline
- 3.6.4.1.7. Add or remove gridlines, alternating row colors
- 3.6.4.1.8. Alter the row and column sizes

3.6.4.2. Cell

- 3.6.4.2.1. Select a cell (or range of cells)
- 3.6.4.2.2. Pick a data format (date, currency, text, etc).
- 3.6.4.2.3. Add fill to a cell
- 3.6.4.2.4. Choose border styles
- 3.6.4.2.5. Add conditional highlighting
 - 3.6.4.2.5.1. Changes the look of the cell depending on certain conditions

3.6.4.3. Text

- 3.6.4.3.1. Style
 - 3.6.4.3.1.1. Format text with fonts, styles, and colors
 - 3.6.4.3.1.2. Change the alignment of the content of the cell
 - 3.6.4.3.1.3. Select the line spacing of the data in a cell
- 3.6.4.3.2. Layout

3.6.4.3.2.1. Set text inset and indent for cells

3.6.4.3.2.2. Set tab stops for data in cells

3.6.4.3.2.3. Add borders and rules for the text in cells

3.6.4.3.2.4. Choose a paragraph background color

3.6.4.4. Arrange

3.6.4.4.1. Bring the table forward or back on the sheet, in front of or behind graphics, text boxes, etc.

3.6.4.4.2. Adjust the size of the table

3.6.4.4.3. Change the position of the table on the canvas

3.6.4.4.4. Rotate the table

3.6.4.4.5. Lock or Unlock the entire table

3.6.4.4.6. Group or Ungroup objects such as shapes on a canvas

3.6.4.4.6.1. Select shapes and Unite, Intersect, Subtract, or Exclude portions of overlapping shapes

4. Working with tables

4.1. Entering data

4.1.1. Click a cell and type

4.1.1.1. Press tab to move to next column

4.1.1.2. Press return to move to next row

4.1.1.3. Select a range of cells, then right-click to merge or unmerge cells

4.1.2. Drag to fill right or fill down

4.1.2.1. Works with data and functions (see below)

4.1.2.2. Intelligent series

4.1.2.2.1. Months, quarters, numbers

4.1.2.2.2. Establish a pattern with two or more cells, then drag right or down

4.1.3. Cell types

4.1.3.1. Use Cell Inspector Data Format pop-up menu

4.1.3.1.1. Automatic

4.1.3.1.2. Checkbox

4.1.3.1.3. Star Rating

4.1.3.1.4. Slider

4.1.3.1.5. Stepper

4.1.3.1.6. Pop-up menu

4.2. Sorting data

4.2.1. Click a cell column

4.2.2. Choose ascending, descending, or more options

4.3. Adding a common function

4.3.1. Select a range of cells and drag and drop the function label to a cell to add the formula

4.3.2. Drag to fill to copy a formula or function to other cells

4.3.2.1. Select a range of cells

4.3.2.2. Drag a formula or function (say, SUM) into an empty cell beneath a column of selected cells

- 4.3.2.3. Drag the SUM cell to the right to copy the SUM function to more columns
- 4.3.2.4. The SUM function will use the relative (rather than absolute) positions of the column of cells above it
- 4.3.3. Other functions
 - 4.3.3.1. More than 250 higher level functions for date and time, financial, statistical, etc.
 - 4.3.3.2. Type an = sign in a cell to show the formula editor
 - 4.3.3.2.1. Type or double-click a function or select a function and click Insert Function to add it to the formula
 - 4.3.3.2.2. Replace any variables by typing or clicking cells
 - 4.3.3.2.3. Click red x to delete changes to formula
 - 4.3.3.2.4. Click green check mark to accept changes to a formula
 - 4.3.3.3. Cells referenced in formulas will often adopt the names in the header cells for their rows and columns
 - 4.3.3.3.1. For example, rather than list cell “A5”, the formula may list a cell as “May 2017”
 - 4.3.3.3.2. Formulas may include cells in different tables as well as cells on different sheets within the same document

Exercise: Open the file called Mortgage Calculator. Change the numbers in the yellow shaded cells and watch what happens to the bar chart, the table of possible payments, and the figures on the Monthly Data sheet.

4.4. Categories

4.4.1. A way to organize data within a table

4.4.2. When you create a category in a source column, all rows that share a common value are treated as groups

Open the file named Shirt Sales and follow along

4.4.3. Select a table

4.4.4. Click Organize button, then click Categories

4.4.5. Choose a category from the Add a Category... pop-up menu

4.4.5.1. Data is organized by group under a Summary Row

4.4.5.2. Add up to four sub categories

4.4.5.3. Remove a source column by clicking the delete button

4.4.6. Add a calculation

4.4.6.1. Click in an empty cell in the summary row for the group

4.4.6.2. Click the gear button

4.4.6.3. Choose a calculation

5. Charts

5.1. Numerous types of charts to pick from

Open the file named Charting Basics and follow along

5.2. Adding a chart

Exercise: Open the file named Sporting Goods and follow along

- 5.2.1. Select the cells you want to use
- 5.2.2. Click Chart button to select a chart style
- 5.2.3. Move and resize it
- 5.2.4. Use Inspector to customize it
 - 5.2.4.1. Click Chart
 - 5.2.4.1.1. Change Style of chart (font, colors, fill, shadow, etc.)
 - 5.2.4.2. Change Wedges, Axes, Series (labels, gridlines, exploded wedges, trendiness, etc.)
 - 5.2.4.3. Arrange
 - 5.2.4.3.1. Bring the chart forward or back on the sheet, in front of or behind graphics, text boxes, etc.
 - 5.2.4.3.2. Align the chart
 - 5.2.4.3.3. Change the size and position of the table on the canvas
 - 5.2.4.3.4. Lock or Unlock the chart
 - 5.2.4.3.5. Group or Ungroup objects such as shapes on a canvas
 - 5.2.4.3.5.1. Rotate and flip objects
 - 5.2.4.3.5.2. Unite, Intersect, Subtract, or Exclude portions of overlapping shapes

Exercise: In the Sporting Goods file, click the First Quarter sheet. Add a new table (with a chart) to the sheet and customize it to match. No copying and pasting.... ;)

6. Printing

Open the file named Shirt Sales and follow along

- 6.1. File > Print
- 6.2. No Page Setup command; use the settings in the Print Setup sidebar
- 6.3. Use the Content Scale controls to make the spreadsheet fit on paper

7. Collaborating

- 7.1. Files stored in iCloud Drive can be shared with others
- 7.2. Choose File > Share... ... or click the Share button in the Toolbar and choose Collaborate
- 7.3. Choose a method of inviting others to share the document
- 7.4. Choose who can access the document and their permissions
- 7.5. Multiple users can edit the same document at the same time and see changes in real time

8. Compatibility

- 8.1. Numbers opens Excel files
 - 8.1.1. Drag and drop icon onto Numbers icon
- 8.2. Numbers saves in Excel and PDF formats

8.2.1. Choose File > Export to...

8.3. Share > Send Copy

9. Help

9.1.1. Formulas and Functions help

9.1.2. Help > Numbers Help

9.1.3. Numbers User Guide for Mac, free in Apple Books

9.1.4. Me: Mike Matthews <mamatthews@icloud.com>

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