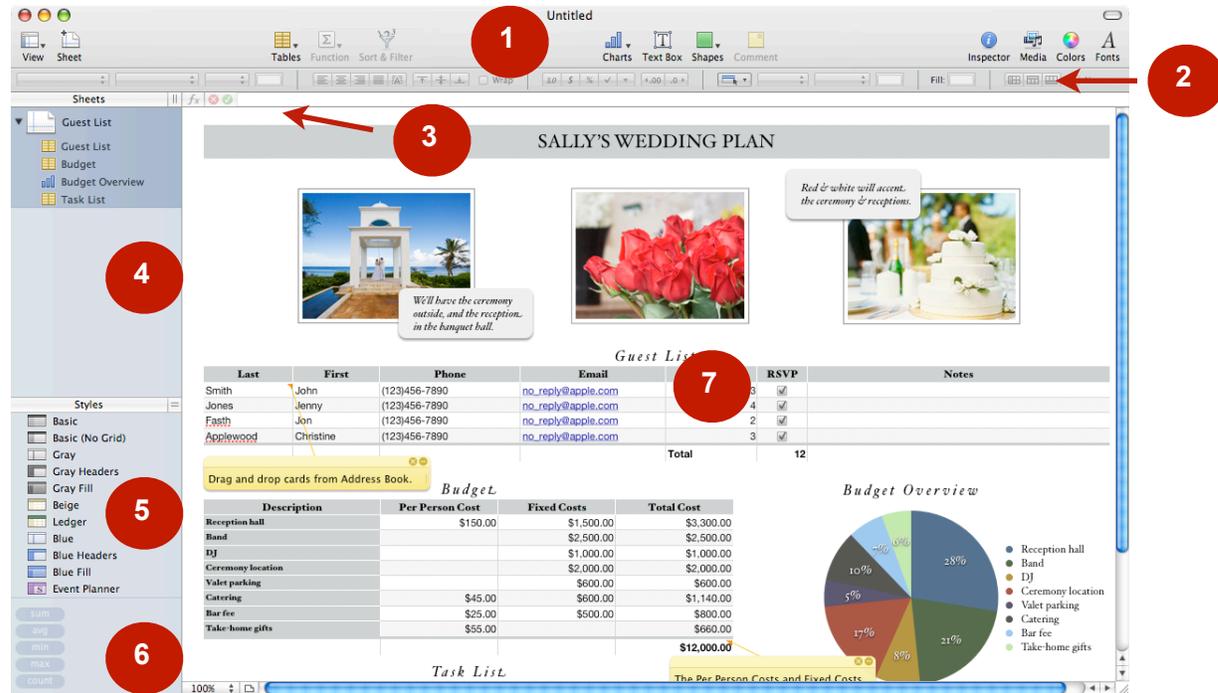


Numbers is Apple's spreadsheet application. It is installed as part of the iWork suite, which also includes the word processing program Pages and the presentation program Keynote. Numbers supports the familiar formulas and functions included in other spreadsheet programs, and it includes more than 30 Apple-designed templates to help you format your spreadsheets in ways that make your data easier to view and understand. With Numbers '09 your spreadsheets can be linked across iWork applications. This makes it easy to add spreadsheet data to a Keynote presentation or a Pages document.



The screenshot shows the Numbers '09 interface with a spreadsheet titled "SALLY'S WEDDING PLAN". The interface includes a toolbar (1), a format bar (2), a formula bar (3), a sheets pane (4), a styles pane (5), a sheet canvas (7), and a task list (6). The spreadsheet contains a guest list table, a budget table, and a budget overview pie chart.

Last	First	Phone	Email	RSVP	Notes
Smith	John	(123)456-7890	no_reply@apple.com	3	
Jones	Jenny	(123)456-7890	no_reply@apple.com	4	
Faith	Jon	(123)456-7890	no_reply@apple.com	2	
Applewood	Christine	(123)456-7890	no_reply@apple.com	3	
Total				12	

Description	Per Person Cost	Fixed Costs	Total Cost
Reception hall		\$1,500.00	\$3,300.00
Band		\$2,500.00	\$2,500.00
DJ		\$1,000.00	\$1,000.00
Ceremony location		\$2,000.00	\$2,000.00
Valet parking		\$600.00	\$600.00
Catering	\$45.00	\$600.00	\$1,140.00
Bar fee	\$25.00	\$500.00	\$800.00
Take-home gifts	\$55.00		\$660.00
Total			\$12,000.00

**Budget Overview**

- Reception hall: 28%
- Band: 21%
- DJ: 8%
- Ceremony location: 17%
- Valet parking: 5%
- Catering: 10%
- Bar fee: 7%
- Take-home gifts: 5%

## The Numbers Interface

### 1. The Toolbar

Includes the tools you use most often and allows you to quickly add shapes, text boxes and charts.

### 2. The Format Bar

Includes options for formatting the currently selected object. These options can also be accessed by opening the Inspector.

### 3. The Formula Bar

Allows you to create and edit formulas.

### 4. The Sheets Pane

Shows all the tables and charts you have added to the sheets in your spreadsheet.

### 5. The Styles Pane

Allows to quickly format a table using predefined styles.

### 6. Instant Calculations

Shows the results of automatic calculations performed by Numbers when you select a range of cells.

### 7. The Sheet Canvas

The main work area in Numbers.

## Creating a New Spreadsheet

To create a new spreadsheet:

1. Launch Numbers by clicking on its icon in the Dock or in the Applications folder. 
2. When the Template Chooser opens, select a category from the column on the left and then click on the template you want to use on the right. If a template includes more than one sheet type, you can preview those sheets by hovering over the template's thumbnail and dragging to the left or right with your mouse. Use the slider at the bottom of the Theme Chooser to adjust the size of the sheet thumbnails so you can fit more of them in the window.
3. Click on Choose.

To save your spreadsheet:

1. Choose File > Save As.
2. Enter a name for your file and choose the location where you want to save it.
3. Click on Save.

To open an existing spreadsheet and edit it:

- click on Open an Existing File in the Template Chooser.
- choose File > Open and find the file you want to open on your computer.
- click on Open Recent in the Template Chooser and select a file.

## Sheets

Sheets can be used to separate different sets of data within a single spreadsheet. To create a new sheet:

1. Click on the Add a Sheet button in the toolbar. The new sheet will appear on the Sheets Pane on the left side of the window. By default it will be named Sheet followed by a sequential number. 
2. Name your sheet by double-clicking on the sheet's name and entering your own name.
3. To delete a sheet, click on it once and press the Delete key on your keyboard. Click on Delete when the pop-up window comes up to delete the sheet.

4. To reorder your sheets, click and drag the sheet you want to move to a new spot in the Sheets Pane.

Each sheet will list all the tables and charts you create under that sheet. You can change the order of these objects in the Sheets Pane without changing the layout of the actual sheet.

## Tables and Styles

To add a table to a sheet:

1. Click on the Tables button in the toolbar and choose the type of table you want to add (you can add tables that include checklists, headers, or sums). 
2. You can manipulate a table in a number of ways once you click on it to show its handles:

- To move it: click on the square in the upper left corner (it has dots inside) and drag the table to another location in the sheet.



- Add a row: click on the handle on the lower left corner and drag to add rows.
- Add a column: click on the handle on the upper right corner and drag to add columns.



- Add rows and columns at the same time: drag on the lower right corner and move your pointer down to add rows or to the right to add columns.



3. To add values to your table, click on each cell and type in the value you want to add.
4. To delete a table, click on the square in the upper left corner to select it and press the Delete key on your keyboard (or click to select it in the Sheets list and press Delete).

To add a header or footer to a table, select the table and click on one of the buttons on the toolbar.



A new feature in Numbers '09 is the ability to freeze header rows or columns so they remain visible while you scroll through a spreadsheet that has a lot of data in it. To freeze header rows or columns, select a table and choose Table > Freeze Header Rows or Freeze Header Columns.

The Styles Pane makes it easy to quickly format a table. To apply a style to a table:

1. Click on the table's name in the Sheets Pane to select it.
2. Click on one of the styles listed in the Styles Pane.
3. Make any manual formatting changes you want to fit the style to your needs. These changes are called overrides and by default they are kept even if you choose a different style in the Styles Pane.
4. To get rid of all overrides for a table and apply a base style, click on the triangle to the right of a style's name in the Styles Pane and choose Clear and Apply Style.



To create your own style:

1. Assign a base style to start with.
2. Make the formatting changes you want in your new style.
3. Click on the triangle to the right of any of the styles listed in the Styles Pane and choose Create a New Style.
4. Enter a name for the new style and click on OK. The new style will be listed at the bottom of the Styles Pane. To rename it or delete it, click on the triangle to the right of its name and choose Rename Style or Delete Style. A pop-up window will let you replace the style with another style if it's already being used in one of your sheets.

### Formatting Cells

Once you've entered data into your cells, you can copy, cut and paste and perform other editing:

- To cut and paste the contents of a cell, click once on the cell to select it and then drag its contents to the new cell (make sure you

drag from the center of the cell - you'll see a hand icon).

- To copy a cell's contents, hold down the Option key on your keyboard as you drag the cell's contents.
- To fill adjacent cells with the contents of a cell, click and drag on the lower right corner of the cell when you get the black crosshairs. As you drag, the contents of the cell you selected will automatically fill a range of adjacent cells.

To format a range of cells:

1. Click on the first cell in the range and drag with the white crosshairs to select adjacent cells.
2. Choose your formatting options using the Format Bar (click on the View button and choose Show Format Bar if it's not visible). The Format Bar changes depending on the contents of the cells you have selected.

Numbers includes special cell formats to make data entry easier, including sliders, steppers and check boxes. To use one of these cell formats:

1. Click on the Inspector button.
2. Choose the Cells Inspector.
3. Pick a cell format using the pulldown menu.
4. Choose your options for that cell type (increment size, minimum and maximum values, etc.)



The Inspector is the main area where you change settings in Numbers. Many of the Format Bar options are duplicated in the Inspector.

To split a cell into multiple cells, select the cell you want to split and click on the Split button in the Table Inspector.



To merge cells, select the cells you want to merge and click on the Merge button in the Table Inspector.



### Formulas and Functions

There are two places where you can enter formulas to perform calculations with Numbers: the Formula Bar which is right below the toolbar, and the Formula Editor which appears when you type the equals sign

as the first value in a cell. To create a simple formula:

1. Click on the cell where you want to insert the formula.
2. Enter an equals sign (=) to open the Formula Editor or type an equals sign in the Formula Bar.



3. Enter the location of the cell with the first value as a column-row pair (i.e. A1, C3, etc.).
4. Enter the operator you want to use (+, -, \*, /).
5. Enter the location of the cell with the second value as a column-row pair.
6. Press Enter on your keyboard or click on the Accept button (the check mark) to perform the calculation.
7. To edit the formula, click in the cell that has the formula to bring up the Formula Editor, make your changes and click on the Accept button.
8. To delete the formula, click on the cell with the formula and press Delete on your keyboard.

Functions are more advanced formulas. When you select a range of cells, Numbers automatically performs a few functions (such as Sum and Average) for you and lists the results in the area below the Styles Pane.

sum	21
avg	5.25
min	5
max	6
count	4

To use other functions:

1. Click on the cell where you want to insert the function.
2. Click on Function on the toolbar and choose the function you want to use. For more advanced functions, choose Show Function Browser to open the Function Browser.
3. Once the Function Browser opens, choose a function category from the list on the left and then choose the function you want to use on the right. A brief description of the function is displayed at the bottom of the popup window.
4. Click on Insert Function. The function will be added to the cell you had selected,



with argument placeholders in parentheses.

5. To edit the function, click on the cell with the function to display the Formula Editor, replace each argument with a value or cell reference and click on the check mark on the right side of the Formula Editor. The easiest way to replace the arguments with values is to click on each argument and then click on the cell with the value you want to use for that argument. The cell and the argument will be color coded with the same color to show you how they are linked.
6. To remove a function, select the cell with the function and press Delete on your keyboard.
7. To edit a function, double-click on the cell with the function's results.

When you apply a function to a selected cell range, Numbers will place the result in the next empty cell:

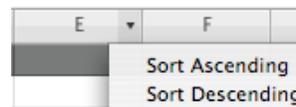
- at the bottom if you select a range in a column
- to the right if you select a range in a row
- in a footer row if you select a column using its reference tab.

Numbers supports many ways to reference cells when you use their values in a formula:

- to reference a range of cells enter the location of the first cell, followed by a colon and the location of the last cell (i.e. A1:A5 for a range in a column or A1:C1 for a range in a row).
- to reference an entire column or row type the column's letter or the row number as the starting and end value of the range (i.e. A:A to reference the first column or 1:1 to reference the first row).

### Sorting and Filtering

To sort the contents of a column, click on the disclosure triangle on its reference tab, then choose a sort option (Sort Ascending or Sort Descending).



To sort by more than one column:

1. Click on the Reorganize button on the toolbar. 
2. In the Sort area, choose the name of the column you want to sort by using the first pulldown menu, then choose ascending or descending using the second pulldown menu.
3. To add another column to sort by, click on the plus button to the right, then choose the column name and sort option as described in step 3.
4. Click on Sort Now to see the changes in the spreadsheet.

A filter can be used to show only the rows that contain the values you specify. To apply a filter:

1. Select the table by clicking on its name in the Sheets pane.
2. Click on the Reorganize button in the toolbar.
3. Check the box next to “Show rows that match”. This will activate the filter.
4. Choose a column to filter by using the first pulldown menu, a condition using the second pulldown menu, and the value you want to use for the filter using the third pulldown menu.
5. To add more conditions to the filter, click on the plus button on the right side of the popup window and repeat step 4. You can determine whether all conditions must be met using the All or Any pulldown menu.
6. To turn off the filter and show the entire table, uncheck the box next to “Show rows that match”.

Numbers '09 adds the ability to sort columns by categories. To sort the contents of a column into categories, click on the disclosure triangle on its reference tab and choose Categorize by this Column. To undo this action, click on the disclosure triangle again and choose Delete Categories. To collapse and expand a category click on the disclosure triangle to the left of its name.

To do a count using categories, select any field in the same row as the category label, click on the disclosure triangle and choose Count.

To undo a count, select the same field, click on the disclosure triangle and choose Blank.

### Text Boxes

In addition to being able to insert and format text in columns and rows inside a table, Numbers allows you add text using text boxes that can be positioned anywhere on a sheet.

To add a text box:

1. Choose Insert > Text Box or click the Text Box button on the toolbar. 
2. To edit the text, click once on the text box to select it then double-click inside of it to select the placeholder text and replace it with your own text.
3. To move the text box, click once on it to select it and drag it to another location.
4. To change the width of the text box, drag on the handles that appear when you select it.
5. To add columns to a text box, click on the Columns button on the Format Bar while the text box is selected and choose the desired number of columns. 
6. To delete a text box, click once on it to select it and press Delete on your keyboard.

To change the appearance of the text inside a text box:

1. Click once on the text box to select it.
2. Use the buttons in the Format Bar to change the font family, font style, font size, and color. You can also change the line spacing, fill color and other options.
3. To change other text options such as the character spacing, open the Inspector by clicking on its button in the toolbar and choose the Text Inspector.
4. To access more font options, click on the Fonts button on the toolbar. 

### Images

There are several ways to add images to a Numbers spreadsheet:

- Drag and drop an image from a Finder window into the spreadsheet.
- Choose Insert > Choose and navigate to the location where the image is stored on your hard drive, then click on Insert.
- Click on the Media button on the toolbar, select Photos, and choose an image from your iPhoto library or 

from one of your iPhoto albums (you can also use photos taken with Photo Booth). Drag the image into the spreadsheet to add it.

If you add the image to a cell it will be used as the cell's background image. If you would rather have a floating image in your spreadsheet, you should drag the image to a blank area of the spreadsheet. Once you have added the image as a floating image, you can drag it to a different location or use the handles that appear around it to resize it.

The Graphic Inspector can be used to customize the appearance of an image:

- Check the box next to Shadow to add a drop shadow. Use the controls to change the angle, offset, and set other options for the drop shadow.
- Check the box next to Reflection to create a reflection effect. Use the slider to change the opacity of the reflection.
- Use the Opacity slider to increase the level of transparency in the image.

The Metrics Inspector also has options that apply to images:

- Use the flip buttons to flip the image vertically or horizontally.
- Use the Angle wheel to rotate your image.

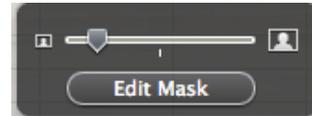
Numbers allows you to edit your images without having to open iPhoto:

1. Select the image you want to edit and choose View > Show Adjust Image.
2. Use the sliders and controls in the Adjust Image window to adjust the sharpness, brightness and contrast, colors, and other properties of the image.
3. To perform an automatic adjustment, click on the Enhance button. If you're not happy with the results, click on Reset Image to start over.

To mask or hide part of an image:

1. Click on the image to select it.
2. Choose Format > Mask (or Mask with Shape if you want to use a shape as the mask).
3. Drag the handles to adjust the size of the mask. The grayed out area of the image will be hidden when you apply the mask.

4. Press Enter on your keyboard to set the mask.
5. To edit a mask, select the image that has the mask applied to it and click on Edit Mask. Use the slider to adjust the zoom level of the image inside the mask.



## Shapes

To add a pre-made shape to your spreadsheet:

1. Click on Shapes on the toolbar and choose one of the pre-made shapes included with Numbers. 
2. Drag to position the shape at the desired position in the spreadsheet, or use the handles to resize it.
3. Use the options in the Format Bar to change options such as the fill and border colors.
4. To include text inside the shape, double-click inside of it and start typing. Use the options in the Format Bar to change the font, the text color, and other options.

To draw a custom shape:

1. Click on Shapes in the toolbar and choose the last option (draw a freeform shape).
2. Click to set the first point of your shape, then continue clicking to set additional points.
3. Click on the first point to close the shape. You can move and resize the shape as you would any of the pre-made shapes.

To group two objects (shapes or images):

1. Click once on the first object to select it.
2. Hold down the shift key on your keyboard and click on the second object.
3. With both objects selected, choose Arrange > Group. This will create a new object based on the two objects you selected. This new object can be moved and resized as if it were a single object.

To change the stacking order of objects, choose Arrange > Send Backward and Arrange > Send Forward. To delete an object, select it and press Delete on your keyboard.

## Charts

To add a chart:

1. Select the cells you want to base the chart on (they can be adjacent or non-adjacent). You can also select the entire table in the Sheets pane.
2. Click on Charts on the toolbar and choose a chart type from the popup menu (or choose Insert > Chart). 
3. Use the handles to resize the chart or drag it to another location to reposition it.
4. Open the Inspector and choose the Chart Inspector to change the chart type, the chart colors, whether a title or legend is displayed or not, and other options. The 3D tab allows you create a 3D effect, while the Axis and Series tabs allow you to customize how the data is displayed in the chart.
5. To edit the text displayed in the title or legend, double-click on it and replace it with the desired text.
6. To change whether the rows or columns are used for the series, click on the orientation button in the upper left corner of the cell range while the chart is selected. 
7. To add values to the chart, make sure it is selected and then either Shift-click (if they are adjacent) or Command-click (if they are not adjacent) on the values you want to add.
8. To delete a chart, make sure it is selected and press Delete.

Numbers '09 includes mixed chart types that allow you to easily overlay two data sets on top of each other for comparison. Using the Series Type option in the Series tab of the Chart Inspector, you can give each series a different visual treatment (line, column or area) to help distinguish between the two series. Another new feature is the ability to show a trend line. To show a trend line:

1. Select the chart by clicking on it once in the Sheet Canvas.
2. Open the Chart Inspector and click on Advanced in the Series pane.
3. Select a trend line type from the pulldown menu in the Trendline tab.

The integration between the iWork '09 applications makes it possible to create a

linked chart that can be inserted into a Pages document or a Keynote presentation. When the Numbers table data is updated these changes can be updated on the Pages or Keynote version without having to reinsert the chart.

To create a linked chart:

1. Create a Numbers chart and save your spreadsheet.
2. Copy and paste the Numbers chart into a Pages document or a Keynote presentation.
3. To update the version of the chart in your Pages document or Keynote presentation when you make changes in Numbers, select the chart in Pages or Keynote and click on the Refresh button. 
4. To unlink a Pages or Keynote chart from its Numbers source chart, select the chart in Pages or Keynote and click on Unlink.

## Adding Hyperlinks

To add a hyperlink:

1. Double-click inside a cell to select the text.
2. Open the Inspector, choose the Hyperlink Inspector, then select "Enable as a hyperlink".
3. Choose an option from the Link To pop-up menu (Web Page or Email Message).

## Working with Addresses

You can create a table based on your addresses stored in Address Book:

1. Select one or more contacts in Address Book (you can also select a group).
2. Drag the selected contacts into the Numbers canvas. A column will be created for each field in the Address Book entry.
3. Only the Last name, First name, Phone, and Email fields are visible by default. To view the other fields, choose Table > Unhide All Columns. You can then delete columns or rows as needed.

## Adding Comments

To add a comment to a cell:

1. With the cell selected, click on the Comment button on the toolbar. 
2. Enter the desired text in the comment box.

3. To hide the comment box, click on the minimize button (it looks like a minus sign). You will know a cell has a comment because it will have an orange triangle in the upper right corner.
4. To open up the comment after you have minimized it, click on the corner of the cell.
5. To delete a comment, open up the comment box and then click on the X.

### Password Protection

To add a password to a Numbers spreadsheet:

1. Open the Document Inspector and check the box next to “Require password to open” at the bottom of the Inspector.
2. Enter the desired password and click on Set Password. You can add a password hint as well.
3. The Password Assistant can help you select a strong password for added security. To open the Password Assistant, click on the key icon at the top of the Set Password window.

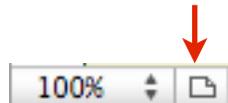
The password protection feature only works for spreadsheets saved as iWork '09 documents. If you export your spreadsheet into a different format the password will be removed.

### Printing

Print View also allows you to change the layout of each page before you print it or save it as a PDF, and to add page headers and footers.

To use Print View:

1. Choose View > Show Print View or click on the Page View icon next to the zoom controls.



2. To change the orientation of the page, click on one of the orientation buttons next to the Print View button.



3. To change the number of pages, drag the Content Scale slider to the right until the layout is split into multiple pages.

4. To add a header or footer, hover your cursor over the bottom or top portion of the page until the box appears then type in the text you want to appear in the header or footer.
5. To add a page number, click inside the footer and choose Insert > Page Number (you can also add the Date & Time or the Page Count).
6. Reposition objects by dragging and dropping and resize them by selecting them and using the handles.

When you're happy with your layout, you can print it:

1. Choose File > Print.
2. Select a printer (either a printer connected to your computer or one on the network) and choose the number of pages and other options.
3. Click on Print to print out your Numbers document, or on PDF > Save as PDF if you want to create a PDF version.

### Exporting and Sharing with iWeb

To open a Numbers document with Microsoft Excel or another spreadsheet program, you must first export it:

1. Choose Share > Export.
2. Click on one of the tabs (PDF, Excel, or CSV) to choose a format for your exported file.
3. Set your options for the format you selected.
4. Click on Next.
5. Choose a save location and click on Export.

You can also include a link to a Numbers spreadsheet in a web page created with iWeb (only if you have iWeb '08 or later installed):

1. Choose Share > Send to iWeb and choose a format (PDF or Numbers Document).
2. Choose a blog or podcast when iWeb opens (if you have multiple blogs on your website).
3. iWeb will add a thumbnail of the spreadsheet on the page with a link to the actual PDF or Numbers file. Select the thumbnail and use the handles to resize the thumbnail, or move it to another location on the iWeb page.

To email a spreadsheet choose Share > Send via Mail and select a format for the attachment (Numbers, Excel or PDF). Your default email program will open so you can address the message and send it. The numbers spreadsheet will be sent as an attachment in the format you selected.

### **iWork.com**

iWork.com is a new service from Apple that allows you to share Numbers spreadsheets and other iWork documents over the Web. Each document uploaded to iWork.com has its own web page where other people can view it, provide feedback by adding comments, or download the original version of the document to open it with Numbers on their computers. iWork.com is a free service that is currently in public beta.

To share a Pages document using iWork.com:

1. Choose Share > Share via iWork.com.
2. Enter your Apple ID and Password and click on Sign In.
3. Invite others to view your Numbers document by entering their email addresses and a short message.
4. Check the boxes next to "Leave Comments" and "Download the document" if you want to allow these actions when the document is viewed on iWork.com.
5. Click on Show Advanced to specify which file formats (PDF, Excel, or Numbers '08 and '09) will be provided for downloading.
6. Click on Share. Your document will be uploaded to iWork.com in the background.

Once the document has been uploaded, a message will be sent to each person you've invited with a link to access the document on the Web. The document's web page will include navigation links at the top. Clicking on Show Navigator will display page thumbnails on the left side of the page for added navigation.

The visitors to your document's web page can leave a comment by selecting any piece of text, image or other object and clicking on the Add Comment button at the top of the page. To leave general comments they can add notes by entering their text in the Document Notes area of the page and clicking on Post

Note. To download the spreadsheet, they can click on the Download button and select from the list of formats you have made available (each download link will also include the file size of the document to let them know how big it is).

To manage your iWork.com documents, click on Share > Show Shared Documents in Pages. This will open the Shared Documents page where you will see a list of shared documents along with the date they were published, their type and file size. To open a shared document in your web browser, click on the name of the document. To stop sharing a document, click on the Delete link to the right of the document's name.

### **Numbers Resources**

iWork Community (<http://www.iworkcommunity.com/>)

This is site where you can find free templates for Numbers and the other programs in the iWork suite. The templates are submitted by other iWork users. To install a new template:

1. Download a template from iWork Community as a zip file.
2. Double-click on the zip file and copy the folder included in it.
3. Go to your home folder and locate the Library/Application Support/iWork/Numbers/Templates/My Templates folder.
4. Paste the folder you copied in step 2 into the My Templates folder.
5. Open the Template Chooser in Numbers. You will see a new section called My Templates where any installed templates will be listed.