

Excel 2: Formulas, Charts, & More Class Guide

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Part 1: Excel 1 Recap

1.1 Formatting Refresher

Below is a picture of the Home tab of the Ribbon which contains most, but not all, of the features we'll go over in class today.



Horizontal Alignment

% formatting

Exercise 1: Open the Grand Opening Contacts spreadsheet (in Excel2Class Spreadsheest.xlsx). Spruce up the spreadsheet with colors and borders. Merge & Center the "Grand Opening Contacts" across the top of the table.

Part 2: Sorting & Filtering

2.1 Sorting

You can easily sort your data alphabetically, chronologically, or numerically...and even by color. Sorting can be Ascending (A-Z) or Descending (Z-A). If you have a Header Row (a top row that labels the data of your table), it is a good idea to format this row to stand out from your actual data.



2.2 Filtering

Filtering is a quick and easy way to hide data so that you can see only the relevant data you need. It is a cinch to turn off and on. Address

Exercise 5: In the Grand Opening Contacts spreadsheet...

- Place the cell pointer on any cell within A4 to K26 •
- Click on Sort & Filter→Filter •
- On the spreadsheet, click on the down arrow to the right of City and select only Greenwood to limit your list.
- Click OK
- To turn off filtering, simply click on **Sort & Filter** ->Filter

Part 3: Altering Your View

3.1 Freezing Panes

You can freeze panes—sections of the spreadsheet—so you can easily view them even when you scroll up and down/left and right. Freezing Panes does not affect how your spreadsheet prints.

Exercise 6: In the Grand Opening Contacts spreadsheet...

- Click on cell A4. •
- Click on View. •
- Click on Freeze Panes→Freeze Panes -•
- Now scroll down and see if Rows 1-3 stay in place •

Click on **Freeze Panes** \rightarrow **UnFreeze Panes** to turn this feature off.

Part 4: Formulas & Functions

4.1 Formula Basics

Formulas are equations that perform calculations on values in your spreadsheet and always start with an equal sign (=). Here are the symbols/operators for simple calculations:

+ Addition - Subtraction * Multiplication / Division

Ordering = Excel calculates from left-to-right with multiplication and division always completed first (use () to change this order)

Copying Formulas = You can copy & paste or use AutoFill to easily copy formulas from cell to cell.

4.2 Functions

Functions are prewritten formulas—you just need to supply the value(s) and not the operator(s). The same rules for formulas apply to functions. Some other info:

- ✤ You can calculate ranges of cells using the colon (:).
- You can use a comma (,) to separate cells you want to include that are not in a range.
- If you don't highlight what cells you want to include in a function, Excel automatically looks above the cell you're at to locate numbers. If nothing is there, it will look to the left then the right.

Exercise 8: AutoSum **D** is the function we used in Excel 1. On the Widget Sales Data spreadsheet...

- Select Row 15 and click Wrap Text in the Ribbon. •
- Click on cell B13.
- Click on the AutoSum shortcut at the top right. •



Split

🗖 Hide

Jub

Freeze Top Row

Freeze First Column

August

May

June

- Click the checkmark at the top or **Enter**.
- Tally the rest of the months as well as column N using AutoSum (and AutoFill).
- Use AutoSum in cells N4 to N12 to tally each widget type.

NOTE: If ##### appears in a cell, widen the column so the number will fit.

HINT: You can automatically widen all columns in your spreadsheet. We won't use it for this exercise, but here's how:

- Click on the empty gray rectangle to the left of column A.
- Click on Format→Autofit Column Width

4.3 MAX, AVERAGE, & Percentage

We will explore other functions (there are hundreds of them!) as well as create a percentage formula. You can get to all functions in Excel by clicking on **AutoSum** \rightarrow **More Functions** or by clicking on the **Formulas** tab of the Ribbon (be sure to not be on a cell that has a function in it when you do this).

Exercise 9: On the Widget Sales Data spreadsheet...

- Put the cell pointer on B16.
- Click on the arrow next to AutoSum near the top
- Find the MAX listing and click on it.
- Next, a formula will show up in your spreadsheet with cells Excel thinks you want to use. Make sure they are **B4 through M4**. If they aren't, highlight those cells.
- Click the checkmark or press Enter.
- Calculate the MAX monthly sales figure for the other colors plus the Total

Exercise 10: On the Widget Sales Data spreadsheet...

- Put the cell pointer on C16
- Click on the arrow next to AutoSum near the top
- Find the **AVERAGE** listing and click on it.
- Next, a formula will show up in your spreadsheet with cells Excel thinks you want to average. They are not the correct ones, so highlight cells **B4 through M4**.
- Press Enter.
- Calculate the AVERAGE number for the other colors plus the Total

<u>Exercise 11</u>: On the *Widget Sales Data* spreadsheet, we will figure each color's Average Monthly Sales percentage of the Average Monthly Total.

- Put the cell pointer on D16.
- Type =c16/c25 and press Enter.
- Format the result to a percentage by clicking on the **%** in the Number area of the Home tab ribbon.
- Try to copy this formula into cell D17. You will notice that this will not work since Excel will change the <u>Relative Reference</u> from cell C25 down to C26 which is blank. To get

There may be occasions when you need an **Absolute Cell Reference** (or a combination of Relative and Absolute) so that one or more of the cells in your formula or function never change...or only change by column or row. "\$" symbols indicate an absolute reference.

Example	When copied
=a4/\$b\$3	A4 can change; B3 will
	never change
=a4/\$b3	A4 can change; Column B
	will never change but Row
	3 can
=a4/b\$3	A4 can change; Column B
	can change but Row 3 will

	Σ	lutoSum 🔹 🔬 🎢		
	Σ	<u>S</u> um	8	
		<u>A</u> verage	ct ≁	
		Count Numbers		
_		Max		
		M <u>i</u> n		ł
>		More <u>F</u> unctions		

copying and pasting to work, we'll redo our percentage formula so that the reference to C25 is partially <u>ABSOLUTE</u> instead of all <u>RELATIVE</u>.

- Go back to cell D16 and type =c16/c\$25
- Copy and paste the formula into cells D17 through D24.

4.4 COUNT

COUNT is one function from a group called *Count Functions*. Its goal is to add up the cells in a selected range that contain numbers (not text...just numbers).

Exercise 12: On the Widget Orders spreadsheet...

- Click on cell **B16**
- Either type =count(b4:b10) or click on the arrow next to AutoSum and choose Count Numbers (and then highlight B4:B10)
- Use AutoFill on cells C16 to E16.

Part 5: Charts...As Easy As Pie (and Line and Bar...)

5.1 Charts

It is super easy to make charts of a table in Excel using the **Insert** tab menu. The exercise below will demonstrate this feature.



Exercise 13: Back on the Widget Sales Data spreadsheet...

- Highlight the data range A15 to B24 for our chart.
- Click on the Insert tab and then Column. Choose the first 3-D Column from the dropdown list.
- Notice that three new **Chart Tools** tabs appear above the Ribbon. These will help you customize your chart.



- Click on the Layout tab. Use the Chart Title, Legend, and Data Labels menu to change your chart if you would like.
- Next, click on the **Move Chart** option on the Design tab will give you the option to place your chart in a new worksheet. Let's do that!

Part 6: Copying & Pasting into Word

6.1 Paste Special

You can conveniently copy an Excel spreadsheet section or chart into Word if you are typing a report. If you use the *Past Special* feature, you can make it so that updating the spreadsheet in Excel will automatically update the copied section/graph in Word.

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Exercise 14: Using the chart from earlier in class...

- Click on the chart once
- Click on **Copy** or press **Ctrl+C**. •
- Open Word and click on the **arrow** below Paste. •
- Select **Paste Special**. In the box that pops up, choose • Paste Link and Microsoft Excel Chart Object.
- Click OK.

Now when you update the chart's underlying spreadsheet, the information will automatically transfer to the Word document.

Part 7: Sparklines - Easy Inserts

7.1 Sparklines

Sparklines (new in Excel 2010) are tiny charts that can show data trends very easily. Here is how they work:

Exercise 15: Using the Widget Sales Data spreadsheet...

- Click on Cell O3 and type in Graphs. Draw in borders around cells O3-O13. •
- Click on Cell **04**. •
- Click on the Insert tab and then on Line in the Sparklines group. •

Formulas

Low Point Last Point

Data

Make **B4:M4** the data range and click **OK**. •

Туре

File Home Insert

Edit Data *

Sparklin

- Use Autofill to copy the sparkline into cells 05-013. •
- Click on the Sparkline Tools Design tab to mark the High • Point. 🗶 | 🚽 🤊 • (🖻 • | 🖛 | Excel2ClassSpreadsheets - Microsoft Excel

Page Lavout

Line Column Win/Loss Negative Points Markers

High Point First Point



8.1 HELP!

Excel has a help feature that can aid you in refreshing your memory on certain tasks or by even learning new tasks. Help can be reached at by clicking the Question mark in the upper right hand corner. You will most likely be directed to Office.com's online help, but there is an offline version if needed.

8.2 Additional Help

Below are some websites that might be of help to you:

www.greenwoodlibrary.us/computer-class - Lists all of the library's computer classes and includes the Excel guides and class spreadsheets.

www.inspire.in.gov - Click on the Testing & Education button near the middle of the page (then click on Career Tools and then Basic Computer Skills-you will need to create a free account)

www.gcflearnfree.org - A great collection of tutorials on a wide array of subjects including Microsoft Excel 2003-2016.



Create Sparklines

Choose the data that you want

Choose where you want the sparklines to be placed

Data Range: B4:M4

Location Range: \$0\$4

i na t

Column Win/Loss

 \sim

Line

OK

Sparklines

Cancel

? X

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<u>www.free-training-tutorial.com</u> - Free tutorial videos on Excel tasks (just be wary of clicking on the ads)

http://spreadsheets.about.com/

www.customguide.com/cheat-sheets/ - Free cheat sheets for most Office programs 2007-2016.

<u>www.google.com/work/apps/business/products/sheets/</u> - You can use Google Sheets for free (after creating a Google account) to practice many of the Excel features we've used today.

You can also find help by searching for the function you want to use or the problem you're having using your favorite search engine.

Thank you for coming!

Please fill out a Computer Class Survey before leaving. <u>http://www.greenwoodlibrary.us/programming-survey</u> (or go to <u>www.greenwoodlibrary.us</u> → Services & Programs → Computer Survey)

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