Excel Tools: Summarizing Data

Follow along at: http://bit.ly/excel-tools

See the code at: http://bit.ly/excel-tools-code

Key Questions for the Morning

- Benefits of Excel?

- Drawbacks of Excel?

- Keyboard Shortcuts
    - **Ctrl + arrow key** - Go to the end of the text in that direction
    - **Ctrl + c** - Copy the selection to clipboard
    - **Ctrl + v** - Paste clipboard contents to the cell(s)

Basic Function Syntax
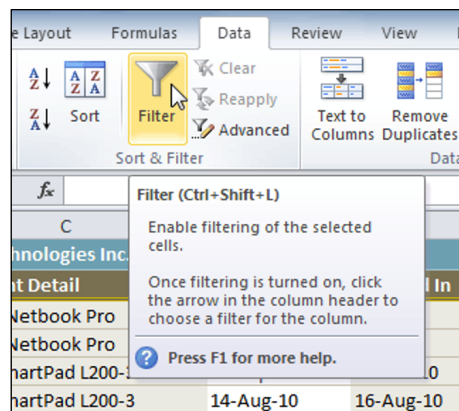
```
=FUNCTION_NAME(parameter1, parameter2,...)
```

For Example

```
=SUM(A5:A8)
```

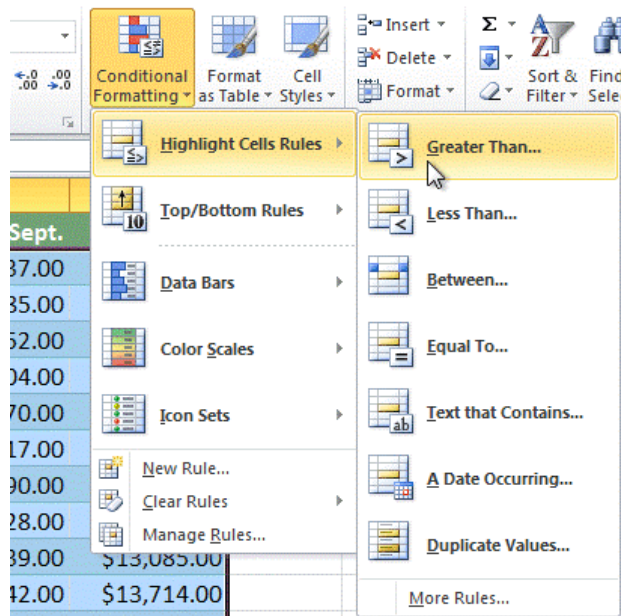- This tells Excel to sum all the values in cells A5, A6, A7, and A8
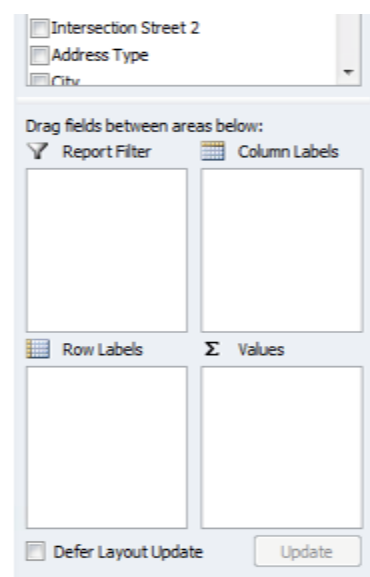
Key Data Tasks

Filtering

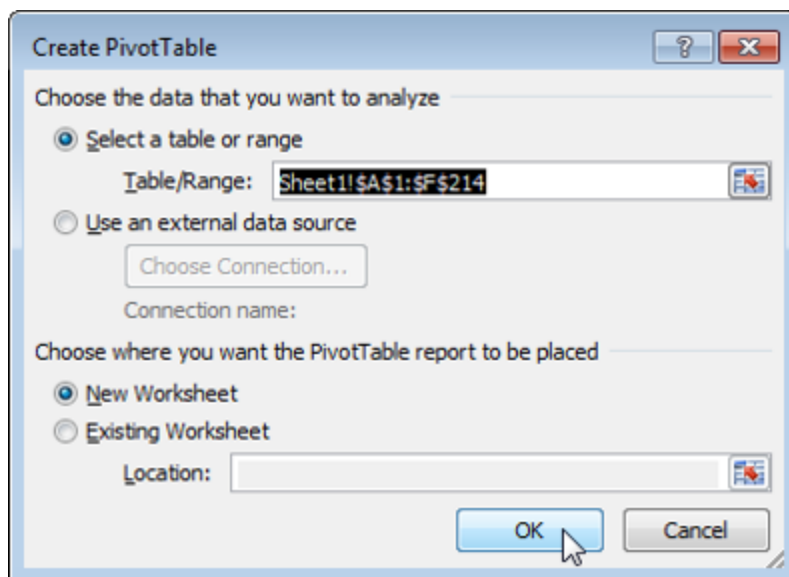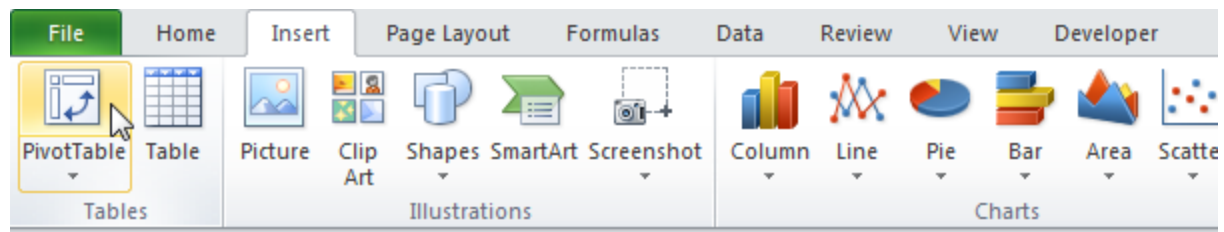# Conditional Formatting

PivotTables

Useful Functions in Excel

=SUM(): Calculates the sum for a range of numbers

=COUNT(): Counts the number of cells containing numbers in a range

=COUNTA(): Counts the number of non-blank cells in a range

=HOUR(): Extracts the hour from a timestamp

=WEEKDAY(): Extracts the day of the week from a timestamp

=CHOOSE(): Uses an index number to return a result from an ordered list of values

=MID(): Select a specified number of characters from a text string

=LEFT(): Select a specified number of characters from the beginning of a text string

=RIGHT(): Select a specified number of characters from the end of a text string

=FIND(): Find the location of a given character in a text string

=CONCATENATE(): Combine characters together into a text string

=VLOOKUP(): An operation to look up a value in another location based on an index value

=IF(): A function for logical comparison between values to return a desired result given a particular condition

Formulas for Class

- Extract hour from timestamp `=HOUR(B2)`
- Extract day of the week from timestamp `=WEEKDAY(B2)`
- Formula to display the name of the day

```
=CHOOSE(D2,"Sunday","Monday","Tuesday","Wednesday","Thursday","Friday","Satur
```

- Formula to concatenate Community District and Borough

```
=CONCATENATE(IF(A3<10,"0",""),A3," BRONX")
```

- Formula for VLOOKUP of Community District Population (may need to adjust references)

```
=VLOOKUP(A5,'[NYC_Population_1970-2010.xlsx]A'!$B$1:$H$81,7,FALSE)
```

Resources
- NYC Population 1970-2010 - https://www1.nyc.gov/site/planning/data-maps/nyc-population/census-2010.page
- 311 Noise Complaint data - https://data.cityofnewyork.us/
- Microsoft Excel keyboard shortcuts - https://support.office.com/en-us/article/keyboard-shortcuts-in-excel-for-windows-1798d9d5-842a-42b8-9c99-9b7213f0040f
- 7 essential Excel tricks every office worker needs to know - https://www.microsofttraining.net/sharing/11-seven-essential-excel-tricks-every-office-worker-needs-to-know.html
- 11 Places That Can Turn You Into A Microsoft Excel Power User - https://medium.com/the-mission/eleven-places-that-can-turn-you-into-a-microsoft-excel-power-user-c119f18e138c
- Data Sensemaking- http://fellinlovewithdata.com/teaching/developing-a-data-sensemaking-course by Enrico Bertini
- Datapolitan training classes http://training.datapolitan.com/

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Your Notes