

# Excel Tools: Summarizing Data

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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)

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# Formulas and Functions

## Basic Function Syntax

```
=FUNCTION_NAME(parameter1, parameter2,...)
```

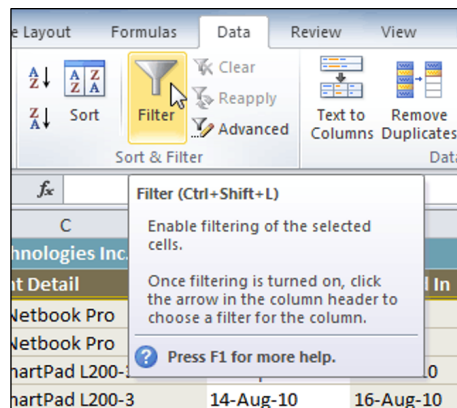
### For Example

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

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

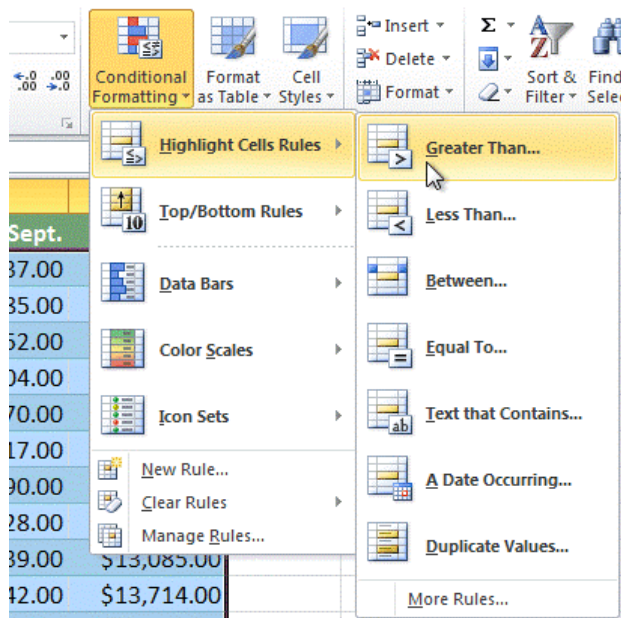
## Key Data Tasks

### Filtering

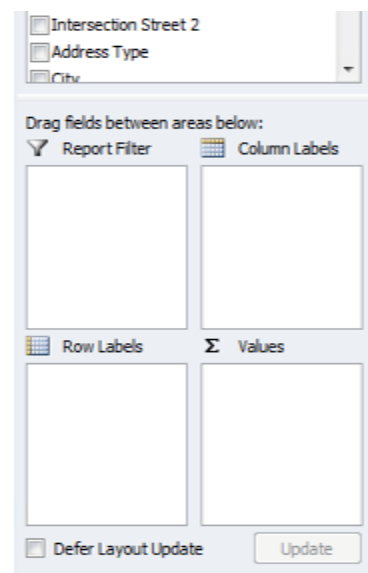
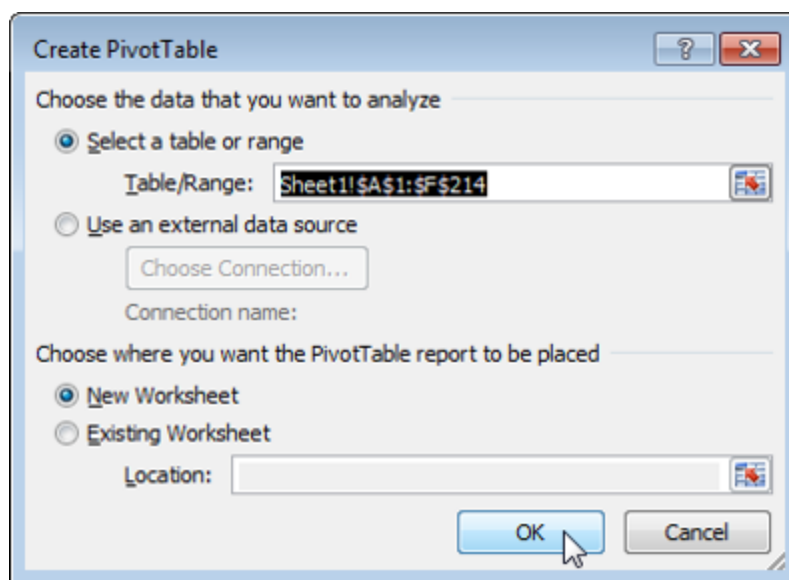
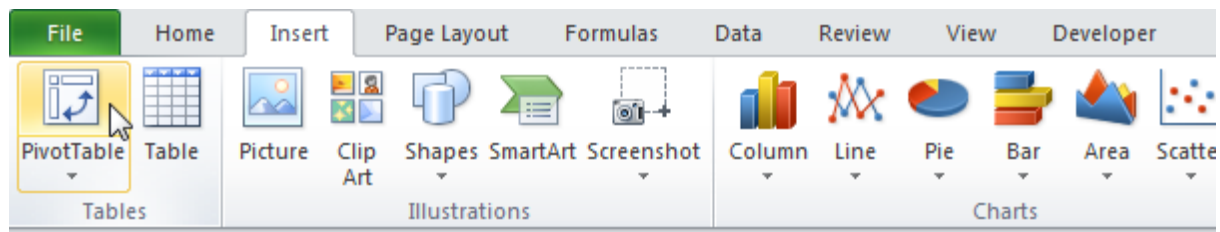


	A	B	C	D	E	F
1	Unique Key	Created Date	Closed Date	Agency Name		Complaint Type

# Conditional Formatting



# PivotTables



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## 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","Saturday")
```

- 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://felinlovewithdata.com/teaching/developing-a-data-sensemaking-course> by Enrico Bertini
- Datapolitan training classes <http://training.datapolitan.com/>

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## Your Notes