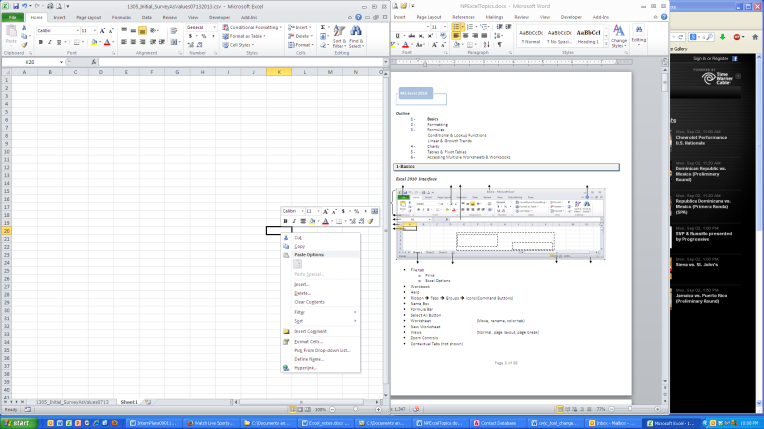
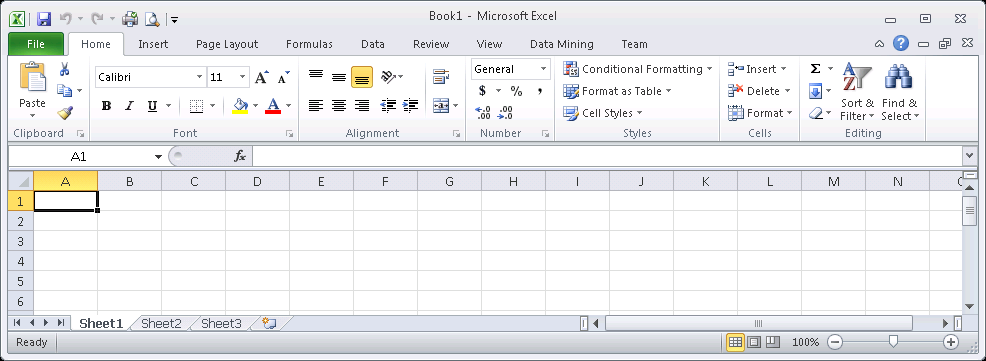
MS Excel 2013 Outline

# Basics

What is a Spreadsheet? What is Excel?

## Excel Interface (label the objects)

****

1. File tab
   * Print
   * Excel Options
2. Workbook
3. Help
4. Ribbon 🡺 Tabs 🡺 Groups 🡺 Icons (Command Buttons)
5. Name Box
6. Formula Bar
7. Select All Button
8. Active Cell
9. Worksheet (Move, rename, color tab)
10. New Worksheet
11. Views (Normal, page layout, page break)
12. Zoom Controls
13. Shortcut menu
14. Contextual Tabs (not shown)

## **Example 1** (“Intro” worksheet)

*Spreadsheet Components*

* Cell
* Active Cell
* Cell Referencing
* Cell Range
  + Adjacent
  + Non-adjacent
  + Moving
* Columns/Rows
  + Adjusting
    - Manually
    - Double-Click
    - Specifically
  + Hiding
  + Adding / Deleting

## Cell Contents (4 types)

* number
* text
* date
* formula (and formula view)

*Other features*

* Named Range
* Right-Clicking
* Cell size too small

## **Example 2** (“AutoFill” worksheet)

## Copy & Paste options

## AutoFill

* Using the Fill Handle
  + Drag/Drop
  + Copy+Double-click to fill all the way to end of column (must have info in at least one column)
* Numbers, Text, Ordinal Positions
* Dates, Months, Days of Week

## Printing

* Worksheet
* Workbook

## **Example 3** (“Common PC Shortcuts” worksheet)

Select All

## Save

Cut

Copy

Paste

Bold

Italics

Find/Search

Display Formulas

Display Print Menu

MS Excel 2013 Outline

# Formatting

## 

## **Example 1** (“Formatting” worksheet)

*Home Tab*

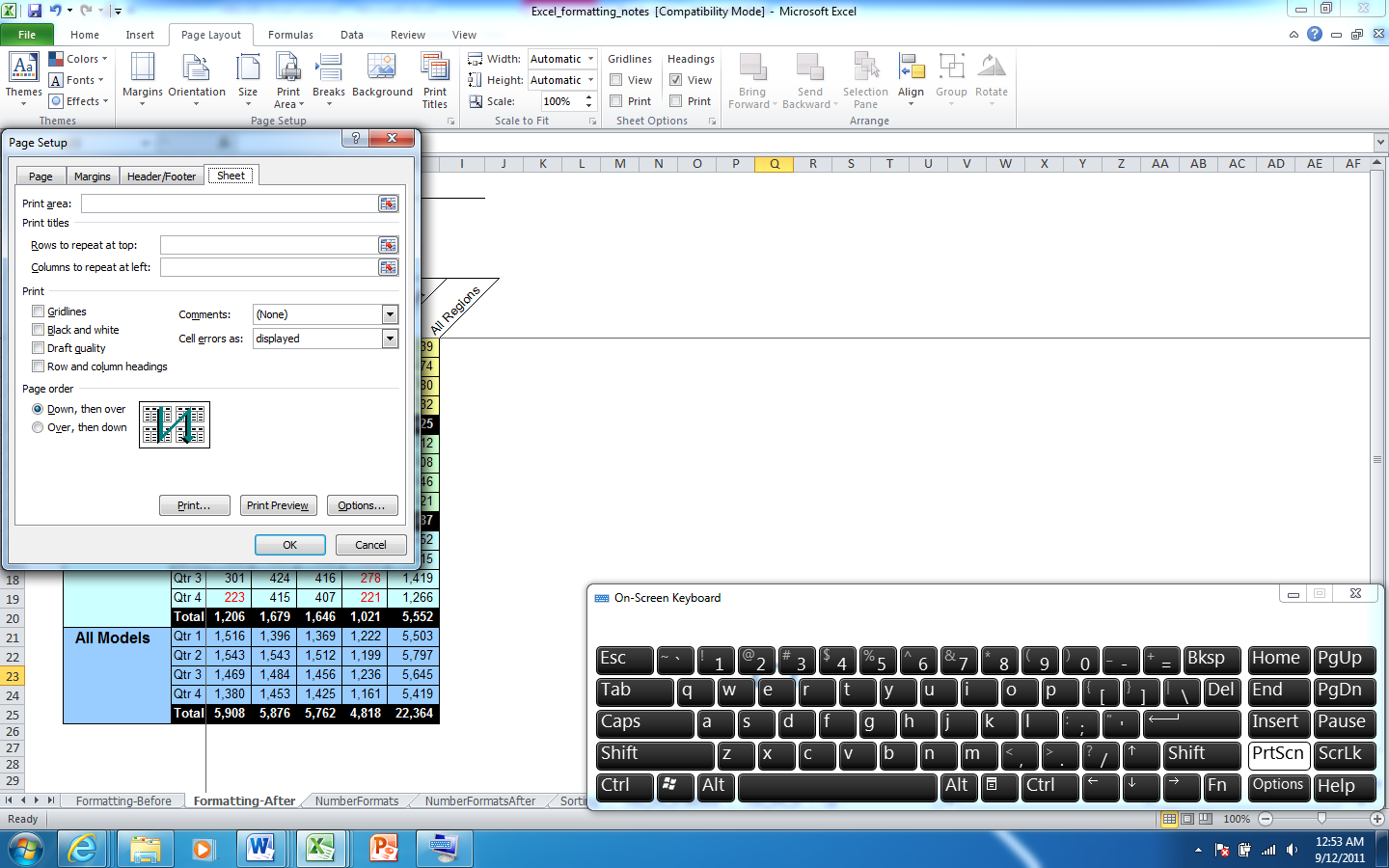
* Select All | Resize Columns
* Select All | Resize Rows
* Borders
* Fill Color
* Orientation – rotate
* Alignment – horizontal & vertical
* Merge & Center – each line
* Comma Style & Decimals
* Format Painter
* Conditional Formatting
* Wrap Text (or Alt-Enter)

## Review Tab

## Comments

## View Tab (screen options)

* Freeze Panes
* Split worksheet
* Gridlines



## Page Layout Tab (printout options)

* Page Setup Group| Page Setup dialog |Sheet Tab| Print | **Gridlines**

-OR- Sheet Options Group | **Gridlines** view and/or print

* Page Setup Group | Print Titles | Sheet Tab | Row & Column **Headings**

-OR- sheet options group | **Headings** view and/or print

* Page Setup Group | Print Titles | Sheet Tab | **Rows to repeat at top** or columns at left

-OR- Page Setup group | **Print Titles** | …

* Page Setup Group | Breaks | Insert **Page Break**
* Margins Tab

## Insert Tab

* Header & Footer

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insert file: | insert sheet

* + Special codes: File Name, Sheet Name, Date, Time

## **Example 2** (“NumberFormats” worksheet)

## Home tab

* Clearing a Cell 🡺 editing group
* Format as Table 🡺 styles group
* Currency Formats: 🡺 number group
  + Accounting style
  + Currency style
* Date Formats: 🡺 number group
  + Short
  + Long
  + Custom
* Data Bars 🡺 styles group, conditional formatting

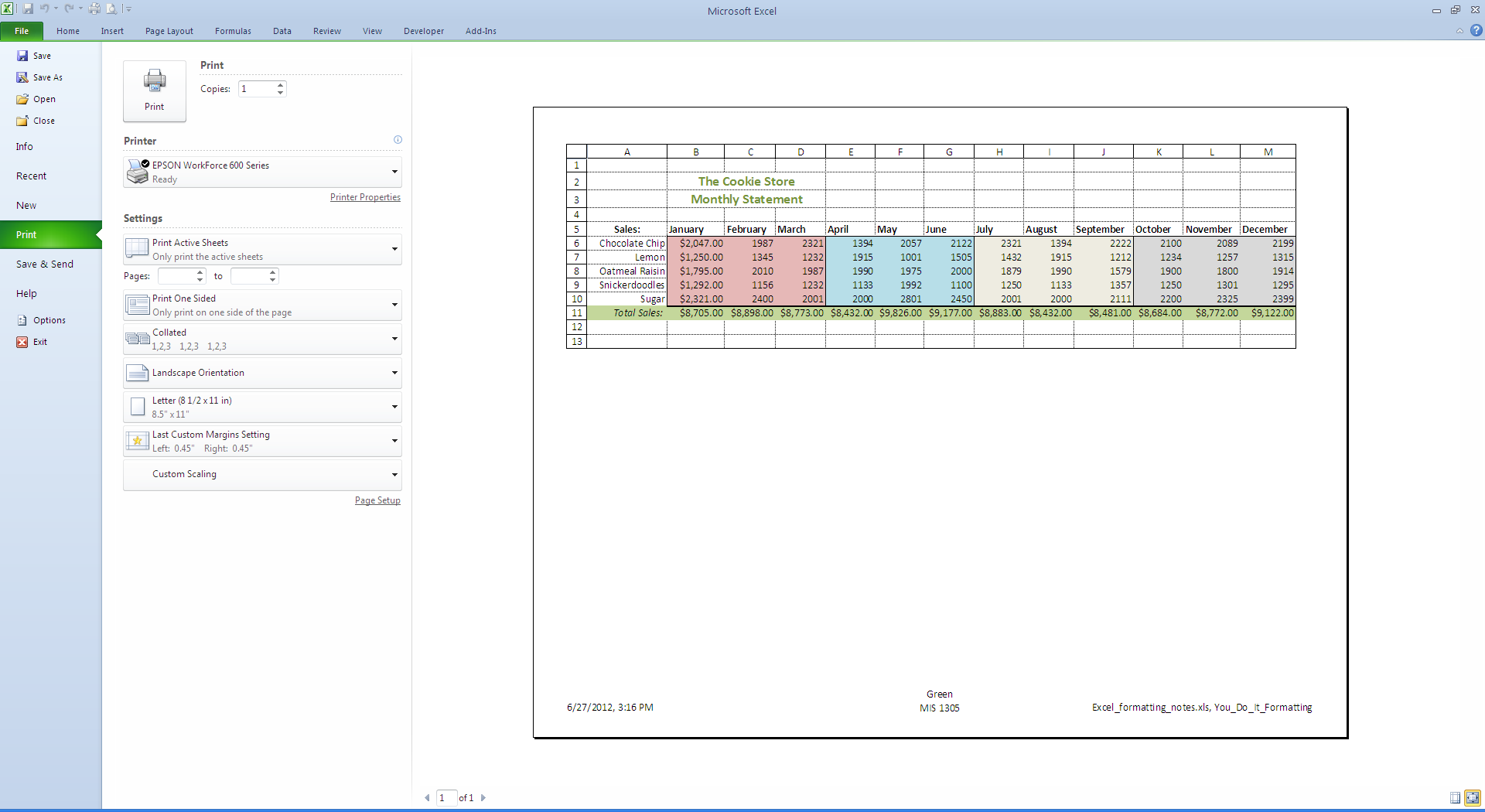
## **Example 3** (“Sorting” worksheet)

## Data Tab (also on Home tab, Editing group)

* Sort Order
  + Ascending
  + Descending
* Sort Fields
  + Single-field Sort
  + Multi-field Sort

## **Example 4** (“You Do It\_Formatting” worksheet) – optional but strongly recommended

Partial Example of desired look when printed (footer not shown):



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# Formulas & Functions

# - If, Lookup Functions

**- Linear & Growth Trends**

**- Loan & Investment Functions**

## **Example 1 (“Formulas” worksheet)**

## Formulas

* Basic formulas
* Complex formulas
  + Order of Precedence: ( ), ^, \*, /, +, -, Left-to-right
* Formula View
  + Show Formulas
  + Shortcut

## **#1 Rule**:

## **Example 2 (“Basic Functions” worksheet)**

## Basic Statistical Functions

* SUM
  + AutoSum
  + SUM, and Bad examples
* AVERAGE
* MEDIAN
* MIN & MAX
* ROUND
* COUNT
* COUNTA
* COUNTIF
* Nested Functions

## **Example 3 (“Dates” worksheet)**

## Basic Date Functions

* TODAY
* NOW
* YEAR
* MONTH
* DAY
* WEEKDAY
* Calculations with Dates

## **Example 4 (“RelativeRef”, “AbsoluteRef”, and “RunningSum” worksheets)**

## Types of Referencing

* Relative Reference
* Absolute Reference
* Mixed Reference

## **Example 5 (“IF1” and “IF2” worksheets)**

## Logical Functions

* IF

## =IF(logical\_test, [value\_if\_true], [value\_if\_false])

* Nested IF

* + =IF(logical\_test, [value\_if\_test\_true], IF(logical\_test2, [value\_if\_test2\_true], [value\_if\_test2\_false]) )

***Example 6 (“Lookup” worksheet)***

## Lookup Functions

* =VLOOKUP(lookup\_value, table\_array, column\_index\_number, [range\_lookup])

*Lookup\_value*

*Table\_array*

*Column\_index\_number*

*Range\_lookup*

* =HLOOKUP(lookup\_value, table\_array, row\_index\_number, [range\_lookup])

*Row\_index\_number*

## **Example 7 (“Errors” worksheet)**

*Handling Errors*

* IFERROR
  + =IFERROR( expression, value\_if\_expression\_generates\_error)

## **Example 8 (“PMT” and “PPMT&IPMT” worksheets)**

## Basic Financial Functions

* Formulas tab | Insert Function
* Amortization Schedule
* PMT
* PPMT
* IPMT

**=PMT (rate, nper, pv, fv, type)**

*Rate*

*Nper*

*PV*

*FV*

*Type*

**=PPMT (rate, per, nper, pv, fv, type)**

## **=IPMT (rate, per, nper, pv, fv, type)**

## Per

## **Example 9 (“Fill Growth Series” worksheet)**

## Projecting Future Values

* Linear (constant amount) and Growth (constant percentage) Trends
* Uses Autofill to fill in series of values
  + First specify (i.e., highlight) desired starting and ending values
  + Home | Editing | Fill | Series…

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# Charts

## Chart Terminology (label the objects)

* Chart Area, Plot Area
* Category Axis, Value Axis
* Data Marker, Data Series
* Tick Marks, Gridlines (NOT SHOWN)
* Titles: Chart, Category, Value
* Labels: Category, Value, Data
* Legend

## Common Chart Types

## \*Column Chart

* Stacked Column Chart
* Line Chart
* \* Pie Charts

\*we’re doing these

## Creating a Chart

* Identifying the Chart Data
* Select a Chart Type
  + Column
  + Pie
* Layout Tab
  + Legend
  + Data Labels
  + Format Selected Objects
    1. Slice “Explosion”
    2. Fill Color, …
  + Chart Title
  + Axis Titles
  + Change Units
    1. Layout Tab | Axes group | Primary Vertical Axis | Show Axis in Hundreds
  + Gridlines
  + Walls
  + Data Table
  + Chart Rotation
  + Chart Name
* Design Tab
  + Selecting/Editing Chart Data
  + Name Chart object
  + Move Chart
  + Modify Chart Style
  + Switch Row & Column
* Format Tab
  + Shape Styles
    1. Fill

1. Outline
   * Chart Size

* Can copy Charts to other Office products

MS Excel 2013 Outline

# Tables & Pivot Tables

## **Example 1 (“Subtotals” worksheet)**

## Subtotals

* Must first Sort the data
* Data Tab | Outline group| Subtotal icon
* Level / Detail Buttons
* Data Tab | Outline | Subtotal | Remove All

## **Example 2 (“Filters” worksheet)**

## Filter

* Filter on :
  + exact values
  + range
* Custom Filter
* Combining Filters

## **Example 3 (“Tables” worksheet)**

## Tables

* Insert Tab | Tables group | Table icon
* Can have more than 1 table on a worksheet
* Table has Name, Records, Fields
  + Rename Table (Design tab | Properties | Table Name)
* Totals Row (Table Design tab; check Totals Row box)
* Formatting Table (Table Tools Design | Table Style Options)
* Add/Delete Records
* Splitting Table
* Benefits of tables
  + Adds AutoFilter for each Field
  + Makes the Table Contextual Tab available
  + Auto formatting
  + Totals row
  + Table Analysis tools (requires add-in), etc…
* Removing Table Object (Design tab | Tools | Convert to Range)

## **Example 4 (“Pivot Tables” worksheet)**

## Pivot Tables

* Create Pivot Table
  + Insert Tab | Tables group| PivotTable icon
* Set up the Pivot Table report
  + Choose Row and Column Labels
  + Choose Values
  + Optional: Report Filter
* Select the Function
* Format Numbers
* Slicer
  + Add: Options tab | Sort & Filter | Insert Slicer

1. One for each field selected
   * Remove: right-click and choose Remove “slicer\_name”

* Format Pivot Table
  + Styles: Design tab | PivotTable Styles | choose Pivot Style
  + Layout: Design tab | Layout | Report Layout

1. Show in Compact Form
2. Show in Tabular Form

* Refresh the data as needed
  + Options | Refresh

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# Multiple Worksheets & Workbooks

## Linking to a Cell…

* On Another Worksheet

worksheetname!cellreference

* On Another Workbook

‘[filename]worksheet’!cellreference