Highline Excel 2016 Class 14: Think of VLOOKUP as Relationship in Data Model and Vice Versa

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Think of VLOOKUP as Relationship in Power Pivot Data Model and Vice Versa

1) If our goal is to create a Regional Sales Report from the following Excel Tables:

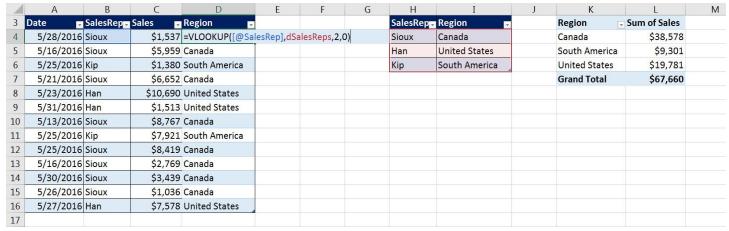
A	А	В	С	D	Е	F	G	Н	I
3	Date -	SalesRep	Sales 🔻					SalesRep	Region 🔻
4	5/28/2016	Sioux	\$1,537					Sioux	Canada
5	5/16/2016	Sioux	\$5,959					Han	United States
6	5/25/2016	Kip	\$1,380					Kip	South America
7	5/21/2016	Sioux	\$6,652						
8	5/23/2016	Han	\$10,690						
9	5/31/2016	Han	\$1,513						
10	5/13/2016	Sioux	\$8,767						
11	5/25/2016	Kip	\$7,921						
12	5/25/2016	Sioux	\$8,419						
13	5/16/2016	Sioux	\$2,769						
14	5/30/2016	Sioux	\$3,439						
15	5/26/2016	Sioux	\$1,036						
16	5/27/2016	Han	\$7,578						
47									

- 2) There are two choices:
 - Lookup formula like VLOOKUP
 - Relationship in Power Pivot Data Model

When to use VLOOKUP

- 1) When data set is not big
- 2) Your data sets are already in the Excel Workbook File
- 3) You need a quick and easy solution for 1 or 2 lookup columns

Example of VLOOKUP Helper Column solution for Regional Sales Report



Power Pivot Data Model in Excel 2016

Must have correct version of PC Excel 2016 (covered earlier in class but repeated here):

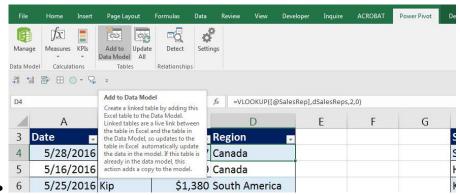
- Excel 2016 Stand Alone program
- Office 2016 Professional
- Office 365 ProPlus

When to use Relationship in Power Pivot Data Model

- 1) You have big data
- 2) You need to build a complex Data Model with relationships between many tables.
- 3) DAX Formulas can be built once and have Number Formatting attached to formula
- 4) With big data, one of the main advantages is that with relationships between lookup tables and transaction tables, the DAX formula process over the lookup tables (which contain unique lists) and in turn filter the transaction table down to a much smaller size, which in turn require less time when the formulas calculate. More later.

Example of how to Create Relationship in Power Pivot Data Model When Tables are in Excel in order to Create Regional Sales Report

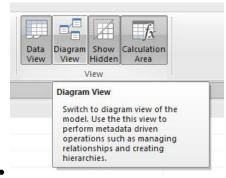
- 1) Proper Data Sets in Excel must be converted to Excel Tables and given a proper name.
- 2) With a single cell selected in the Excel Table, in the Power Pivot Ribbon Tab click the "Add to Data Model" button.



3) Add both Excel Tables to the Data Model:



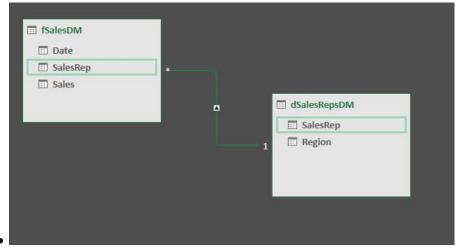
4) Click the Diagram View button:



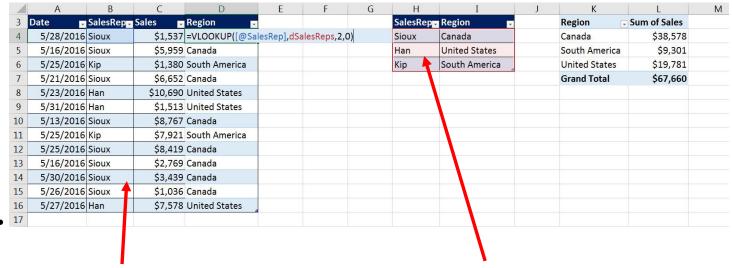
5) Drag SalesRep Field from dSalesRepDM Table to Sales Rep Field in fSalesDM table.



- 6) A One To Many Relationship is created with:
 - The one side being the first column of the lookup table with the unique list of SalesRep names.
 - The many side being the SalesRep Field that contains many repeats or duplicates for each SaleRep name.



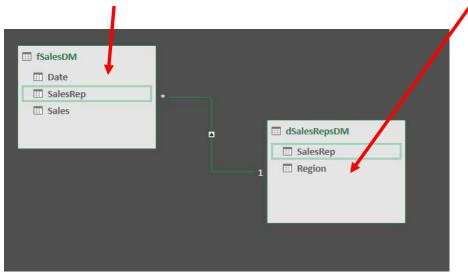
7) Terminology for tables:



Excel people call these "Transaction Tables" Database people call these "Fact Tables"

Excel people call these "Lookup Tables"

Database people call these "Dimension Tables"



8) You can then click the PivotTable button in the Data Model window and create your Regional Sales Report:

4	Α	В	C	D
1				
2				
3		Region	Sum of Sales	
4		Canada	\$38,578	
5		South America	\$9,301	
6		United States	\$19,781	
7		Grand Total	\$67,660	
8				

Cumulative List of Keyboards Throughout Class:

- 1) Esc Key:
 - i. Closes Backstage View (like Print Preview).
 - ii. Closes most dialog boxes.
 - iii. If you are in Edit mode in a Cell, Esc will revert back to what you had in the cell before you put the Cell in Edit mode.
- 2) F2 Key = Puts formula in Edit Mode and shows the rainbow colored Range Finder.
- 3) SUM Function: Alt + =
- 4) **Ctrl + Shift + Arrow** = Highlight column (Current Region).
- 5) Ctrl + Backspace = Jumps back to Active Cell
- 6) Ctrl + Z = Undo.
- 7) **Ctrl + Y** = Undo the Undo.
- 8) **Ctrl + C** = Copy.
- 9) **Ctrl + X** = Cut.
- 10) Ctrl + V = Paste.
- 11) **Ctrl + PageDown** = expose next sheet to right.
- 12) Ctrl + PageUp = expose next sheet to left.
- 13) Ctrl + 1 = Format Cells dialog box, or in a chart it opens Format Chart Element Task Pane.
- 14) **Ctrl + Arrow**: jumps to the bottom of the "**Current Region**", which means it jumps to the last cell that has data, right before the first empty cell.
- 15) Ctrl + Home = Go to Cell A1.
- 16) **Ctrl + End** = Go to last cell used.
- 17) Alt keyboards are keys that you hit in succession. Alt keyboards are keyboards you can teach yourself by hitting the Alt key and looking at the screen tips.
 - i. Create PivotTable dialog box: Alt, N, V
 - ii. Page Setup dialog box: Alt, P, S, P
 - iii. Keyboard to open Sort dialog box: Alt, D, S
- 18) ENTER = When you are in Edit Mode in a Cell, it will put thing in cell and move selected cell DOWN.
- 19) CTRL + ENTER = When you are in Edit Mode in a Cell, it will put thing in cell and keep cell selected.
- 20) TAB = When you are in Edit Mode in a Cell, it will put thing in cell and move selected cell RIGHT.
- 21) SHIFT + ENTER = When you are in Edit Mode in a Cell, it will put thing in cell and move selected cell UP.
- 22) SHIFT + TAB = When you are in Edit Mode in a Cell, it will put thing in cell and move selected cell LEFT.
- 23) Ctrl + T = Create Excel Table (with dynamic ranges) from a Proper Data Set.
 - i. Keyboard to name Excel Table: Alt, J, T, A
 - ii. **Tab** = Enter Raw Data into an Excel Table.
- 24) Ctrl + Shift + ~ (`) = General Number Formatting Keyboard.
- 25) **Ctrl + ;** = Keyboard for hardcoding today's date.
- 26) **Ctrl + Shift + ;** = Keyboard for hardcoding current time.
- 27) Arrow Key = If you are making a formula, Arrow key will "hunt" for Cell Reference.
- 28) Ctrl + B = Bold the Font
- 29) Ctrl + * (on Number Pad) or Ctrl + Shift + 8 = Highlight Current Table.
- 30) Alt + Enter = Add Manual Line Break (Word Wrap)
- 31) Ctrl + P = Print dialog Backstage View and Print Preview
- 32) **F4 Key** = If you are in Edit mode while making a formula AND your cursor is touching a particular Cell Reference, F4 key will toggle through the different Cell References:
 - i. **A1** = Relative
 - ii. \$A\$1 = Absolute or "Locked"

- iii. **A\$1** = Mixed with Row Locked (Relative as you copy across the columns AND Locked as you copy down the rows)
- iv. **\$A1** = Mixed with Column Locked (Relative as you copy down the rows AND Locked as you across the columns)
- 33) Ctrl + Shift + 4 = Apply Currency Number Formatting
- 34) **Tab key** = When you are selecting a Function from the Function Drop-down list, you can select the function that is highlighted in blue by using the Tab key.
- 35) **F9 Key** = To evaluate just a single part of formula while you are in edit mode, highlight part of formula and hit the F9 key.
 - i. If you are creating an Array Constant in your formula: Hit F9.
 - ii. If you are evaluating the formula element just to see what that part of the formula looks like, REMEMBER: to Undo with Ctrl + Z.
- 36) Alt, E, A, A = Clear All (Content and Formatting)
- 37) Evaluate Formula One Step at a Time Keyboard: Alt, M, V
- 38) Keyboard to open Sort dialog box: Alt, D, S
- 39) Ctrl + Shift + L = Filter (or Alt, D, F, F) = Toggle key for Filter Drop-down Arrows
- 40) Ctrl + N = Open New File
- 41) **F12** = Save As (Change File Name, Location, File Type)
- 42) Import Excel Table into Power Query Editor: Alt, A, P, T
- 43) Ctrl + 1 (When Chart element in selected): Open Task Pane for Chart Element
- 44) **F4 Key** = If you are in Edit mode while making a formula AND your cursor is touching a particular Cell Reference, F4 key will toggle through the different Cell References:
 - i. **A1** = Relative
 - ii. \$A\$1 = Absolute or "Locked"
 - iii. **A\$1** = Mixed with Row Locked (Relative as you copy across the columns AND Locked as you copy down the rows)
 - iv. \$A1 = Mixed with Column Locked (Relative as you copy down the rows AND Locked as you across the columns)
- 45) Keyboard to open Scenario Manager = Alt, T, E
- 46) Ctrl + Tab = Toggle between Excel Workbook File Windows
- 47) **Ctrl + Shift + F3** = Create Names From Selection
- 48) Ctrl + F3 = open Name Manager
- 49) **F3** = Paste Name or List of Names
- 50) Alt + F4 = Close Active Window
- 51) Window Key + Up Arrow = Maximize Active Window
- 52) **Ctrl + Shift + Enter** = Keystroke to enter Array Formulas that: 1) have a function argument that requires it, or 2) whether or not you are entering the Resultant Array into multiple cells simultaneously.
- 53) **Ctrl + /** = Highlight current Array

New In This Video:

54) None