

VIIH Create Pivot Tables using Excel 2008 1

Creating Pivot Tables Using Excel 2008, 2010 or 2013

by
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*Slides and Demo output at: www.StatLit.org/pdf/Create-Pivot-Tables-Excel-2008-6up.pdf
[pdf/Create-Pivot-Tables-using-Excel-Demo.pdf](http://www.StatLit.org/pdf/Create-Pivot-Tables-using-Excel-Demo.pdf)*

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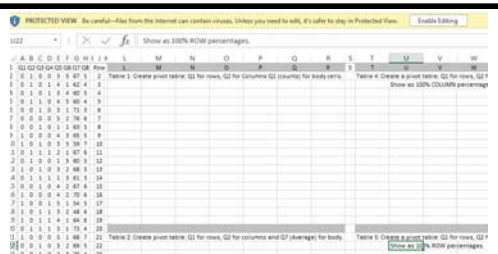
The Goal

Goal: to show the steps involved in creating six different kinds of pivot tables from the same data set. Creating each of the tables starts with steps A-D (shown on the following slides).

Table 1: Two-way count table (slides 9-11)
 Table 2: Two-way table of averages (slides 12-13)
 Table 3: Two-group table of statistics (slides 14-16)
 Table 4: 100% Column Table (slides 17-19)
 Table 5: 100% Row Table (slides 20-21)
 Table 6: Two-way table of percentages (slides 22-23)

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A: Open/Download Data File; Press 'Enable Editing' button



Excel data at:
www.statlit.org/XLS/Create-Pivot-Tables-using-Excel-Data.xls

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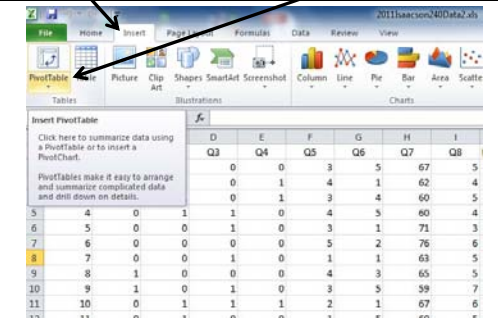
Create Excel Pivot Tables from this data: A1:H241

Data for Q1-Q4 (A-D) is Binary: 0=No, 1=Yes.
 Data for Q5-Q6 (E-F) is Ordinal (discrete): 1-5.
 Data for Q7-Q8 (G-H) is Quantitative (ratio).

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Row			L	M
2	0	1	0	0	3	5	67	5	2	Table 1: Create pivot table			
3	0	1	0	1	4	1	62	4	3				
4	0	1	0	1	3	4	60	5	4				
5	0	1	1	0	4	5	60	4	5				
6	0	0	1	0	3	1	71	3	6				

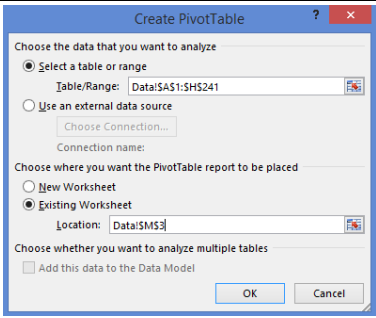
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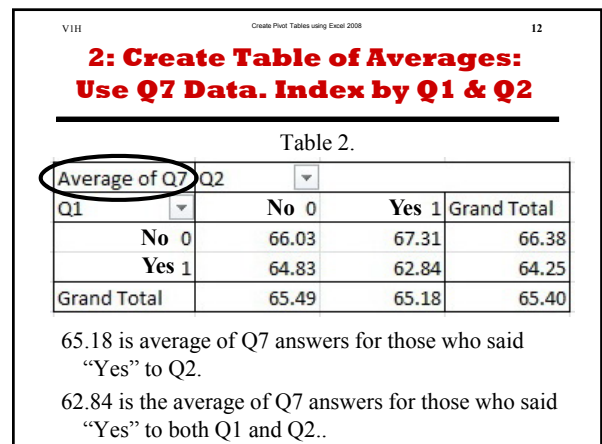
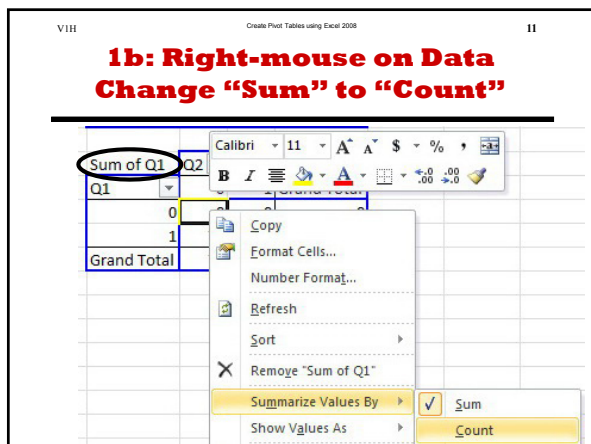
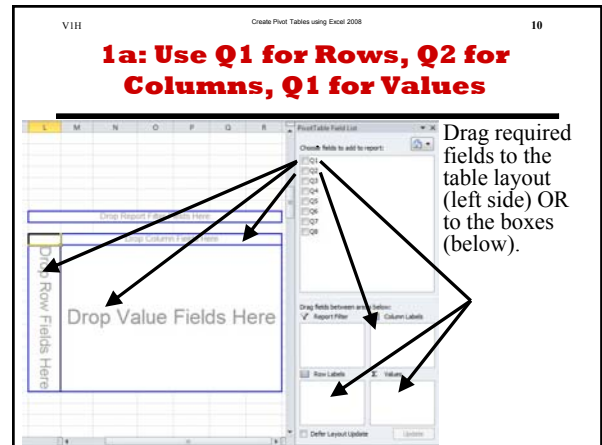
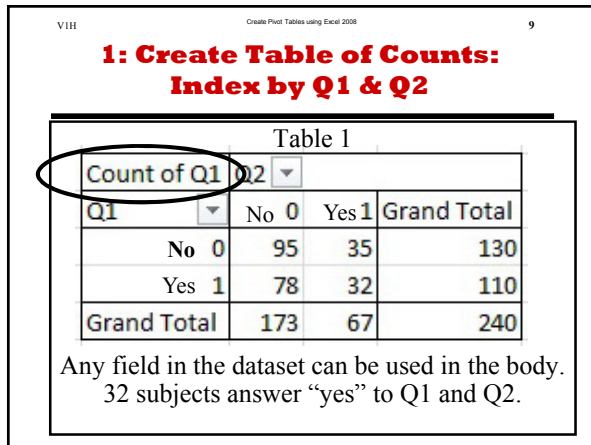
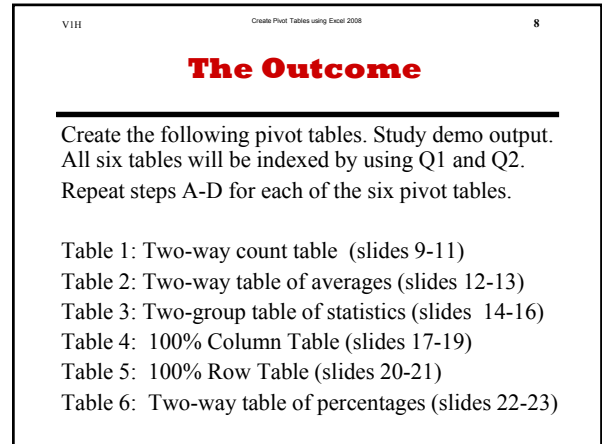
B: From the Insert ribbon, Select "Pivot Table"



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C: In Wizard, Select 'Table/Range' and 'Location'





2a: Drag data fields as needed; Change "Sum" to "Average"

3: Create 3 Statistics for Q7; Index by Q1 & Q2

Q1	Data	Q2	0	1	Grand Total
0	Average of Q7		66.03	67.31	66.38
0	Count of Q7		95.00	35.00	130.00
0	StdDev of Q7_2		11.86	10.05	11.38
1	Average of Q7		64.83	62.84	64.25
1	Count of Q7		78.00	32.00	110.00
1	StdDev of Q7_2		12.48	11.62	12.21
	Total Average of Q7		65.49	65.18	65.40
	Total Count of Q7		173.00	67.00	240.00
	Total StdDev of Q7_2		12.12	10.98	11.79

65.40 is average of Q7 for all respondents.
64.25 is average of Q7 for those who said Yes to Q1.

3a: Drag Q1 to Rows; Q2 to Cols. Drag Q7 three times to Values

If problem dragging Q7 third time to same place, drag to different place
Values may stack horizontally. Cause unknown. Acceptable.

3b: Change Show Values to Average, Count and StdDev.

Right-mouse Q7; change to Average.; Right-mouse Q7_2; change to Count. Right-mouse Q7_3; change to StdDev.

4: Create 100% Column Table; Index on Q1 and Q2.

Table 4.

Count of Q2	Q2	No 0	Yes 1	Grand Total
Q1	No 0	54.91%	52.24%	54.17%
Yes 1	Yes 1	45.09%	47.76%	45.83%
Grand Total	Grand Total	100.00%	100.00%	100.00%

45.83% of all respondents said "Yes" to Q1.
47.76% of those who said Yes to Q2 said Yes to Q1.

4a: Double-click on Data Field; Select Count in 'Summarize by'

4b: Select "Show Values as" Select "% of Column Total"

The screenshot shows the PivotTable field list for 'Count of Q2'. The 'Show Values As' dropdown is set to '% of Column Total'. The 'Report Filter' is set to 'Q1' and the 'Values' field is 'Count of Q2'.

5: Create 100% Row Table; Index on Q1 and Q2.

Table 5.

Count of Q2	Q2			
Q1	No 0	Yes 1	Grand Total	
No 0	73.08%	26.92%	100.00%	
Yes 1	70.91%	29.09%	100.00%	
Grand Total	72.08%	27.92%	100.00%	

27.92% of all respondents said "yes" to Q2.
 29.09% of those saying yes to Q1 said Yes to Q1.
 The first step for Table 5 is the same as 4a for Table 4.

5a: Select "Show Values as"; Select "% of Row Total"

The screenshot shows the PivotTable field list for 'Count of Q2'. The 'Show Values As' dropdown is set to '% of Row Total'. The 'Report Filter' is set to 'Q1' and the 'Values' field is 'Count of Q2'.

6: Create two-way table of Q3; Index by Q1 and Q2.

Table 6.

Average of Q3	Q2			
Q1	No 0	Yes 1	Grand Total	
No 0	81%	71%	78%	
Yes 1	37%	34%	36%	
Grand Total	61%	54%	59%	

59% of respondents said Yes to Q3.
 36% of those who said Yes to Q1 said Yes to Q3.
 Of those who said Yes to Q1, 36% said Yes to Q3.

6a: Change Sum to Average; Format data as Percentages

The screenshot shows the PivotTable field list with 'Sum of Q3' and the 'Value Field Settings' dialog box. The 'Summarize value field by' is set to 'Average' and 'Show Values As' is set to 'Show Values As'.

Conclusion

Pivot tables are one of the more powerful features of Excel.
 Knowing how to create pivot tables is a *valuable skill*.
 Knowing which is the better table is a *more valuable skill*.
 Knowing how to read, interpret and communicate the data summarized in pivot tables is a *most valuable skill*.