

How can I create a contingency table in Excel?

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A contingency table in Excel is a useful tool for analyzing the relationship between two categorical variables. To create a contingency table, first organize your data into two columns, with one column representing the first variable and the other representing the second variable. Then, highlight the entire data range. Next, click on the "Insert" tab and select "PivotTable" from the menu. In the "PivotTable Fields" window, drag the first variable to the "Rows" field and the second variable to the "Columns" field. Finally, add any desired calculations or formatting to the table. This will create a contingency table in Excel, allowing you to easily visualize and analyze the relationship between the two variables.

Create a Contingency Table in Excel

A contingency table (sometimes called "crosstabs") is a type of table that summarizes the relationship between two categorical variables.

Fortunately it's easy to create a contingency table for variables in Excel by using the pivot table function. This tutorial shows an example of how to do so.

Example: Contingency Table in Excel

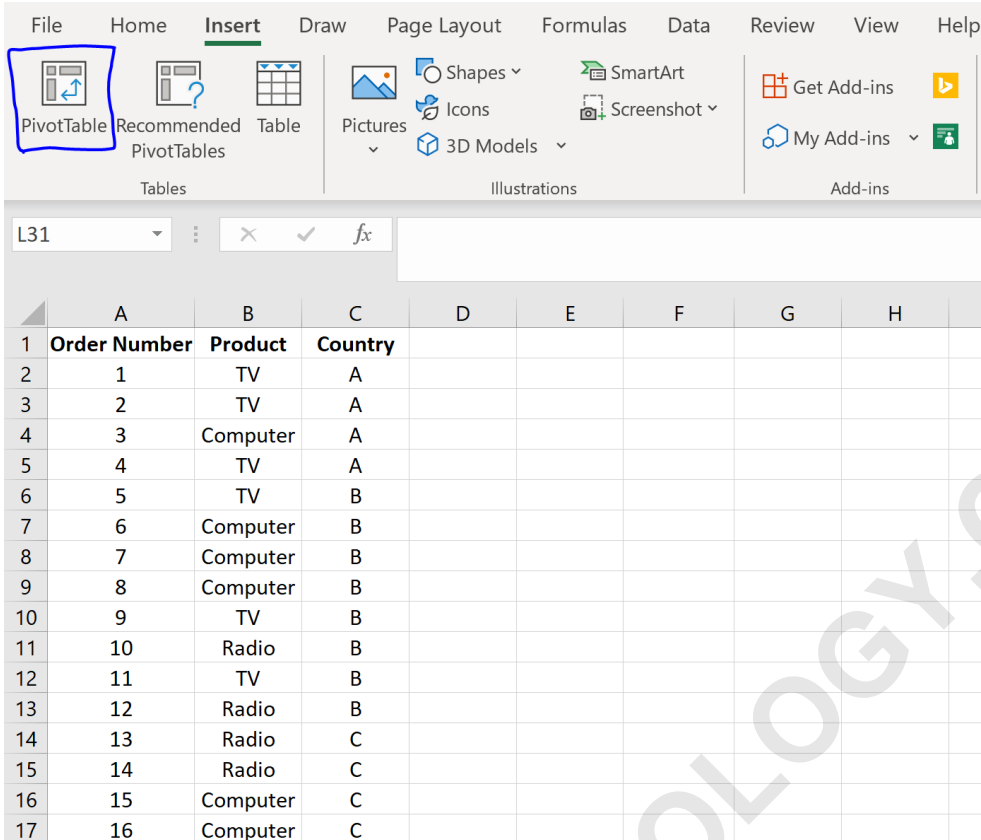
Suppose we have the following dataset that shows information for 20 different product orders, including the type of product purchased (TV, computer, or radio) along with the country (A, B, or C) that the product was purchased in:

	A	B	C	D	E	F
1	Order Number	Product	Country			
2	1	TV	A			
3	2	TV	A			
4	3	Computer	A			
5	4	TV	A			
6	5	TV	B			
7	6	Computer	B			
8	7	Computer	B			
9	8	Computer	B			
10	9	TV	B			
11	10	Radio	B			
12	11	TV	B			
13	12	Radio	B			
14	13	Radio	C			
15	14	Radio	C			
16	15	Computer	C			
17	16	Computer	C			
18	17	TV	C			
19	18	TV	C			
20	19	Radio	C			
21	20	TV	C			
22						
23						
24						
25						
26						
27						

Use the following steps to create a contingency table for this dataset:

Step 1: Select the PivotTable option.

Click the Insert tab, then click PivotTable.



The screenshot shows the Microsoft Excel interface with the **Insert** tab selected. The **PivotTable** icon is highlighted with a blue box. Below the ribbon, the worksheet grid is visible, showing columns A, B, and C with the following data:

	A	B	C
1	Order Number	Product	Country
2	1	TV	A
3	2	TV	A
4	3	Computer	A
5	4	TV	A
6	5	TV	B
7	6	Computer	B
8	7	Computer	B
9	8	Computer	B
10	9	TV	B
11	10	Radio	B
12	11	TV	B
13	12	Radio	B
14	13	Radio	C
15	14	Radio	C
16	15	Computer	C
17	16	Computer	C

In the window that pops up, choose A1:C21 for the range of values. Then choose a location to place the pivot table in. We'll choose cell E2 within the existing worksheet:

	A	B	C	D	E	F	G	H	I	J
1	Order Number	Product	Country							
2	1	TV	A							
3	2	TV	A							
4	3	Computer	A							
5	4	TV	A							
6	5	TV	B							
7	6	Computer	B							
8	7	Computer	B							
9	8	Computer	B							
10	9	TV	B							
11	10	Radio	B							
12	11	TV	B							
13	12	Radio	B							
14	13	Radio	C							
15	14	Radio	C							
16	15	Computer	C							
17	16	Computer	C							
18	17	TV	C							
19	18	TV	C							
20	19	Radio	C							
21	20	TV	C							
22										
23										
24										
25										
26										
27										

Create PivotTable ? X

Choose the data that you want to analyze

Select a table or range

Table/Range: Sheet1!\$A\$1:\$C\$21

Use an external data source

Choose Connection...

Connection name:

Use this workbook's Data Model

Choose where you want the PivotTable report to be placed

New Worksheet

Existing Worksheet

Location: Sheet1!\$E\$2

Choose whether you want to analyze multiple tables

Add this data to the Data Model


OK Cancel

Once you click OK, an empty contingency table will appear in cell E2.

	A	B	C	D	E	F	G	H
1	Order Number	Product	Country					
2	1	TV	A					
3	2	TV	A					
4	3	Computer	A					
5	4	TV	A					
6	5	TV	B					
7	6	Computer	B					
8	7	Computer	B					
9	8	Computer	B					
10	9	TV	B					
11	10	Radio	B					
12	11	TV	B					
13	12	Radio	B					
14	13	Radio	C					
15	14	Radio	C					
16	15	Computer	C					
17	16	Computer	C					
18	17	TV	C					
19	18	TV	C					
20	19	Radio	C					
21	20	TV	C					
22								
23								
24								
25								
26								

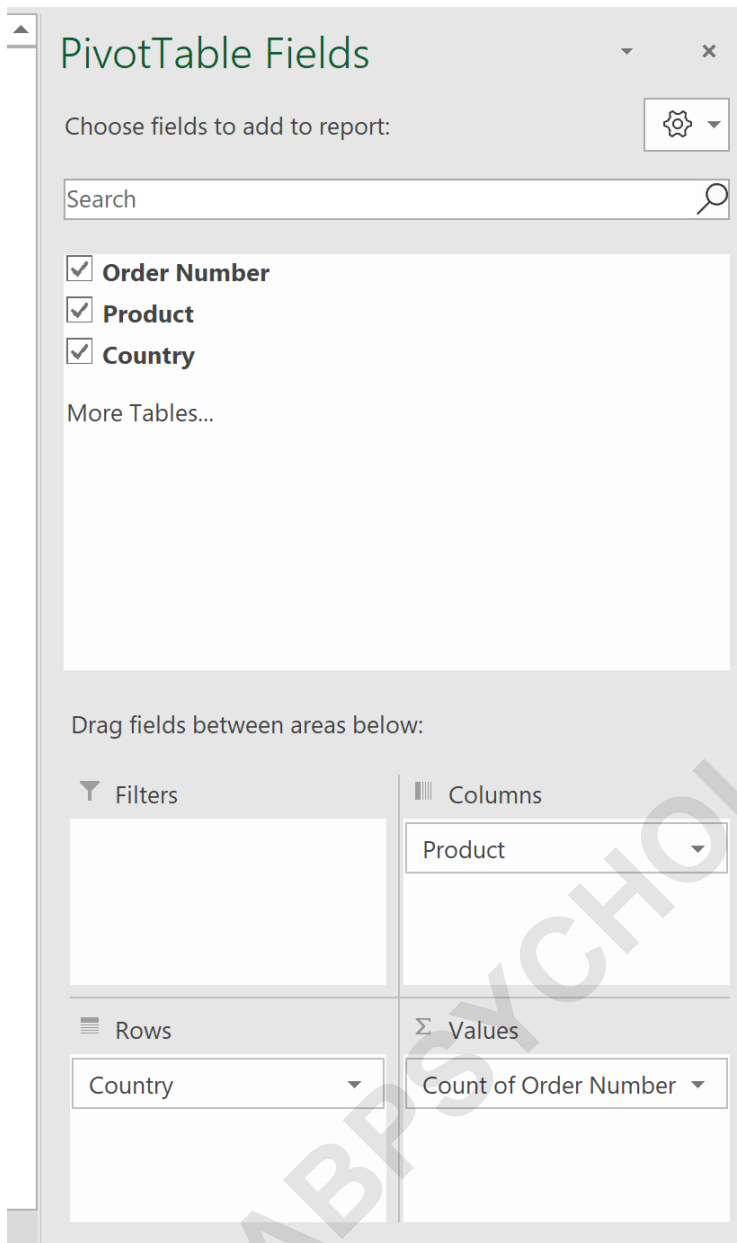
PivotTable3

Click in this area to work with the PivotTable report



Step 2: Populate the contingency table.

In the window that appears on the right, drag **Country** into the box titled **Rows**, drag **Product** into the box titled **Columns**, and drag **Order Number** into the box titled **Values**:



Note: If Values first appears as "Sum of Order Number" simply click the dropdown arrow and select Value Field Settings. Then choose Count and click OK.

D	E	F	G	H	I	J
	Count of Order Number	Column Labels				
	Row Labels	Computer	Radio	TV	Grand Total	
	A	1	3		4	
	B	3	2	3	8	
	C	2	3	3	8	
	Grand Total	6	5	9	20	

Step 3: Interpret the contingency table.

The way to interpret the values in the table is as follows:

Row Totals:

A total of 4 orders were made from country A. A total of 8 orders were made from country B. A total of 8 orders were made from country C.

Column Totals:

A total of 6 computers were purchased. A total of 5 radios were purchased. A total of 9 TV's were

purchased.

Individual Cells:

A total of 1 computer was purchased from country A. A total of 3 computers were purchased from country B. A total of 2 computers were purchased from country C. A total of 0 radios were purchased from country A. A total of 2 radios were purchased from country B. A total of 3 radios were purchased from country C. A total of 3 TV's were purchased from country A. A total of 3 TV's were purchased from country B. A total of 3 TV's were purchased from country C.