How to Overlay Two Histograms in Excel

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To overlay two histograms in Excel, first create two separate histograms on the same chart. Then, use the chart formatting options to adjust the fill colors and line styles of the two histograms. Finally, adjust the transparency of one of the histograms to create an overlay effect. This will allow you to compare the two datasets visually.

A **histogram** is a plot that can be used to quickly visualize the distribution of values in a dataset.

This tutorial provides a step-by-step example of how to overlay two histograms in a single plot in Excel.

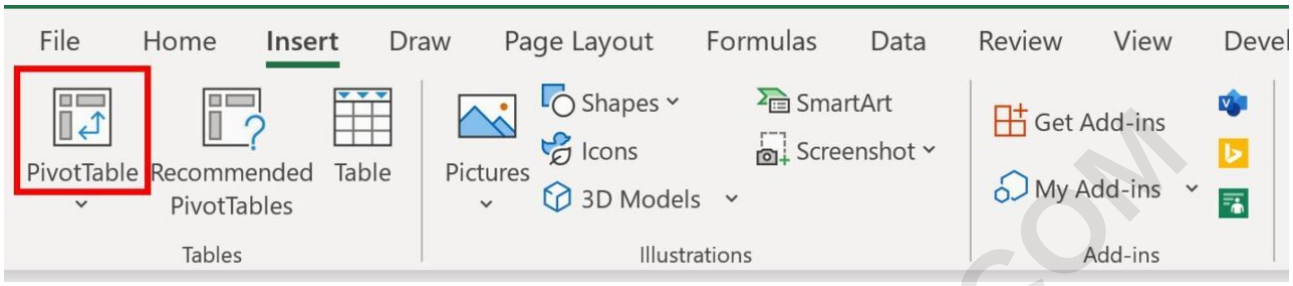
Step 1: Enter the Data

First, let's enter the following data that shows the gender and exam scores for 20 students in a class:

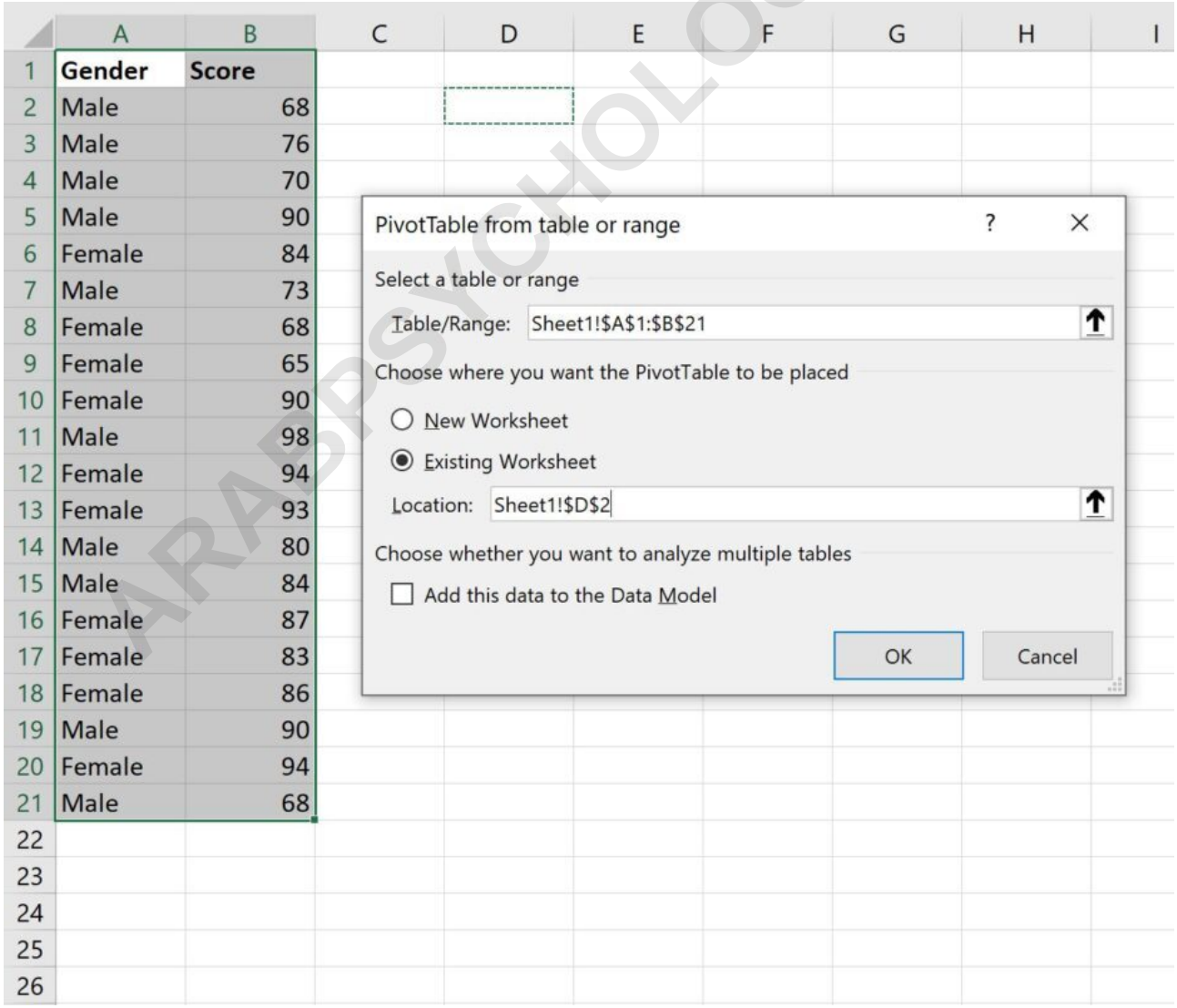
	A	B	C	D	E	F
1	**Gender**	**Score**				
2	Male	68				
3	Male	76				
4	Male	70				
5	Male	90				
6	Female	84				
7	Male	73				
8	Female	68				
9	Female	65				
10	Female	90				
11	Male	98				
12	Female	94				
13	Female	93				
14	Male	80				
15	Male	84				
16	Female	87				
17	Female	83				
18	Female	86				
19	Male	90				
20	Female	94				
21	Male	68				
22						
23						
24						

Step 2: Create Pivot Table

Next, highlight the cells in the range **A1:C21**, then click the **Insert** tab along the top ribbon, then click the icon called **PivotTable**:

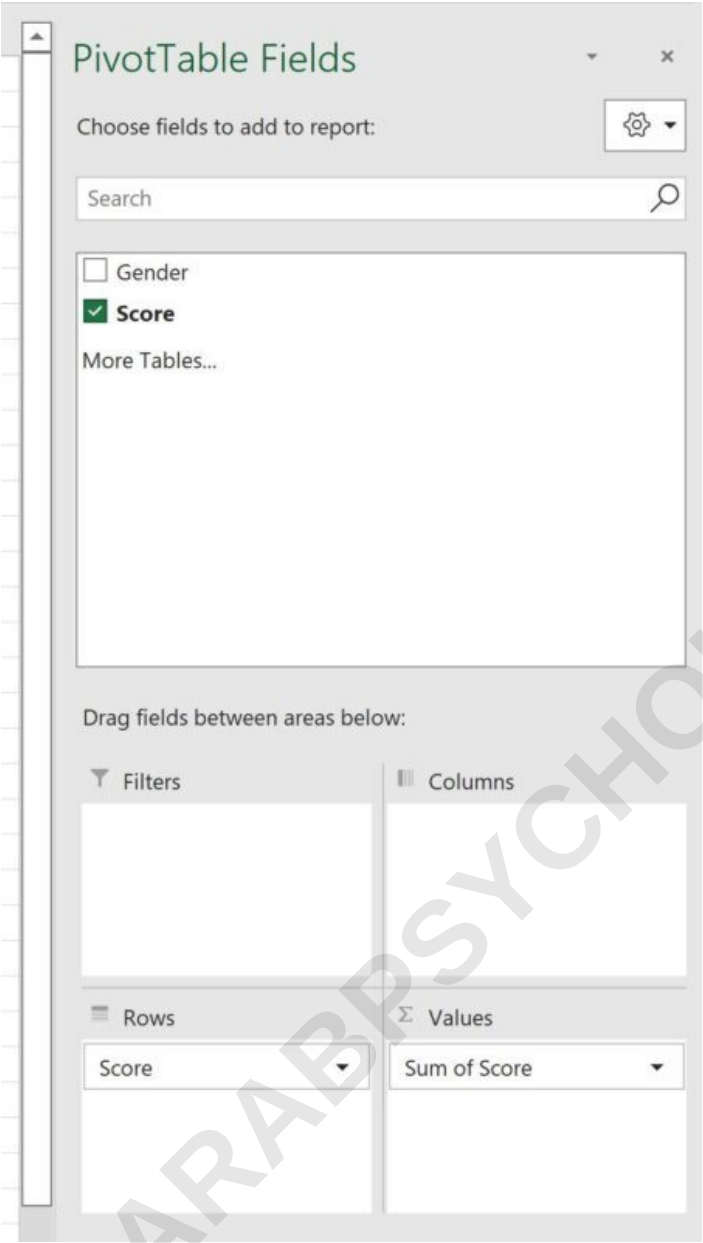


In the window that appears, type the following information and then click **OK**:

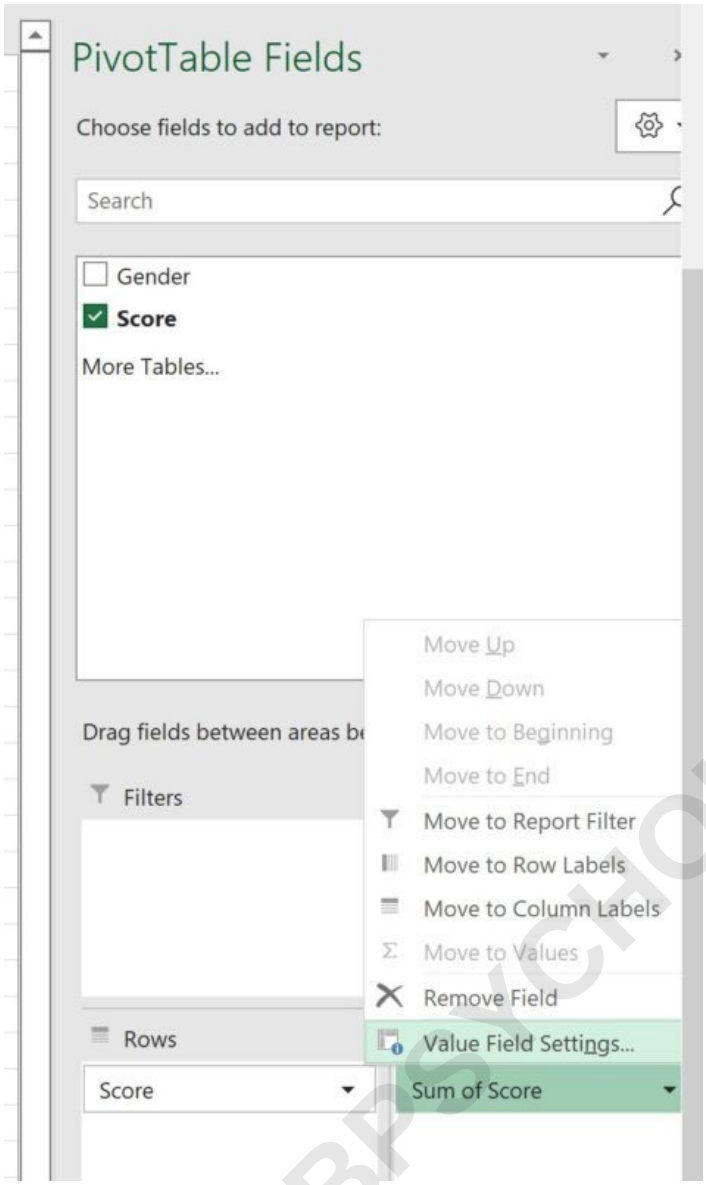


	A	B
1	Gender	Score
2	Male	68
3	Male	76
4	Male	70
5	Male	90
6	Female	84
7	Male	73
8	Female	68
9	Female	65
10	Female	90
11	Male	98
12	Female	94
13	Female	93
14	Male	80
15	Male	84
16	Female	87
17	Female	83
18	Female	86
19	Male	90
20	Female	94
21	Male	68

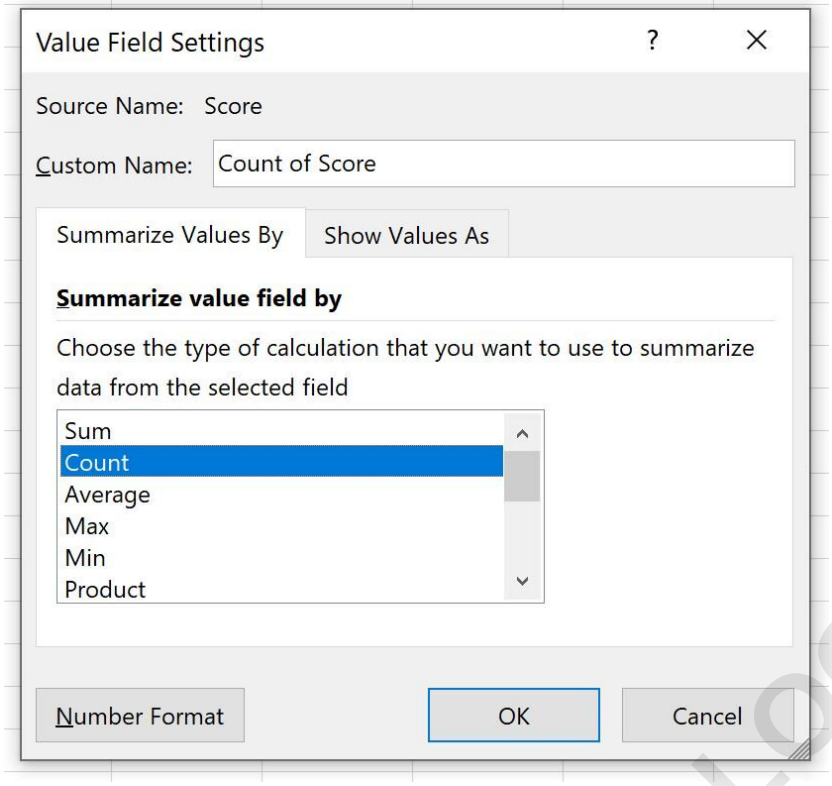
In the **PivotTable Fields** panel that appears on the right side of the screen, drag the **Score** variable to both the **Rows** and **Values** boxes:



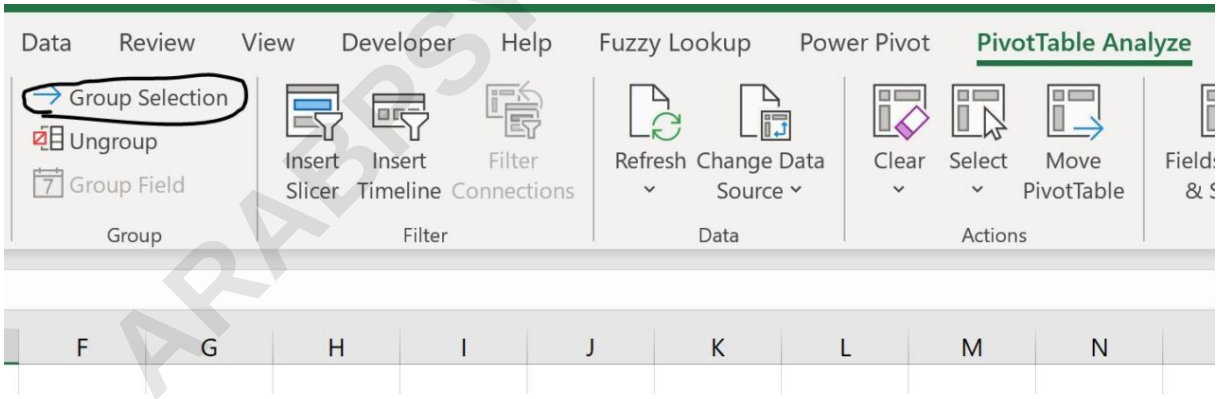
Next, click the **Sum of Score** dropdown arrow and then click **Value Field Settings**:



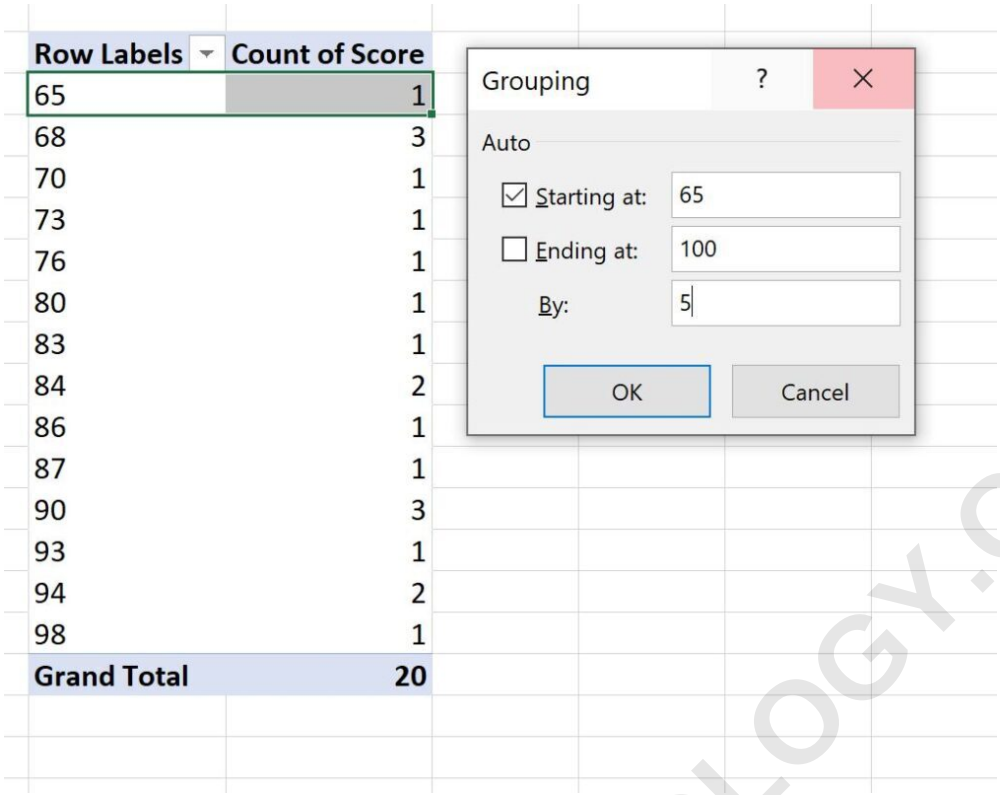
In the new window that appears, click **Count** and then click **OK**:



Next, click any value in the pivot table, then click the **PivotTable Analyze** tab, then click **Group Selection**:

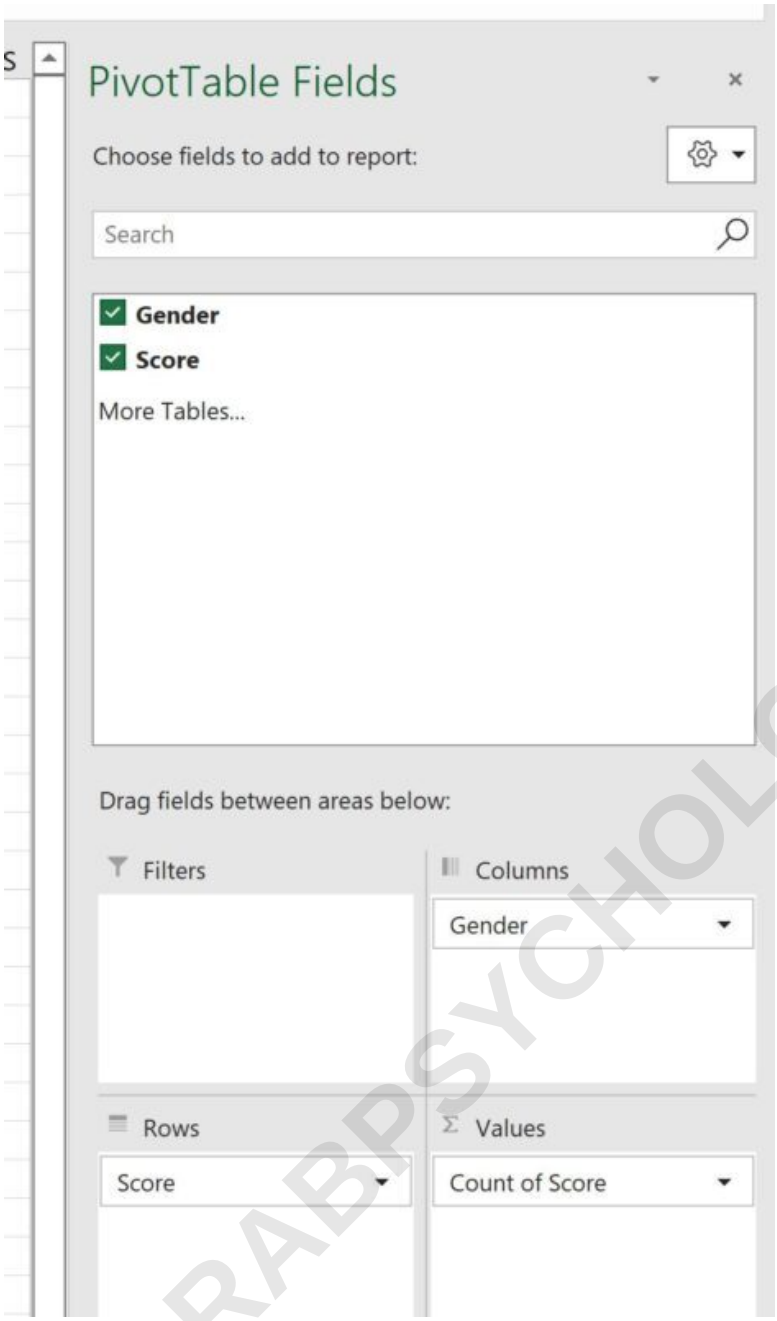


In the new window that appears, group the data Starting at **65**, Ending at **100**, By **5**, then click **OK**:



Row Labels	Count of Score
65	1
68	3
70	1
73	1
76	1
80	1
83	1
84	2
86	1
87	1
90	3
93	1
94	2
98	1
Grand Total	20

Lastly, drag the **Gender** variable to the **Columns** box:

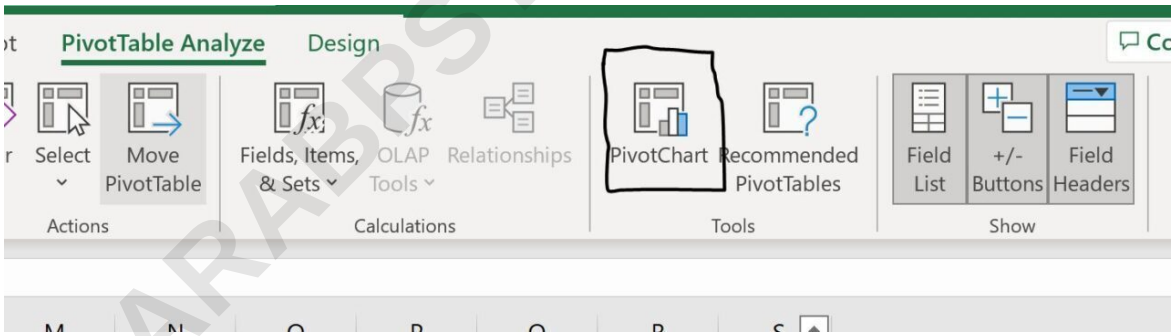


Here's what the updated pivot table looks like:

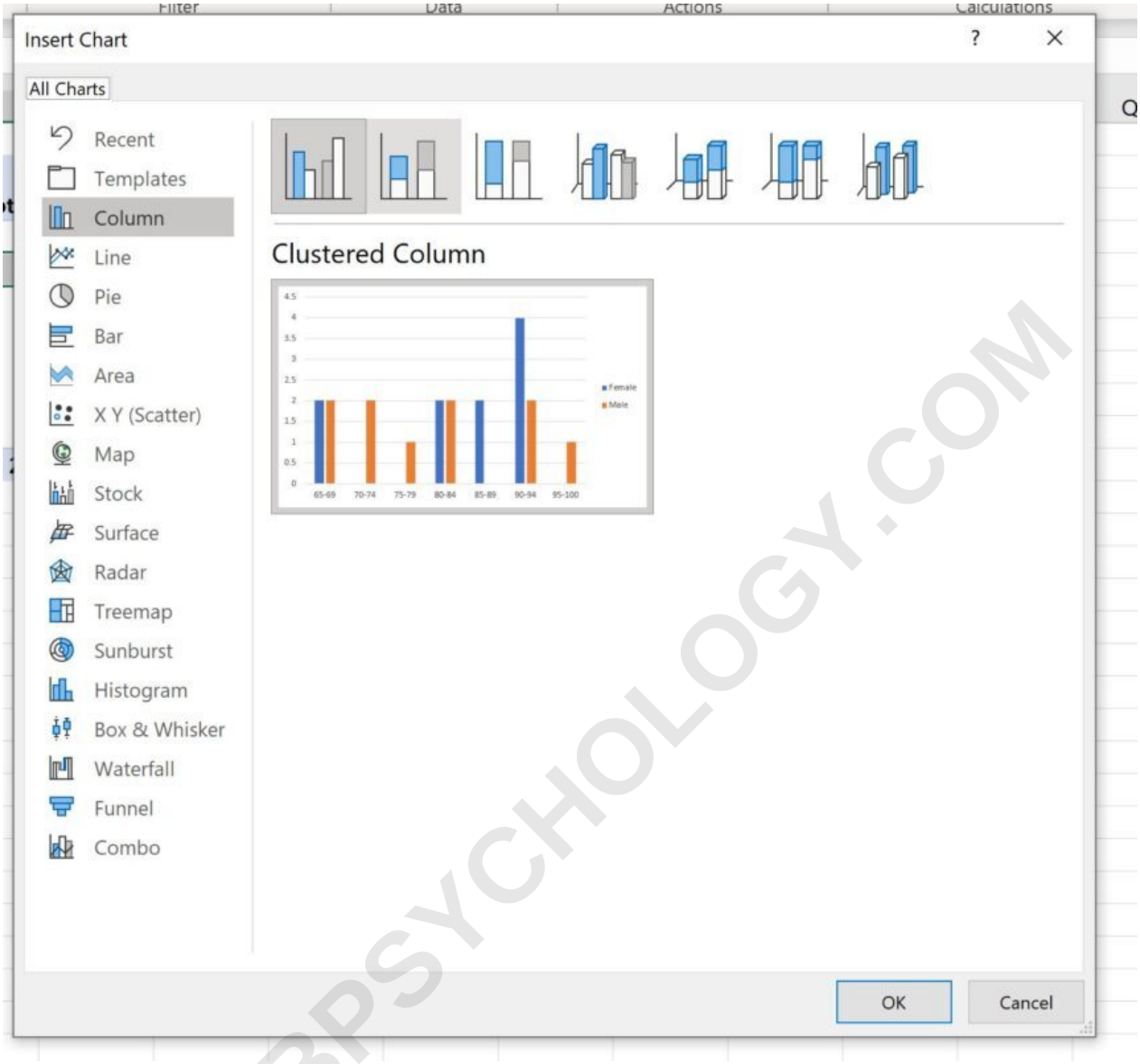
Count of Score	Column Labels		
Row Labels	Female	Male	Grand Total
65-69	2	2	4
70-74		2	2
75-79		1	1
80-84	2	2	4
85-89	2		2
90-94	4	2	6
95-100		1	1
Grand Total	10	10	20

Step 3: Overlay Two Histograms in Plot

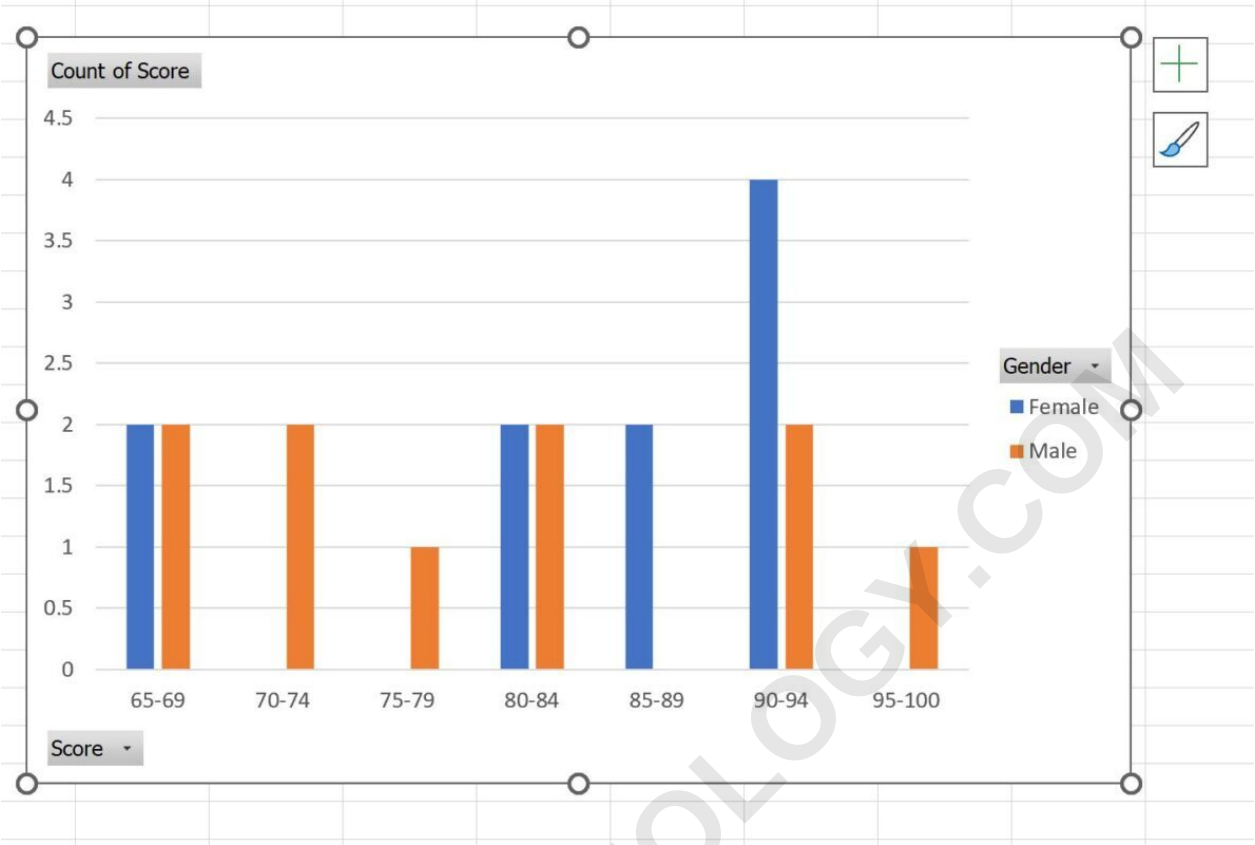
Next, click the **PivotTable Analyze** tab, then click the icon called **PivotChart**:



In the new window that appears, choose **Clustered Column** as the chart type and then click **OK**:



The following chart will appear:



The blue bars display the frequency of exam scores for the Females and the orange bars display the frequencies for the Males.

For example, we can see:

Two females and two males scored between **65-69**.
Zero females and two males scored between **70-74**.
Zero females and one male scored between **75-79**.

And so on.