

# How do I create a horizontal box plot in Excel?

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## RECOMMENDED CITATION

stats writer (2024). *How do I create a horizontal box plot in Excel?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=146335>

A horizontal box plot is a graphical representation of a data set that summarizes the distribution of values and helps identify any outliers. To create a horizontal box plot in Excel, follow these steps:

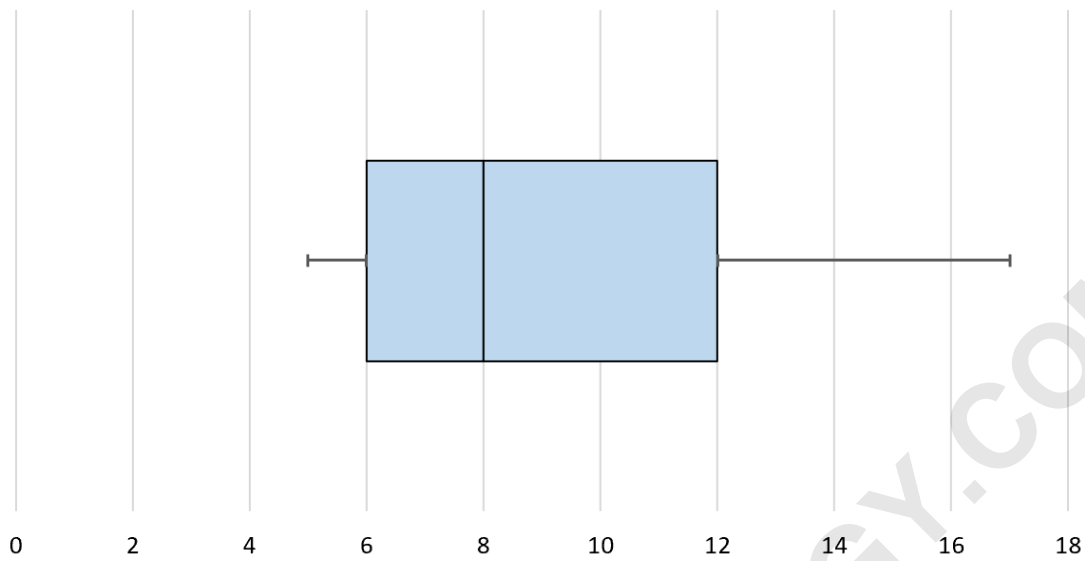
1. Input your data in a column or row format, with the first cell containing the label for the data set.
2. Select the data and navigate to the "Insert" tab on the Excel ribbon.
3. In the "Insert" tab, click on "Insert Statistic Chart" and choose "Box and Whisker" from the drop-down menu.
4. A box plot will appear on your worksheet. You can customize the appearance of the box plot by right-clicking on the chart and selecting "Format Chart Area."
5. To add labels and titles, click on the chart, and then click on the "Chart Elements" button on the right side of the chart.
6. You can also add horizontal gridlines by right-clicking on the chart and selecting "Add Vertical Gridlines."
7. To add labels to the horizontal axis, double-click on the axis and enter the desired label.
8. If your data set has multiple categories, you can group the data by selecting the chart and clicking on the "Design" tab on the Excel ribbon. From there, you can choose the grouping option under the "Data" section.

By following these steps, you can easily create a horizontal box plot in Excel to visually represent your data and gain insights into its distribution.

## Create a Horizontal Box Plot in Excel

**This tutorial provides a step-by-step example of how to create the following horizontal box plot in Excel:**

## Distribution of Points Scored



**Let's jump in!**

**Step 1: Enter the Data**

**First, let's create the following dataset that shows the points scored by 15 different basketball players:**

	A	B	C	D	E	F
1	<b>Points</b>					
2	7					
3	8					
4	9					
5	12					
6	12					
7	5					
8	6					
9	6					
10	8					
11	11					
12	6					
13	8					
14	9					
15	13					
16	17					
17						
18						

## Step 2: Calculate Values for the Plot

Suppose we would like to create a horizontal box plot to visualize the distribution of points values.

A (sometimes called a box-and-whisker plot) is a plot that shows the five-number summary of a dataset, which includes the following values:

**Minimum First Quartile Median Third Quartile Maximum**

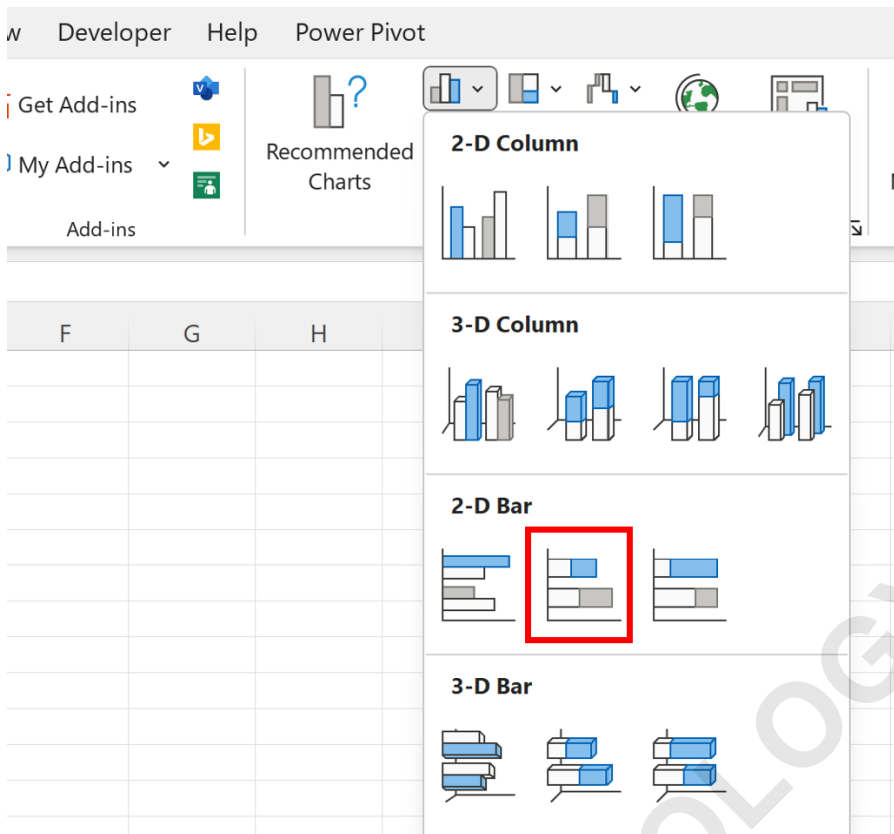
The following screenshot shows how to calculate these five values along with the values to be shown on the

## horizontal box plot:

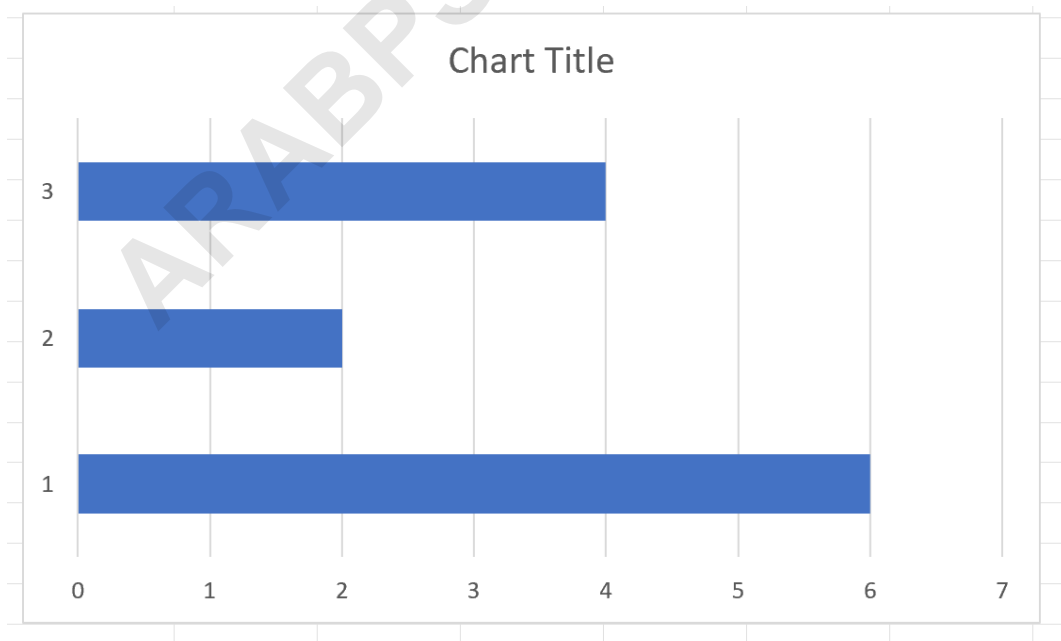
	A	B	C	D	E
1	<b>Points</b>		<b>Min</b>	5	=MIN(A2:A16)
2	7		<b>1st Quartile</b>	6	=QUARTILE.EXC(A2:A16, 1)
3	8		<b>Median</b>	8	=QUARTILE.EXC(A2:A16, 2)
4	9		<b>3rd Quartile</b>	12	=QUARTILE.EXC(A2:A16, 3)
5	12		<b>Max</b>	17	=MAX(A2:A16)
6	12				
7	5		<b>Q1 on Chart</b>	6	=D2
8	6		<b>Q1 to Q2 on Chart</b>	2	=D3-D2
9	6		<b>Q2 to Q3 on Chart</b>	4	=D4-D3
10	8		<b>Lower Whisker</b>	1	=D2-D1
11	11		<b>Upper Whisker</b>	5	=D5-D4
12	6				
13	8				
14	9				
15	13				
16	17				
17					
18					
19					

### Step 3: Insert Bar Chart

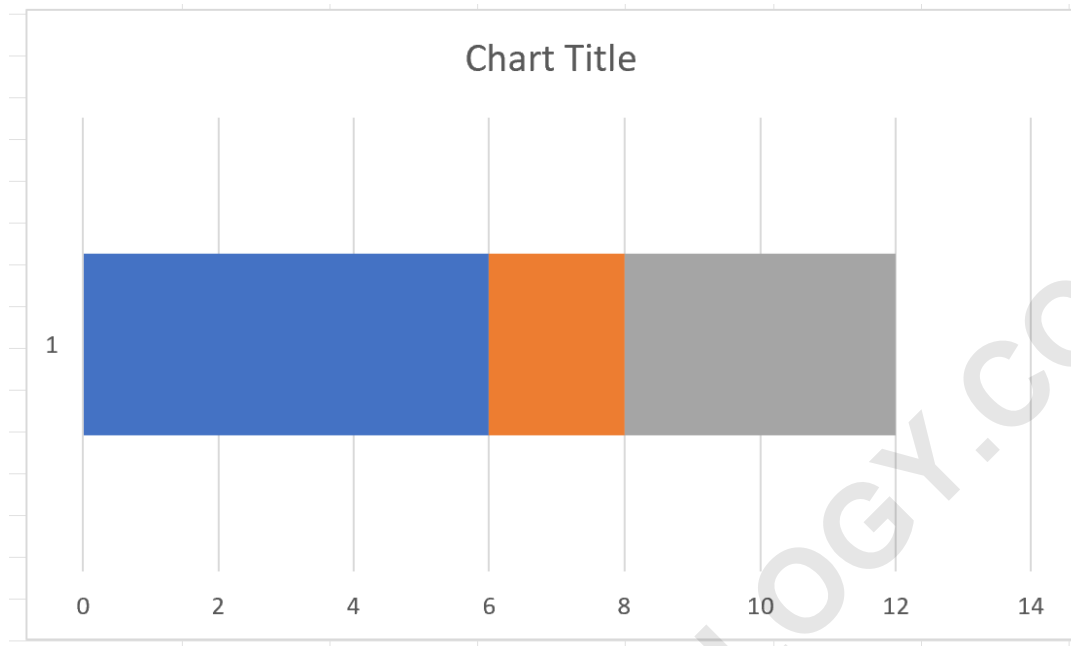
Next, highlight the cell range D7:D9, then click the **Insert** tab along the top ribbon, then click the icon called **Stacked Bar** within the **Charts** group.



**The following bar chart will be created:**

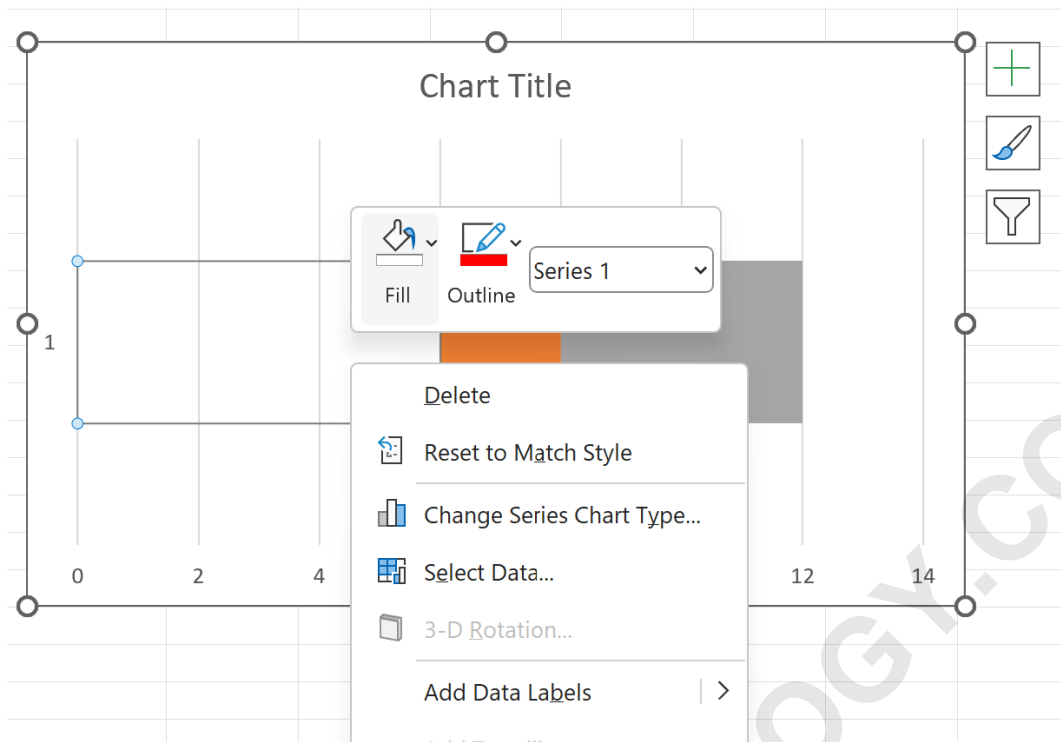


**Once you click OK, the chart will now look like this:**

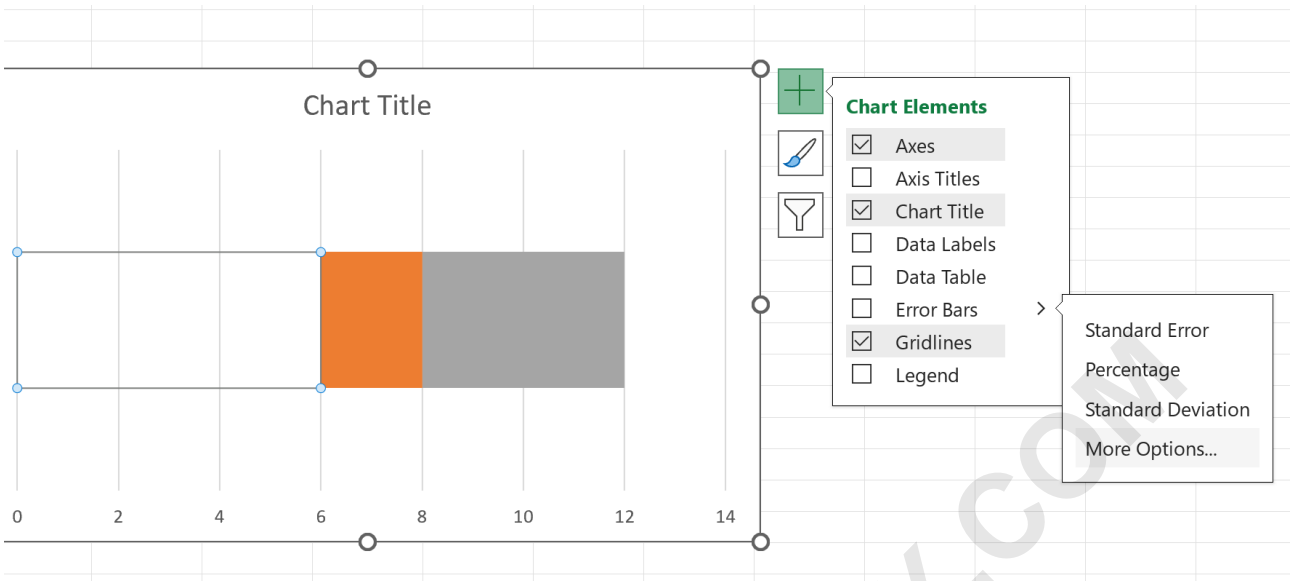


**Step 4: Transform Bar Chart into Box Plot**

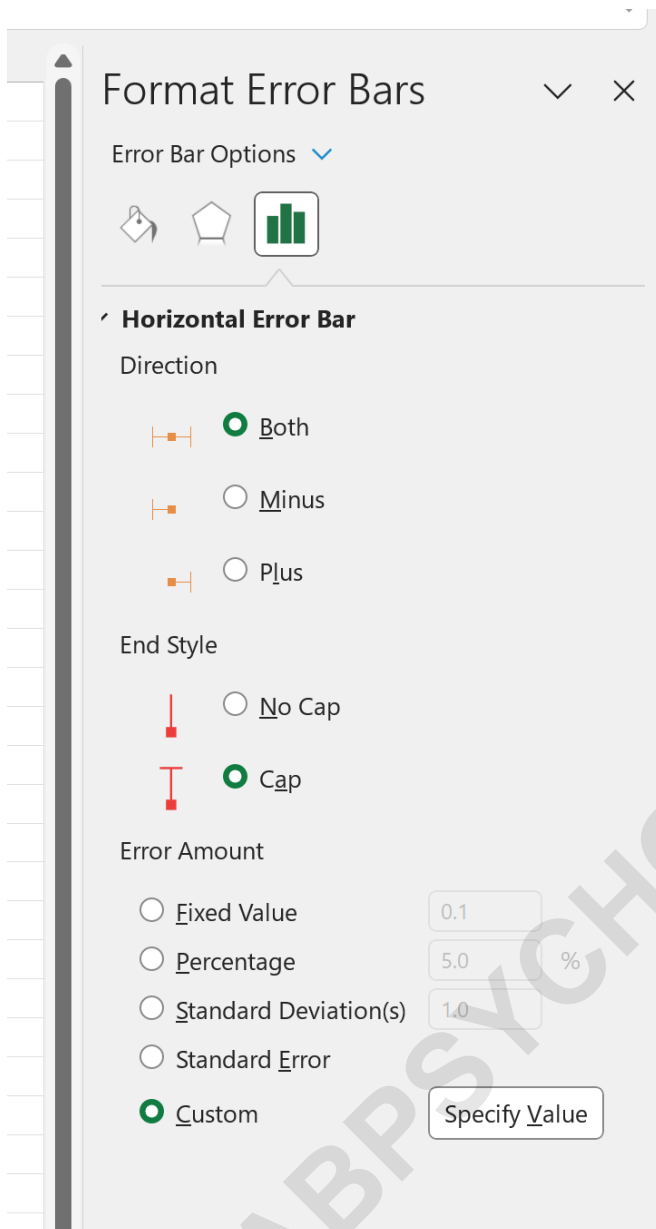
**Next, right click on the blue bar, then click the Fill icon, then click No Fill:**



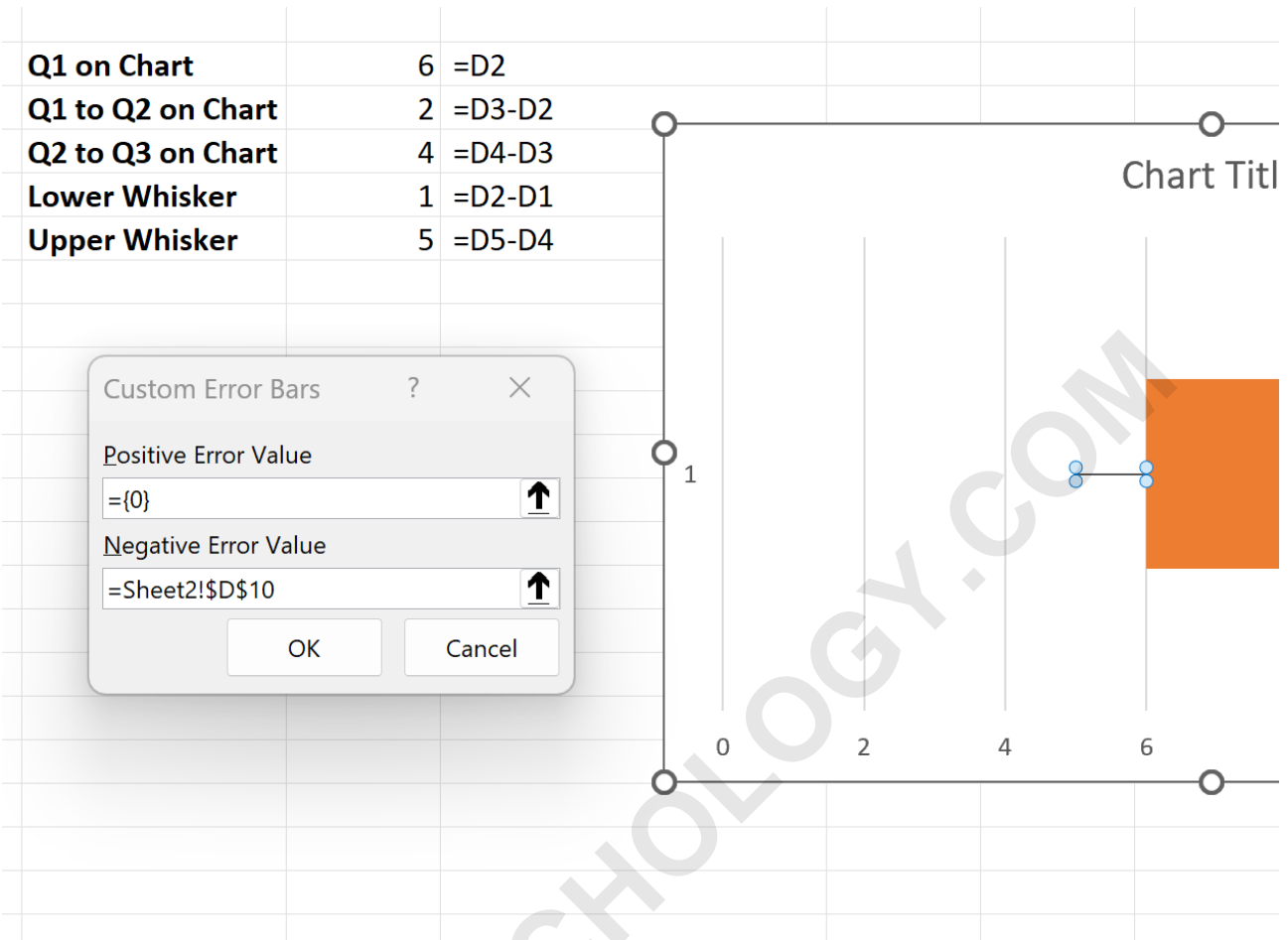
**Next, click on the bar with no fill, then click the tiny green plus sign in the top right corner of the plot, then click the dropdown arrow next to Error Bars, then click More Options:**



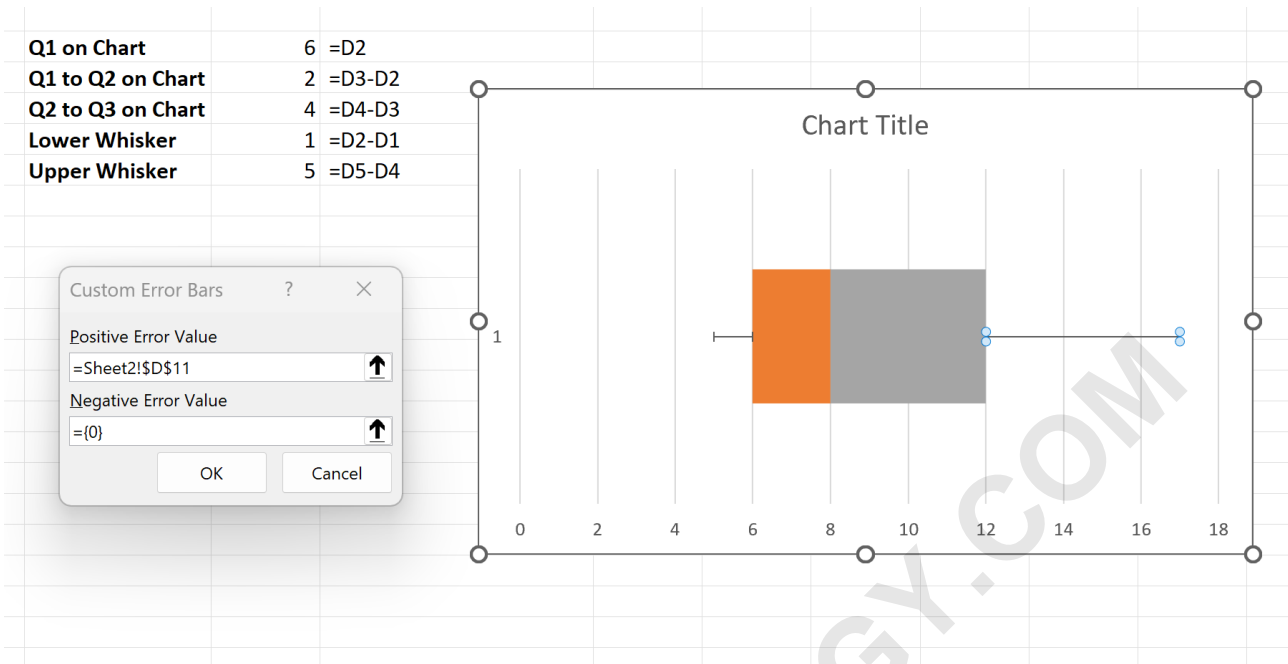
**In the Format Error Bars panel that appears on the right side of the screen, click Custom, then click the button called Specify Value:**



**In the new window that appears, type 0 for the Positive Error Value and D10 for the Negative Error Value box:**



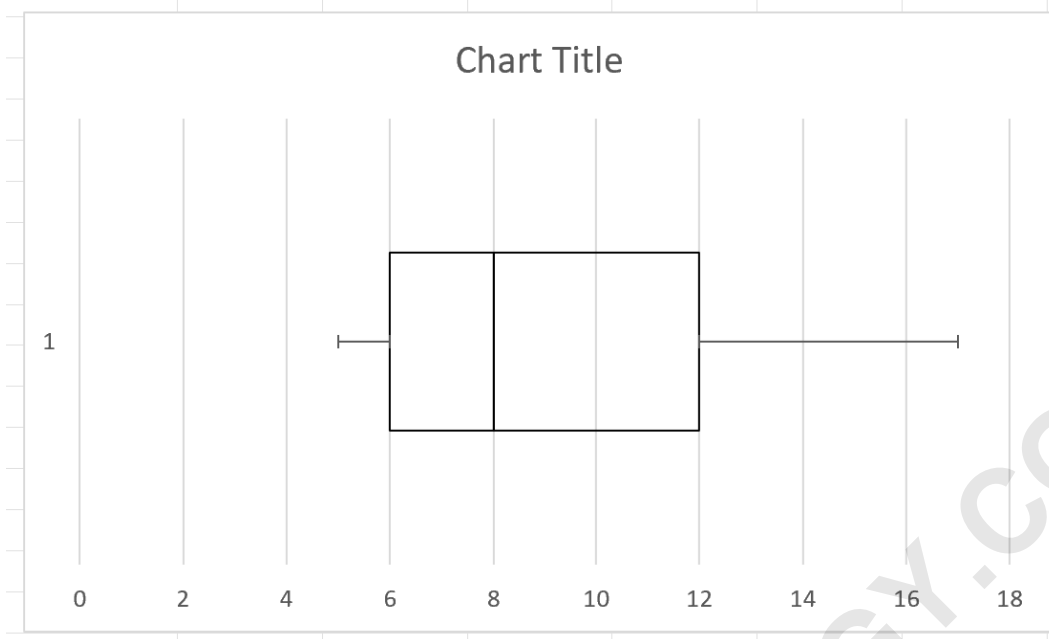
**Repeat the process for the grey box, instead using 0 for the Negative Error Value and D11 for the Positive Error Value:**



**Lastly, right click on the orange bar and choose No Fill for the Fill and Black for the Outline.**

**Repeat this process for the grey bar.**

**The final box plot will look like this:**



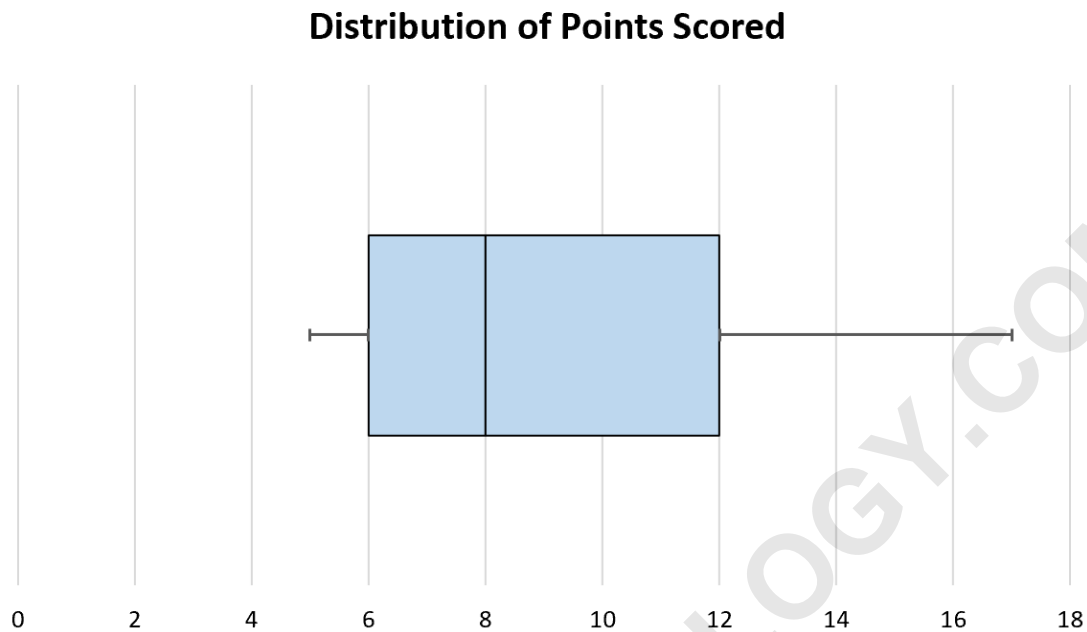
**From the box plot we can see the five number summary of the dataset:**

**The left whisker tells us that the minimum value is 5. The line on the left side of the box tells us that Q1 is 6. The line inside the box tells us that the median value is 8. The line on the right side of the box tells us that Q3 is 12. The right whisker tells us that the maximum value is 17.**

#### **Step 5: Customize the Box Plot (Optional)**

**Feel free to add a title, customize the colors, and adjust the width of the whiskers to make the plot easier to read.**

**The final plot may look like this:**



**The following tutorials explain how to perform other common tasks in Excel:**