

How do I perform data binning in Excel with an example?

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Data binning is a data preprocessing technique used to group a large dataset into smaller, more manageable categories. This is particularly useful in data analysis and visualization as it helps to identify patterns and trends within the data. In Excel, data binning can be performed by using the "Histogram" tool, which divides the data into equal intervals or "bins" and counts the number of data points within each bin. An example of data binning in Excel would be grouping a dataset of sales data by price range, such as \$0-\$50, \$50-\$100, \$100-\$150, and so on. This would allow for a better understanding of the distribution of sales within different price ranges.

Perform Data Binning in Excel (With Example)

Placing numeric data into bins is a useful way to summarize the distribution of values in a dataset.

The following example shows how to perform data binning in Excel.

Example: Data Binning in Excel

Suppose we have the following dataset that shows the number of points scored by various basketball players:

	A	B	C	D	E	F
1	Points					
2	4					
3	4					
4	7					
5	8					
6	12					
7	13					
8	15					
9	18					
10	22					
11	23					
12	23					
13	27					
14	28					
15	28					
16	29					
17						
18						
19						
20						

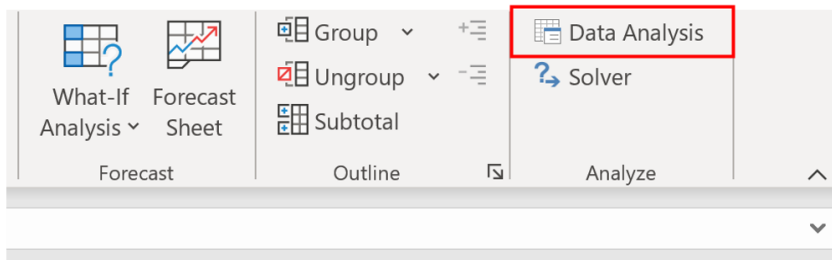
To place each of the values into bins, we can create a new column that defines the largest value for each bin:

	A	B	C	D	E	F
1	Points		Bins			
2	4		5			
3	4		10			
4	7		15			
5	8		20			
6	12		25			
7	13		30			
8	15					
9	18					
10	22					
11	23					
12	23					
13	27					
14	28					
15	28					
16	29					
17						
18						
19						
20						
21						
22						

In this example, we have specified the following bins:

0-56-1011-1516-2021-2526-30

To calculate how many data values fall into each bin, click the **Data** tab along the top ribbon, then click **Data Analysis** within the **Analyze** group.



Note: If you don't see an option for Data Analysis, you need to first in Excel.

In the new window that appears, click Histogram, then click OK:

	A	B	C	D	E	F	G	H
1	Points		Bins					
2	4		5					
3	4		10					
4	7		15					
5	8		20					
6	12		25					
7	13		30					
8	15							
9	18							
10	22							
11	23							
12	23							
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The 'Data Analysis' dialog box is open, showing a list of analysis tools. 'Histogram' is selected and highlighted in blue. The dialog box has 'OK', 'Cancel', and 'Help' buttons on the right side.

Choose A2:A16 as the Input Range, C2:C7 as the Bin Range, E2 as the Output Range, and check the box next to Chart Output. Then click OK.

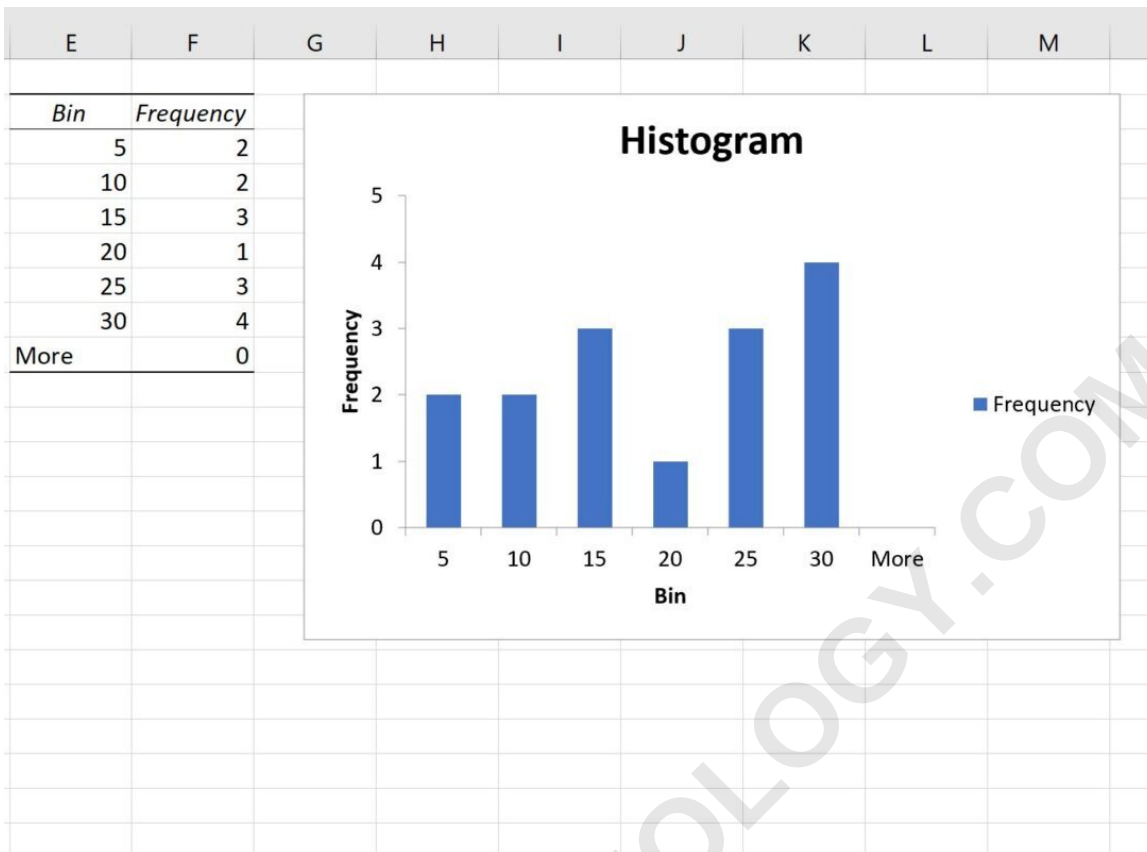
The image shows an Excel spreadsheet with a data table and the Histogram dialog box open. The data table has two columns: 'Points' (A2:A16) and 'Bins' (C2:C7). The Histogram dialog box is configured with the following settings:

- Input Range:** \$A\$2:\$A\$16
- Bin Range:** \$C\$2:\$C\$7
- Labels:** ☐
- Output options:**
 - ☒ **Output Range:** \$E\$2
 - ☐ New Worksheet Ply:
 - ☐ New Workbook
- ☐ Pareto (sorted histogram)
- ☐ Cumulative Percentage
- ☒ **Chart Output**

The dialog box has buttons for OK, Cancel, and Help.

	A	B	C	D	E	F	G	H
1	Points		Bins					
2	4		5					
3	4		10					
4	7		15					
5	8		20					
6	12		25					
7	13		30					
8	15							
9	18							
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The number of values that fall into each bin will automatically be calculated:



From the output we can see:

2 values fall into the 0-5 bin. 2 values fall into the 6-10 bin. 3 values fall into the 11-15 bin. 1 value falls into the 16-20 bin. 3 values fall into the 21-25 bin. 4 values fall into the 26-30 bin. 0 values are greater than 30.

The histogram allows us to visualize this distribution of data values as well.

Note: In this example, we chose to make each bin the same width but we can make individual bins different

sizes if we'd like.

Additional Resources

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

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