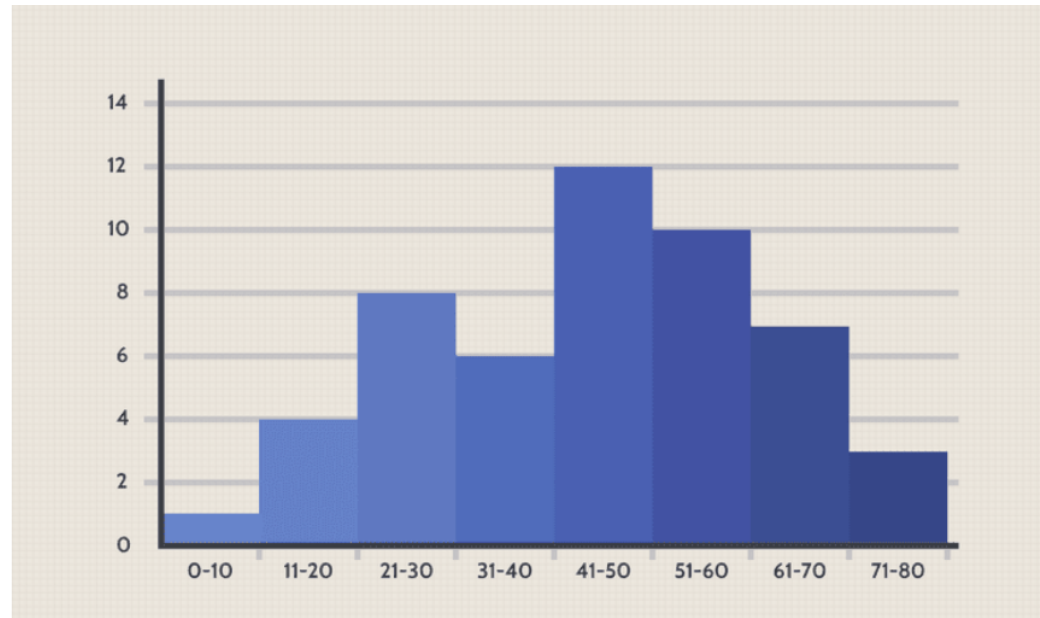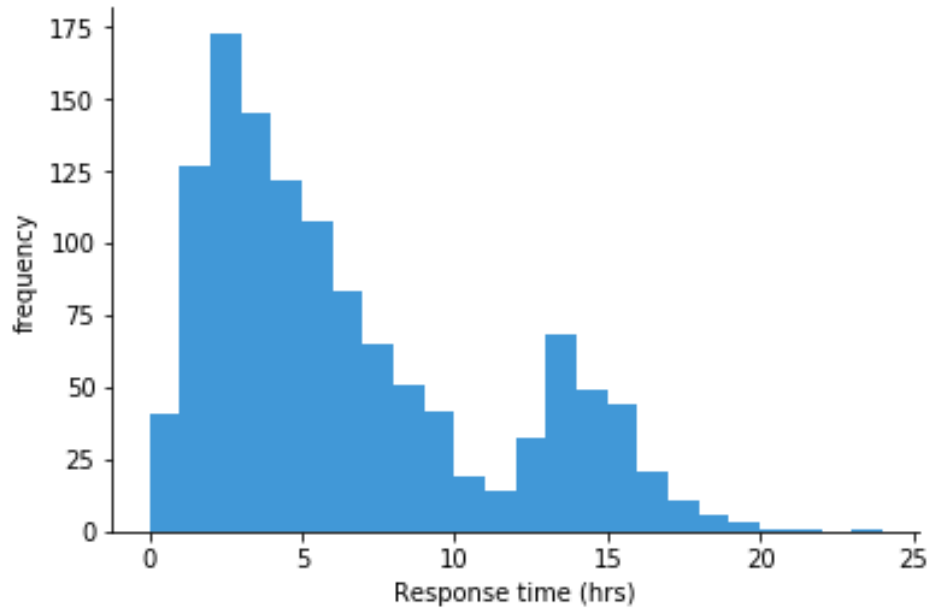**Histograms show the shape of your data. The horizontal axis shows your data values, where each bar includes a range of values. The vertical axis shows how many points in your data have values in the specified range for the bar.**

The histogram above shows a frequency distribution for time to response for tickets sent into a fictional support system. Each bar covers one hour of time, and the height indicates the number of tickets in each time range. We can see that the largest frequency of responses were in the 2-3 hour range, with a longer tail to the right than to the left. There's also a smaller hill whose peak (mode) at 13-14 hour range.

If we only looked at numeric statistics like mean and standard deviation, we might miss the fact that there were these two peaks that contributed to the overall statistics.

Differences Between Bar Chart and Histogram

The bar graph is the graphical representation of categorical data. A histogram is the graphical representation of quantitative data. There is equal space between each pair of consecutive bars.

Histogram

Bar Graph
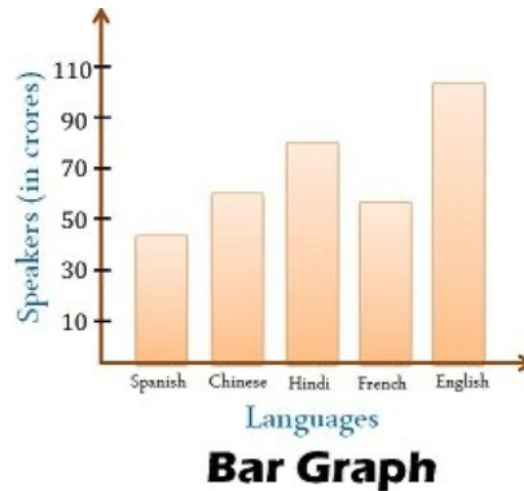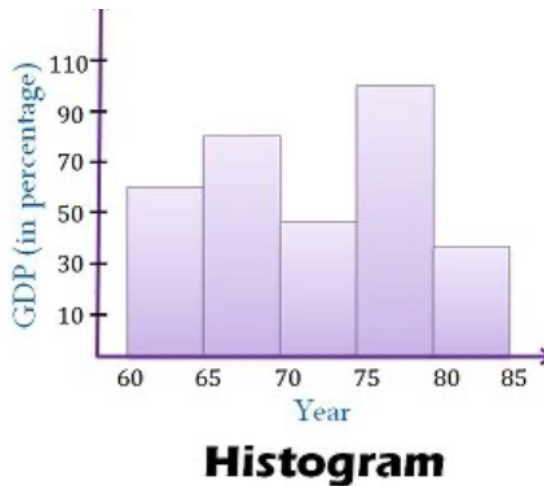
A student in a math class recorded the number of doughnuts purchased by the first 30 customers in Al's doughnut shop. Construct a histogram for this data.

2, 3, 10, 1, 4, 5, 6, 7, 9, 8, 3, 6, 3, 2, 4, 2, 5, 10, 2, 6, 2, 8, 1, 8, 8, 7, 7, 6, 5, 6.