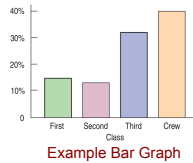


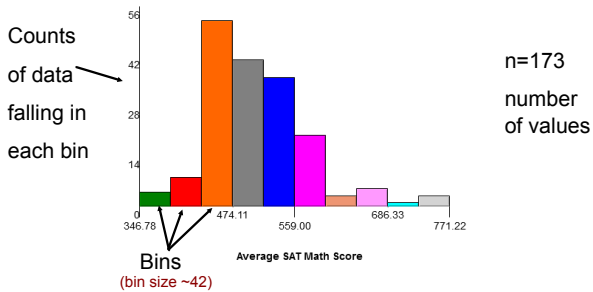
Lesson 05: What is the difference between a bar graph and a histogram?

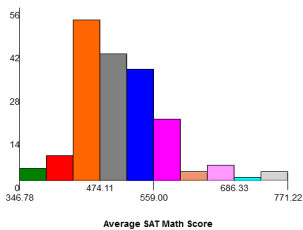
Q:

1. What does the bar graph display?
2. Is there a particular order to display the bars?
3. Why do you think there is space between the bars?



1. A **histogram** looks similar to a **bar graph**....is it?????



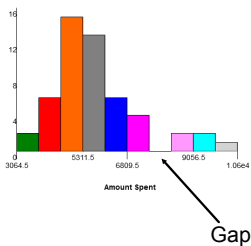


Continuous
numerical data

Quantitative data

But there are no gaps between the bars

If there are gaps?



Any gap in a histogram
is an actual gap in data

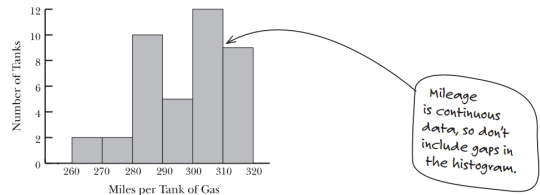
Make a frequency table

Miles per Tank	Frequency
260–under 270	2
Total	40

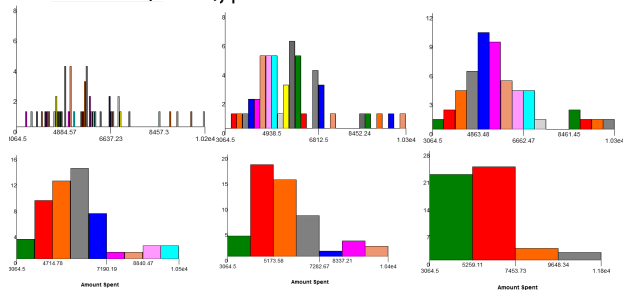
Where n is the number of data entries.

$$\text{Width of each bin} = \frac{\text{Largest value} - \text{Smallest Value}}{\text{number of bins}}$$

The height of each bar in the histogram reflects the frequency for each group of miles per tank of gas.



Misrepresentation Possible !
Spending per student in some schools



[illegible]

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on its right side, suggesting it's resting on a surface.

[illegible][illegible]

Histogram Pros and Cons

Advantages	Disadvantages
Can display large data sets	More difficult to compare two data sets
Can display if data is normally distributed	Can't read individual values/ exact values
Useful for numerical and continuous data only	

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.