

Unit 6: Describing Data

Vocab



Mean

The average of a set of data. All values are added and then divided by the total number of data points



Median



The middle value of a set of data. Once values are in numerical order it is the middle value. If there are two values in the middle, the average of the two number is taken

Mode

The value (or values) that appear most commonly in a set of data.
There can be 0, 1, or multiple modes

Range

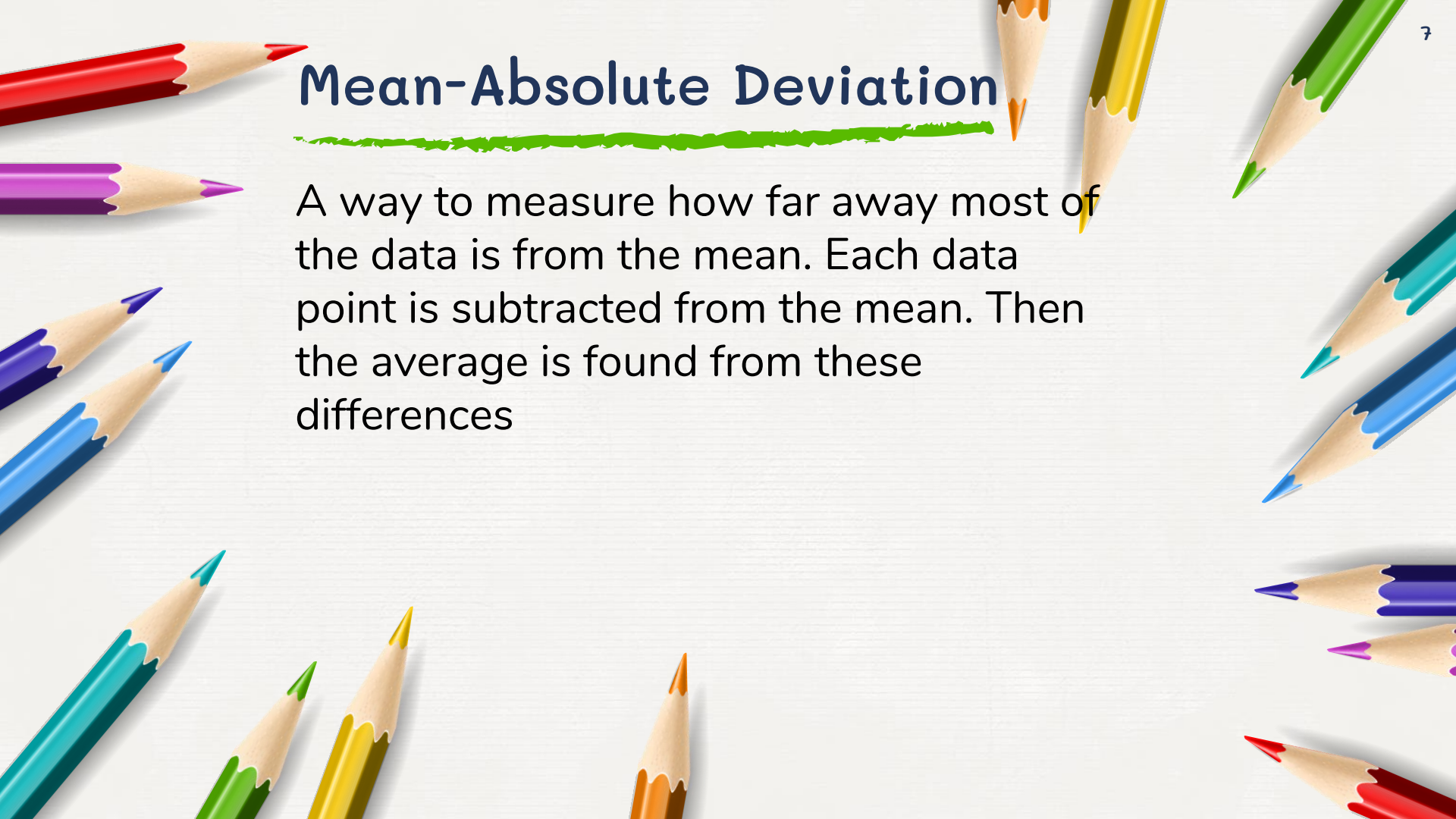
The highest value minus
the lowest value in a
series of data



Interquartile Range



The range of the Upper Quartile (Q3) and Lower Quartile (Q1).
This represents the middle 50% of all the data

The background of the slide is white and is decorated with several sharpened colored pencils in various colors including red, purple, blue, teal, green, yellow, and orange. The pencils are arranged in a circular pattern around the central text. The title 'Mean-Absolute Deviation' is written in a dark blue, sans-serif font and is underlined with a thick, textured green line.

Mean-Absolute Deviation

A way to measure how far away most of the data is from the mean. Each data point is subtracted from the mean. Then the average is found from these differences

5-number summary

The numbers needed to create a box plot

- X Minimum
- X Lower Quartile (Q1)
- X Median (Q2)
- X Upper Quartile (Q3)
- X Maximum



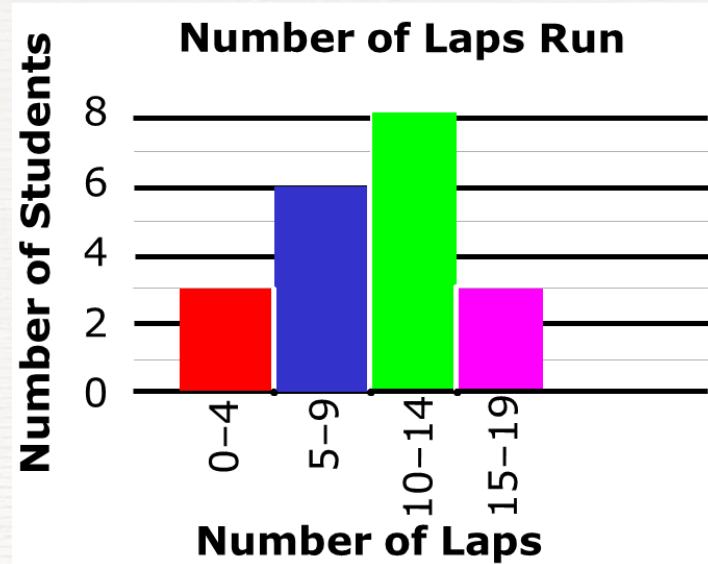
Quartiles

A quartile is a median of a specific part of the data. The data is split in half, the median of the lower set of numbers is called Q1 (lower quartile) and the median of the upper set of numbers is called Q3 (upper quartile)

Histogram

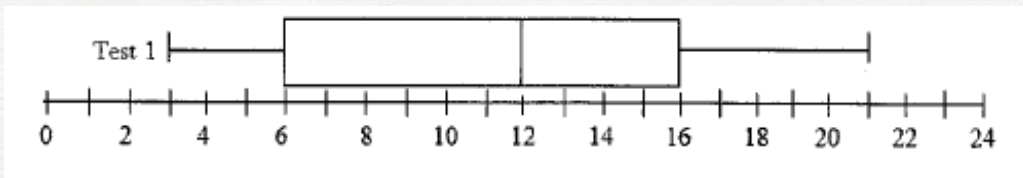


A visual representation of data using bars to show frequency of data values. The x-axis is broken up into “bins”, or ranges, for each bar



Box Plots

Also known as box-and-whisker plots.
Uses the 5-number summary to represent
the data in sets of 25%.



Measures of Central Tendency

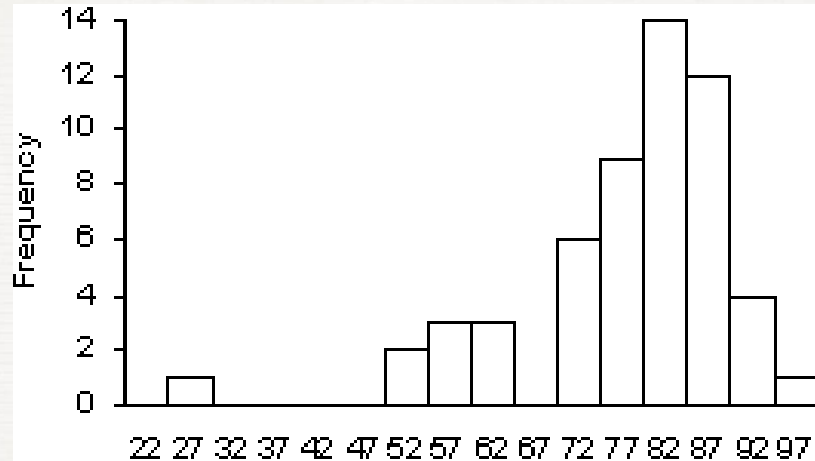
Mean, Median, and Mode are numbers that can be used to give an overall impression of the data. Depending on the data set, one may be more fitting than another



Outliers



A value that is very different than the rest of the data set



Spread

Another word for range (how far apart are the data from minimum to maximum)

Center

Another word for median



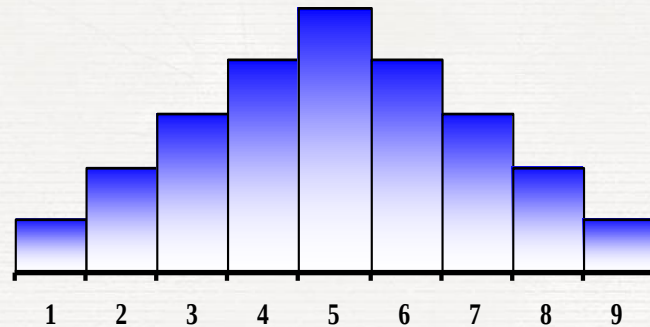
Shape



The overall picture of the data when represented as a dot plot or histogram

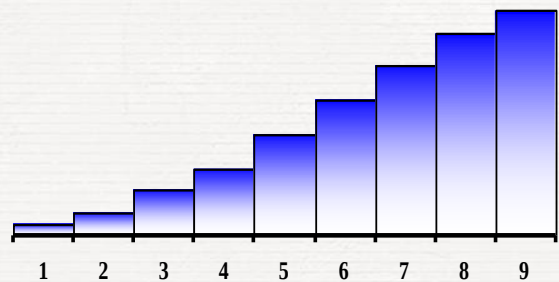
Normal Distribution

When the majority of data is around the mean



Skew Left

When the majority of data is higher than the mean



Skew Right

When the majority of data is less than the mean

