Types of graphs

- Bar graph: numbers
- Circle graph: compare parts to the whole
- Double bargraph: compare two or more sets
- Line graph: change overtime
- Line plot: Frequency data
- Box whiskers: shows measures
- Histogram: intervals

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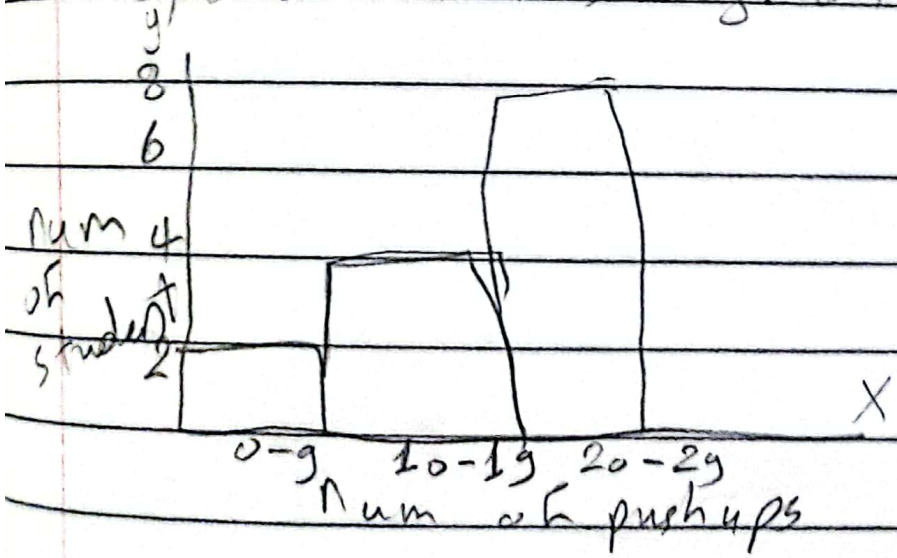
histograms: Visual representation of how many times

data: ex(heights, num of books).

how:

Freq table → Histogram



Steam and leaf plot

organizes Data by using the place Values of the numbers:

1. put nums them in order
2. draw t. chart
3. write Key

Key 1|4 = 14

stem	leaf
1	0 1 4
2	
3	1 3

10, 11, 14, 31, 33

96, 99, 108, 115, 117, 130, 133, 139

Key 10|8 = 108

stem	leaf
9	6 9
10	8
11	5 7
12	
13	0 3 9

5.6, 5.8, 6.2, 7.8, 7.8

Key 5|8 = 5.8

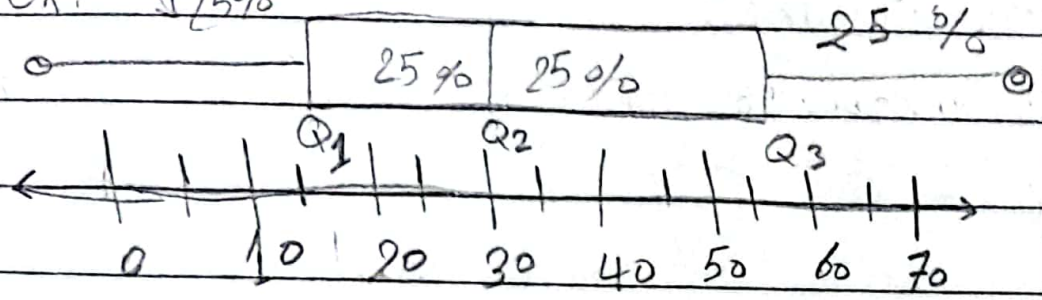
stem	leaf
5	6 8
6	2
7	8

Box and whisker plot

* Summarizing data set using Five summary: minimum value, maximum value, median, Quartile 1, Quartile 3

whisker

ex: 25%



used to describe how the data is distributed (skewed left or right, symmetrical)

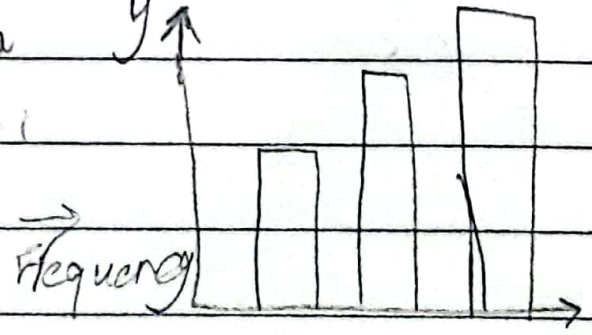
pie chart

Graph that divided into slices (values are expressed in percentages

Bar charts (graph)

using bars or columns to reflect the data to compare different types of data

ex:



Symmetry and skewness

Symmetrical: if it can be divided into two equal sizes of the same shape
skewed to the left: has a long tail trails to the left.
skewed to the right: has " " to the right
* if it skewed to the left:
→ mean is less than median.
→ mean closer to the left side.
→ median closer to the right side.

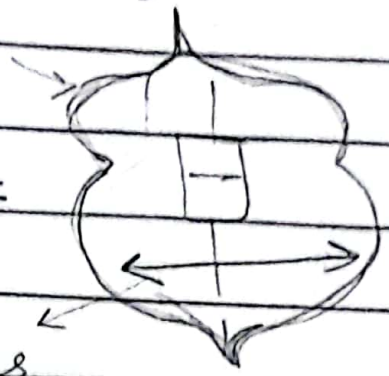
Heat Map

graphical representation of data where values are expressed as colors to make it easier to visualize and understand
used to:
1. identifying patterns and trends.
2. comparing data points.
3. Highlighting outliers
4. correlation analysis.

Violin plot

method of plotting numeric data, combination of box plot and a Kernel density plot

Kernel Density Estimation



the outer layer displays the density of the data

the width indicates the width of the data indicates density of data points

⇒ There might be central box plot the center line in the box represent the median

edges: the interquartile range

whiskers: indicates variability outside the upper and lower quartiles

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Usage: display distributions of categories to compare distributions across different categories

* better than boxplots because it show the distribution of data.