

Summary of Data Displays

Name: \_\_\_\_\_

Stem and Leaf Plot

Categorical / Quantitative

Advantages: find mode quickly, concise, already in order, min/max/gaps/clusters/outliers, shows range

Disadvantages: not visually appealing, hard to find measures of center, not good for comparing, can't see shape of data as well

Sketch: Grades on a science test

stem	leaf
7	2 2 4 5 6 9
8	1 4 5 7 7 9
9	0 1 3 5 8
10	0 0

Key: 7|2 means 72

Dot Plot

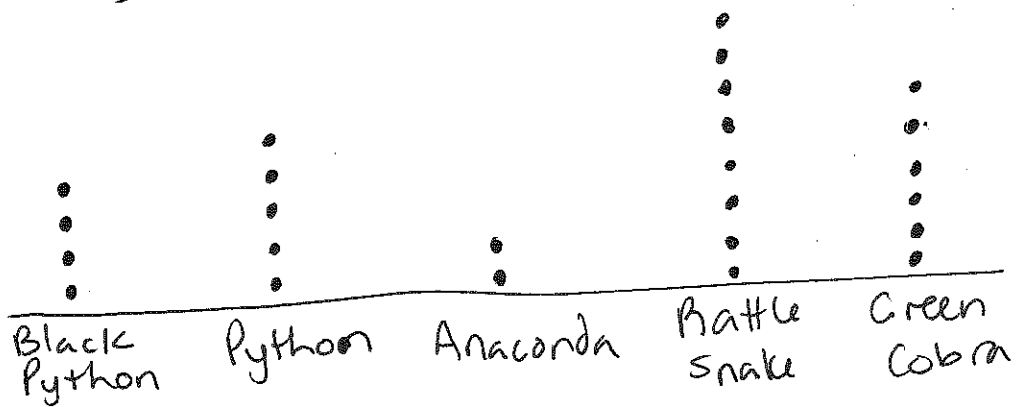
Categorical / Quantitative

Advantages: easy to compare/interpret, easy to find mode, good for small data sets, highlights clusters/gaps/outliers

Disadvantages: not great for large data sets, harder to find measures of center, unsophisticated

Sketch: Number of Snakes in Zoo

• = 1 snake



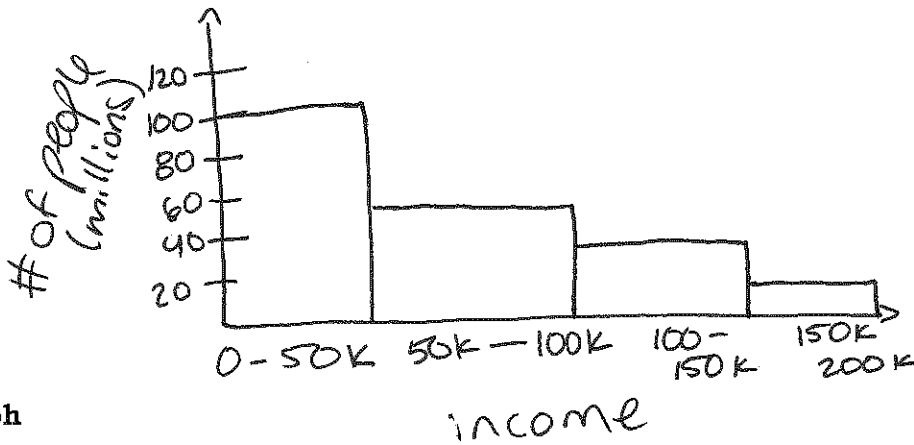
# Histogram

Categorical / Quantitative

Advantages: good for large data sets, clusters, shows the shape of a distribution, find min/max

Disadvantages: can be hard to find measures of center, original data cannot be retrieved, can be difficult to compare

Sketch: Income distribution of 200 million people



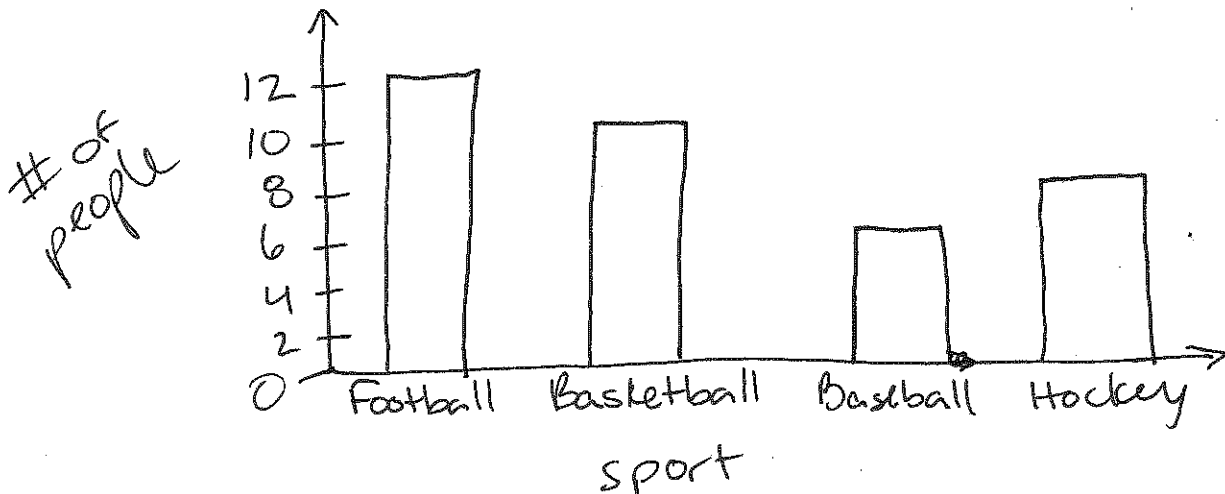
# Bar Graph

Categorical / Quantitative

Advantages: easy to compare, easy to find min/max / mode / gaps / clusters

Disadvantages: can be rearranged to emphasize certain effects, no continuous

Sketch: Preference for Sports of 36 people



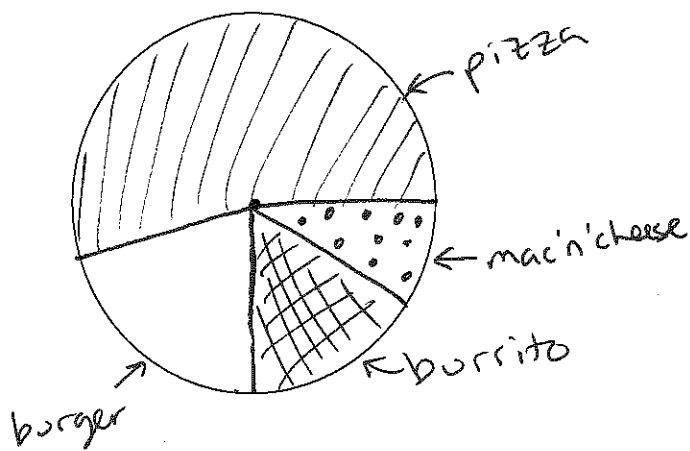
## Circle/Pie Graph

Categorical / Quantitative

Advantages: good for comparing, visually appealing,  
good for showing percentages

Disadvantages: can't see exact data (original #s),  
reveals little of center measure, bad for comparing

Sketch: Preferences of 43 hungry students



- 22 - pizza
- 9 - burger
- 7 - burrito
- 5 - mac'n'cheese

$$\frac{22}{43} = .51 \rightarrow .51 \cdot 360 = 184^\circ \rightarrow \text{pizza}$$

$$\frac{9}{43} = .21 \rightarrow .21 \cdot 360 = 75^\circ \rightarrow \text{burger}$$

$$\frac{7}{43} = .16 \rightarrow .16 \cdot 360 = 59^\circ$$

$$\frac{5}{43} = .12 \rightarrow .12 \cdot 360 = 42^\circ$$