

SESSION 1

Types of data

- 1) Quantitative data can be measured or counted and represented as numbers.
 - Examples: Height, weight, distance, money, temperature, etc.
- 2) Qualitative data captures qualities, characteristics, and concepts.
 - Examples: Eye color, breed of dog, level of education, marital status.

team	points	rebounds
Mavs	99	22
Hawks	104	20
Hornets	88	25
Lakers	113	19
Warriors	109	32

3) Observing the table above, answer the questions below:

- a) Is the variable "team" qualitative or quantitative?
- b) Is the variable "points" qualitative or quantitative?
- c) Is the variable "rebounds" qualitative or quantitative?

Measures of Central Tendency

Mean is the average.

Median is the middle value of a set of data arranged from smallest to largest.

Mode is the most frequent number that appears in your set of data.

7) Now using the table above, find the mean, median, and range of rebounds and points.

$$\bar{x} = \frac{\sum x}{n} = \frac{22 + 20 + 25 + 19 + 32}{5} = 23.6$$

Mean = 23.6

Median = 22

Range = 32 - 19 = 13

no modes

8) Find the mean, median, and mode of the following data set:

4, 7, 7, 9, 2, 5, 5, 11, 8

$$\bar{x} = 6.44$$

$$\text{Med} = 7$$

$$\text{mode} = 5, 7$$

Mode =

Frequency vs. Relative Frequency

8) Frequency:

of times a specific value occurs within a dataset

Relative frequency:

the proportion a certain value occurs within a dataset

Number of Books Read	Frequency (Number of Students)	relative frequency	percentage
0	5	5/50 or 0.1	10%
1	12	12/50 or 0.24	24%
2	20	20/50 or 0.4	40%
3	8	8/50 or 0.16	16%
4 or more	5	5/50 or 0.1	10%
	<u>50</u>	adds up to 1	add up to 100%

Fill in the table with the following relative frequency and percentage.

Histogram

9) The following table displays the range of exam scores on an exam. Construct a histogram with the table.

Score Range	Frequency
50-59	2
60-69	3
70-79	4
80-89	4
90-99	5
100	2

