Unit 1:

Statistic = sample

parameter = population (everyone)

descriptive → factual and describes data collected

inferential → decision / estimate abt population, based on sample.

Types of variable

- quantitative
  - numeric
  - eg. time, price, money
  - discrete or countable
    - interval
      - meaningful diff
      - no zero point
      - eg. temp, shoe size
  - continuous
    - measurable
    - ratio
      - inherent zero starting point
      - differences are meaningful
      - eg. income, distance
- qualitative
  - non-numeric eg. gender, country
  - nominal
    - no rank
    - only classified & counted
    - eg. colour, gender
  - ordinal
    - arranged in some order
    - diff in value # is meaningless
    - ranked / rated
    - eg. survey ranking

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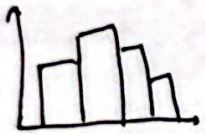
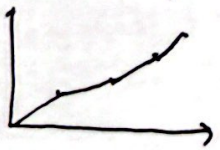
visualize frequency distribution

1. histogram
   - data is distributed



2. ogive
   - cumulative frequency
   - -do up table
   - -use those values to do



class frequency = ni of data in each class

class upper/lower limit = largest & smallest in each class

class interval/width = upper - lower limit

class midpoint = $\frac{\text{upper + lower limit}}{2}$

5 rules for construction

1. all inclusive (include all data)
2. Mutually exclusive (no double count)
3. equal intervals (same width for all class)
4. 5-15 class
5. no open ended class (above 90 X, below 10 X)

5 step for construction

1. decide on class → $2^k > n$ → k → ni of class, n → ni of data
2. determine class width → $\frac{\text{highest value - lowest}}{\text{ni of class}}$
3. set limits
4. tally observations
5. count & check.