Intro to Statistics

- Statistics is the area of math that is involved with collecting, classifying, summarizing and presenting data.
    - 2 types of statistics:
        - Descriptive – classifies, sorts and summarizes data (numbers)
            - *Data* is plural and *Datum* is singular
        - Inferential

    - Data has 2 categories it falls into
        - Quantitative – numbers that indicate amounts, differences
        - Qualitative – generally words that indicate observations (ex: male or female)

    - *Population* – when you gather information from 100% of a group of people

- *Sample* – part or group of the population
    - *Bias* - the difference between the results obtained by sampling and the truth about the whole population.
    - *Random sampling* - helps to eliminate bias, every different member of the population has an equal probability (or chance) of being selected
    - *Strata* - groups or classes inside a population that share a common characteristic

    - *Systematic sampling* - assumed that the elements of the population are arranged in some natural sequential order

    - *Cluster sampling* - we begin by dividing the demographic area into sections. Then we randomly select sections and survey all individuals in those sections.

    - *Convenience sampling* - uses results or data that are conveniently and readily obtained