• Comparing the Measures of Central Tendency
  ○ so... which should we use?
  ○ DEPENDS on the situation
    ■ inferential stats
      ● two types:
        ○ PARAMETRIC: trying to estimate what we think the population parameters look like
          ■ MEAN: population standard
          ■ ONLY interval or ratio data

  ■ nominal data
    ● MODE

  ■ ordinal data
    ● by nature, it's telling us info in terms of location (rank)
    ● MEDIAN

  ■ outliers
    ● if they are really outliers-
      ○ KICK THEM OUT, calculate Mean
    ● if there's an inherent skew-
      ○ MEAN will be overly affected, represent only the extreme scores of dist.
        can't trust it
      ○ MEDIAN should be used, whether interval, ratio, etc.

• Skewed Dist.'s: relationships btw mean, median, and mode
  ○ In symmetrical Distributions: MEAN = MEDIAN
  ○ In single-peaked symmetrical dist. it's MEAN = MEDIAN = MODE
  ○ Positively skewed dist.:
    ■ Mean > Median
    ■ the median will be lower than the mean
  ○ Negatively Skewed dist.:
    ■ Mean < Median
    ■ the median will be higher than the mean

• Measures of Dispersion- Ch. 2 = FOUNDATIONAL
  ○ MEMORIZE the big equations- easier transition
  ○ Deviation Score: how much a score (X) differs from the mean (X - M)
    ■ distance btw the score and the mean
  ○ Sum of Deviation Score is 0: \( \sum (X - M) = 0 \)
  ○ EX: 2 3 5 5 10; Mean = 5
    ■ (2-5) + (3-5) + (5-5)
  ○ Variability in scores: Sum of Squares
    ■ Sums of Squares (SS): is the sum of squared dev. from the mean
    ○ why do we need the mean?
      ● the balancing point of the data
      ● parametric statistics- YOU NEED THE MEAN for a lot of formulas
      ● takes ALL scores into consideration
    ○ why do we need to square them?
      ● b/c it equals ZERO