

Unit 03 - Measures of Center/Variation/Position

Content Area: **Math**
Course(s): **Prob/Stat A**
Time Period: **Semester 1**
Length: **6 weeks**
Status: **Published**

Unit Introduction

Standards

MA.S-ID.A.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).
MA.S-ID.A.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
MA.S-ID.A.3	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
MA.S-ID.A.4	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.
MA.S-ID.B.5	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.

Essential Questions

Content

- Section 2-1: Introduction (Pg. 34-35)
- Section 2-2: Organizing Data (Pgs. 35-48)
- Section 2-3: Histograms, Frequency Polygons, and Ogives (Pgs 48-62)
- Section 2-4: Other Types of Graphs (Pgs. 63-85)
- Section 3.1: Introduction (Pgs. 96-97)
- Section 3.2: Measures of Central Tendency (Pgs. 97-114)
- Section 3.3: Measures of Variation (Pgs. 115-132)
- Section 3.4: Measures of Position (Pgs. 133-151)
- Section 3.5: Exploratory Data Analysis (Pgs. 152-160)

Skills

- Compare center and spread both within a group and between groups
- Describe center, shape, spread, clusters, gaps, outliers and other unusual features.
- Discuss shape, outliers, center, and spread of distributions
- Measure center using mean and median
- Measure position using quartiles, percentiles, and standardized (z) scores
- Measure spread using range, interquartile range, and standard deviation