

The Common Denominator
A Family Math Newsletter
Mathematics 6 GT Unit 12: Statistics and Variability

Unit at a Glance:

Suggested Length of Unit: 12 days (45 minutes), 6 days (90 minutes)

- Representing Categorical Data
- Histograms and Stem-and-Leaf Plots
- Properties of the Mean
- Deviations from the Mean
- Medians and Box Plots
- Describing Tolerance
- Time Series

Resources

- Textbook Resource: Viktora, Steven S, et al. Transition Mathematics. Wright Group/McGraw-Hill, 2008, pp. 738-791.
- Homework Help/Online book (teacher-provided code needed): [Online Textbook Portal](#)

Exploring Chapter 12

Statistics is a relatively new area in mathematics curricula, so the timing of its teaching varies. Students often encounter the same statistical ideas (e.g. mean, median, mode, range, and bar graphs) over several years.

This chapter's content was influenced by the American Statistical Association Curriculum Framework for PreK-12 Statistics Education. It uses algebraic symbolism that students have learned in order to revisit a familiar measure of *center*, the mean (Lesson 12-3); to introduce a new measure of spread that involves absolute value, the *mean absolute deviation* (Lesson 12-4); to describe a more sophisticated display, the *box plot* (Lesson 12-5); and to describe variability with the idea of *tolerance* (Lesson 12-6). Lesson 12-6 gives an opportunity to use a double inequality and absolute value to describe tolerance. Lesson 12-7 involves natural variability and its relationship to rate of change in a time series. Lessons 12-2 and 12-5 show variability due to sampling.

Students will use the graphing calculator to display and analyze data and use the five-number summary to describe data sets with large numbers of individual values.

Quote

“Mathematics is a language.” -Josiah Willard Gibbs