



The Common Denominator

A Family Math Newsletter
Algebra 1 Unit 5: Data Analysis

In this unit, the students will demonstrate their understanding of using precise statistical measures to interpret and compare differences in center and spread of two or more different data sets. Particularly, the students learn about standard deviation and the application of the empirical rule. The students will then transition to multi-variable categorical data, where they will use joint, marginal, and conditional relative frequencies to recognize possible associations and trends in the data. The following topics will be studied:

Unit at a Glance

Topic	Skills	Length
Topic A: One Variable Data Distributions	<ul style="list-style-type: none">• Visual Displays of One Variable Data (dot plots, histograms, parallel box-and-whisker plots, and side-by-side stem-and-leaf plots)• Effect of Outliers on Shape, Center, and Spread• Standard Deviation• Empirical Rule for Normal Distribution	8 (45-minute) periods 4 (90-minute) periods
Topic B: Multi-Variable Categorical Data	<ul style="list-style-type: none">• Two-way Frequency Tables• Relative Frequency	4 (45-minute) periods 2 (90-minute) periods

Exploring Mathematics

Real World Connections

Review your child's recent grades on Schoology together. Have your student create a histogram to represent their grade data, find their five-number summary, explain which measure of center best represents their data, and describe the spread of their grades. Suppose you want your student to bring up one of their grades. Have your student explain how this change would affect their grade data, calculate their new five-number summary, and explain the best measure of spread.

Careers

A geologist is a scientist who studies Earth—its processes, materials, and history. Geologists investigate earthquakes, floods, landslides, and volcanic eruptions to gain a deeper understanding of these phenomena. They explore ways to extract materials from the earth, such as metals, oil, and groundwater. Geologists devise and use mathematical models and use statistical methods to help them understand Earth's geological processes and history. If you are interested in a career as a geologist, you should study these mathematical subjects: Algebra, Geometry, Trigonometry, Statistics, and Calculus. Research other careers that require using statistical methods to understand natural phenomena. Check out the career activity at the end of the unit to find out how geologists use math (HMH Student Resources, Unit 4: Statistical Models, Student Edition, Unit 4 Back Matter, page 4).



Resource Toolkit

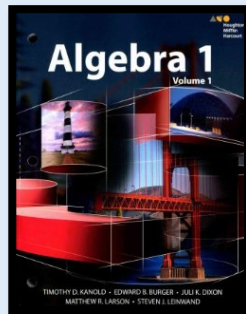
HMH Algebra 1 Textbook, Interactive Student Edition, or Student Resources

Topic A

Unit 4: Statistical Models, Module 9: One-Variable Data Distributions, Lessons 9.1-9.4

Topic B

Unit 4: Statistical Models, Module 8: Multi-Variable Categorical Data, Lessons 8.1-8.2



Homework Help

Topic A

Go to HMH Student Resources, Unit 4, Module 9:

Lesson 9.1: Measures of Center and Spread, Reteach

Lesson 9.2: Data Distributions and Outliers, Reteach

Lesson 9.3: Histograms and Box Plots, Success for English Learners

Lesson 9.4: Normal Distributions, Reading Strategies

Khan Academy: [Representing Data](#)

Topic B

Go to HMH Student Resources, Unit 4, Module 8:

Lesson 8.1: Two-Way Frequency Tables, Success for English Learners

Lesson 8.2: Relative Frequency, Success for English Learners

Khan Academy: [Two-Way Frequency Table](#)



“Education is the most powerful weapon which you can use to change the world.”

– Nelson Mandela