

Mathematics I builds students' command of geometric knowledge and linear and exponential relationships. Students learn through discovery and application, developing the skills they need to break down complex challenges and demonstrate their knowledge in new situations.

Course topics include relationships between quantities; linear and exponential relationships; reasoning with equations; descriptive statistics; congruence, proof, and constructions; and connecting algebra and geometry through coordinates.

This course supports all students as they develop computational fluency and deepen conceptual understanding. Students begin each lesson by discovering new concepts through guided instruction, and then confirm their understanding in an interactive, feedback-rich environment. Modeling activities equip students with tools for analyzing a variety of real-world scenarios and mathematical ideas. Journaling activities allow students to reason abstractly and quantitatively, construct arguments, critique reasoning, and communicate precisely. Performance tasks prepare students to synthesize their knowledge in novel, real-world scenarios and require that they make sense of multifaceted problems and persevere in solving them.

This course is built to state standards.

Unit 1: Solving Equations and Inequalities

Unit 2: Functions

Unit 3: Linear Equations

Unit 4: Systems of Linear Equations

Unit 5: Exponents and Exponential Functions

Unit 6: Sequences and Functions

Unit 7: Semester 1 Exam

Unit 8: Foundations of Geometry

Unit 9: Triangles

Unit 10: Coordinate Geometry

Unit 11: Constructions and Transformations

Unit 12: Descriptive Statistics

Unit 13: Data and Mathematical Modeling

Unit 14: Semester 2 Exam