

Pre-Algebra Course 1 Curriculum

The Pre-Algebra Course 1 students will be using a math curriculum entitled *Prentice Hall Mathematics Course 1*. It covers a combination of rational numbers (including fraction arithmetic), patterns, geometry, and integers in preparation for solving one- and two-step equations and inequalities. Guided problem-solving strategies throughout the text provide students with the tools they need to be effective and independent learners. An emphasis on fractions solidifies student understanding of rational number operations preparing them to apply these skills to algebraic equations. Activity Labs throughout the text provide hands-on, minds-on experiences reaching all types of learners. It is a problem-solving approach, based on everyday situations, which develops critical thinking.

In Course 1 students will:

- Develop proficiency in all decimal and fraction operations. Students will work with percentages and develop estimation skills. Concepts of scale and ratio are introduced.
- Use variables in equations and patterns. Models are introduced for percentages, proportions, integers, and properties of equality.
- Use grids, nets, and block diagrams to build concepts of area and volume. Students will explore symmetry and transformations. The coordinate plane is introduced.
- Choose units, convert units, and estimate measures within the customary and metric systems.
- The students develop and use formulas related to polygons and also explore surface area and volume.
- Master measures of central tendency, simple line graphs, bar graphs, and probabilities. Students will make line plots, circle graphs, and stem-and-leaf plots.
- Learn specific problem-solving strategies and apply them to a variety of problems. Students will practice and apply these strategies through guided problem-solving.
- Justify answers by showing the steps they took to solve problems or writing about mathematics. Many exercises will ask students to justify their work, explain a process, or draw a conclusion.