Pre-Algebra 2

MTHH022256
Credits: 0.5 units / 5 hours

Course Description

In Pre-Algebra 2 students will gain a solid preparation for both algebra and geometry. The second semester of the Pre-Algebra series, this course provides an introduction to both algebraic concepts and geometry through an exploration of equation solving, inequalities, linear functions, graphing, spatial thinking, data analysis, probability, and nonlinear functions. The course is designed to introduce algebraic thinking skills and to connect the concepts to arithmetic skills that students already know. This course provides a "bridge" to First Year Algebra and Geometry by building on the mathematical concepts and skills students need.

Course Assessments

6 Unit Evaluations, 3 Proctored Progress Tests

Course Objectives

1. When you have completed the materials in this course, you should be able to: Identify relations and functions.
2. Use linear functions to learn slope and graphing.
3. Understand the basic figures of geometry and classify triangles and quadrilaterals.
4. Find the areas, surface areas, and volumes of basic geometric figures.
5. Know the Pythagorean Theorem and use it for right triangles.
6. Use data in different displays.
7. Use probability in real-life situations.
8. Graph nonlinear functions.
9. Perform operations with polynomials.

Course Outline

Unit 1: Linear Functions and Graphing
Lesson 1: Linear Functions
Lesson 2: Graphing

Unit 2: Spatial Thinking
Lesson 3: Introduction to Geometry
Lesson 4: Congruence, Circles, and Constructions
Lesson 5: Translations, Symmetry, Reflection, and Rotation

Unit 3: Area and Volume
Lesson 6: Area
Lesson 7: Space Figures and Surface Areas
Lesson 8: Volume and Models

Unit 4: Right Triangles in Algebra
Lesson 9: Square Roots, Right Triangles, and Distance
Lesson 10: Special Triangles

Unit 5: Data Analysis and Probability
Lesson 11: Data Analysis
Lesson 12: Probability

Unit 6: Nonlinear Functions and Polynomials
Lesson 13: Patterns and Functions
Lesson 14: Polynomials

Required Textbook and Materials

(available through Follett virtual bookstore at http://highschool.nebraska.bkstr.com)

MTHH 022 Kit
Kit contains:

- 6" Protractor with ruler calibrations
- plastic compass
- 12-count colored pencils
- 50 sheet pad of ¼" graph paper