

Virginia Placement Test Mathematics Units 1 - 9

Unit	Unit Name	Unit Description
Unit 1	Operations with Positive Fractions	The student will solve application problems using proper fractions, improper fractions, and mixed numbers. All students learning outcomes for this unit must be completed without the use of a calculator. Emphasis should be placed on applications throughout the unit. Applications will use U.S. customary units of measurement. All fractions in this unit should be expressed in simplest form, unless otherwise indicated.
Unit 2	Operations with Positive Decimals and Percentages	The student will solve problems using decimals and percentages. Emphasis should be placed on applications throughout the unit. Applications will use U.S. customary and metric units of measurement.
Unit 3	Algebra Basics	The student will perform basic operations with algebraic expressions and solve simple algebraic equations using signed numbers. Emphasis should be placed on applications throughout the unit.
Unit 4	First Degree Equations and Inequalities in One Variable	The student will solve first degree equations and inequalities containing one variable and use them to solve application problems. Emphasis should be on learning the steps to solving equations and inequalities, applications, and problem solving.
Unit 5	Linear Equations, Inequalities and Systems of Linear Equations in Two Variable	The student will learn how to find the equation of a line, graph linear equations and inequalities in two variables and solve a system of two linear equations. Emphasis should be on writing and graphing equations using the slope of the line and points on the line, and applications.
Unit 6	Exponents, Factoring and Polynomial Equations	The student will learn techniques to factor polynomials and use these techniques to solve polynomial equations. Emphasis should be on learning all the different factoring methods and solving application problems using polynomial equations.
Unit 7	Rational Expressions and Equations	The student will simplify rational algebraic expressions, solve rational algebraic equations and use them to solve application problems.
Unit 8	Rational Expressions and Equations	The student will simplify radical expressions and use rational exponents. The student will solve radical equations and use them to solve application problems.
Unit 9	Functions, Quadratics Equations and Parabolas	In this unit the student will have an introduction to functions in ordered pair, graph, and equation form. The student will engage in a thorough introduction to quadratic functions and their properties as they complete preparation for entering STEM or business-administration college-level mathematics courses.