

CURRICULUM PROFILE

7th GRADE ALGEBRA

Rational Numbers and Percents

- Compare and order rational numbers
- Operations with rational numbers
- Apply primes, factors, divisors, multiples, common factors and common multiples in solving problems
- Represent repeated factors with exponents
- Identify and apply properties of rational numbers
- Estimate with rational numbers
- Interchange fractions, decimals and percents
- Solve problems with rational numbers

Reference: Chapter 1, 2, 3, 6

State Goals: 6A, 6B, 6C, 8A

Ratios, Proportions and Percents

- Identify, write and compare ratios, rates and proportions
- Solve proportions in word problems, similar figures and scale factors
- Solve percent problems

Reference: Chapter 3, 4, 6

State Goals: 6D, 7C, 8D, 9A

Measurement and Geometry

- Find perimeter, circumference, area, surface area and volume
- Recognize common 2- and 3-dimensional shapes
- Identify and sketch common geometric figures
- Identify, sketch, and solve problems involving angles
- Graph points and identify coordinates in a coordinate plane
- Recognize, describe and show transformations or combinations of transformations
- Solve equations using the Pythagorean Theorem
- Apply formulas in a wide variety of theoretical and practical real world measurement applications

Reference: Chapter 4, 12

State Goals: 7A, 7B, 9A, 9B, 9D

Probability and Statistics

- Solve problems involving probability including permutations and combinations
- Read, interpret and make predictions from data and many types of graphs
- Create graphs
- Determine and use mean, median, mode and range to interpret data

Reference: Chapter 1, 3, 11

State Goals: 10A, 10B, 10C

Algebra

- Understand geometric and arithmetic sequences
- Write, simplify and evaluate algebraic expressions
- Solve one, two step, and multistep equations
- Solve absolute value equations and inequalities
- Graph linear equations and inequalities including horizontal, vertical, parallel and perpendicular
- Write linear equations in various forms
- Find slope
- Solve systems of equations by graphing, substitution, and elimination by addition and multiplication
- Solve systems of inequalities by graphing
- Introduce exponential, quadratic, reciprocal, absolute value, and step functions

Reference: Chapter 1, 5, 6, 7, 8, 9 10

State Goals: 8A, 8B, 8C, 8D