

Public Schools of the Tarrytowns

Grade 7H Curriculum

First Semester

UNIT 1: Algebra

Approximate time frame: September/October

Evaluating algebraic expressions

Translating 2-operation verbal expressions into equations

Solving two-operation equations

UNIT 2: Number Sense & Operations

Approximate time frame: October/November

Operations with integers

Exponents

Order of Operations with absolute value, integers, and exponents

Negative and zero exponents

Scientific notation (including translating scientific notation into standard form)

Comparing scientific notation

UNIT 3: Multi-step Equations

Approximate time frame: November/December

Solving equations by combining like terms

Solving equations containing the distributive property

Solving equations with variables in both members

Solving multi-step equations

UNIT 4: Pythagorean Theorem

Approximate time frame: December/January

Subsets of numbers

Rational and irrational numbers on a number line

Repeating and non-repeating decimals

Square roots and estimating square roots

Pythagorean theorem

Determining if a triangle is a right triangle

Second Semester

UNIT 5: Geometry

Approximate time frame: January/February

Plotting points on the coordinate plane

Drawing graphs of patterns

Area on a coordinate plane
Area and circumference of a circle
Missing angles in a quadrilateral
Faces and bases of 3-D shapes
Volume of prisms, cylinders
Surface area of prisms and cylinders

UNIT 6: Measurement

Approximate time frame: February
Converting mass and weight
Converting capacity and volume
Ratios
Proportions

UNIT 7: Statistics

Approximate time frame: March
Frequency tables
Venn diagrams
Collecting, reading and interpreting data
Range
Measures of central tendency
Circle graphs
Constructing central angles
Double bar graphs
Double line graphs
Misleading statistics
Sampling

UNIT 8: Probability

Approximate time frame: April
Listing outcomes of compound events
The Fundamental Counting Principle
Probability of dependent events
Experimental probability

UNIT 9: Transformations

Approximate time frame: May
Describe and identify transformations in the plane, using proper function notation (rotations, reflections, translations, and dilations)
Draw the image of a figure under rotations of 90 and 180 degrees
Draw the image of a figure under a reflection over a given line
Draw the image of a figure under a translation
Draw the image of a figure under a dilation
Identify the properties preserved and not preserved under a reflection, rotation, translation, and dilation

UNIT 10: Polynomials

Approximate time frame: June
Translate verbal sentences into algebraic inequalities
Write verbal expressions that match given mathematical expressions
Use physical models to perform operations with polynomials
Multiply and divide monomials

Add and subtract polynomials with integer coefficients

Multiply a binomial by a monomial or binomial

Divide a polynomial by a monomial (integer coefficients)

*Additionally time will be spent preparing for transition to the Common Core Standards