Mathematics RIT Score: 261-270

Number Sense and Operations

Fractions
· Add and subtract rational numbers with unlike denominators (may involve integers)

Percents
· Solve problems with successive discounts and rate of interest

New Vocabulary in this range:
none

New Signs and Symbols:
none

Percents
· Change a percent to a fraction (including mixed numbers)

Square Roots
· Understand properties of square roots

Irrational Numbers
· Define irrational numbers

New Vocabulary in this Range:
infinite non-repeating decimal

New Signs and Symbols:
none

Patterns, Functions, and Algebra

Patterns, Sequences, Functions
· Determine the domain of independent variables and the range of dependent variables in a relation that is defined by a graph, a set of ordered pairs, or a symbolic expression
· Analyze properties and relationships of functions (e.g. linear, polynomial, rational)

Solving Equations and Inequalities, Simplifying Expressions, Order of Operations
· Find the slope of a line parallel to a given line
· Find the x-intercept of a given equation
· Solve equations with fractions as exponents
· Analyze a graph to identify the appropriate system of equations
· Determine the vertex of a parabola
· Determine which of several equations can be factored
· Determine commonalities between three given equations of lines

Trigonometry
· Use graph to identify trigonometric functions of angles
· Find cosine, sine, and tangent of any given angle
· Use law of cosines

New Vocabulary in this Range:
none

New Signs and Symbols:
none

Measurement

Area, Perimeter, Circumference
· Understand that area of a square equals side squared
· Find the surface area of a polyhedron and cylinder
· Find the diameters when given the area of a circle
· Find the perimeter with use of variables

New Vocabulary in this Range:
none

New Signs and Symbols:
none

Geometry and Spatial Sense

Geometric Properties and Terminology
· Identify the correct definition of a postulate
· Solve problems using two chord power theorem
· Identify and solve problems involving right triangles using the trigonometric functions and the Pythagorean Theorem
· Use of distance formula to determine type of triangle using coordinates
· Solve problems regarding relationships among chords, secants, tangents, inscribed angles, central angle, arc, and inscribed and circumscribed polygons of circles
· Measure and compare angles in degrees
· Solve problems involving the perimeter, circumference, area, volume, and surface area of common geometric figures
· Determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids
· Find and use measures of sides and interior and exterior angles to identify figures and solve problems involving polygons
· Know the effect of rigid motions on figures in the coordinate plane and space, including rotations, translations, and reflections

New Vocabulary in this Range:
postulate

New Signs and Symbols:
none

Data Analysis, Statistics, and Probability

Combinations and Permutations
· Perform complex combinations in problem solving situations

Graphing
· Determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids

New Vocabulary in this Range:
none

New Signs and Symbols:
none

Problem Solving

· Solve complex geometry, algebra, and probability problems

New Vocabulary in this Range:
none

New Signs and Symbols:
none