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| Yinghua MS Math Course | Grade 5 Honor(Level 3 and 4) | Grade 6 Honor(Level 3 and 4) | Grade 7 Honor(Level 3 and 4) | Grade 8 Honor(Level 3 and 4) |
| Target Math Level in 9th Grade | Algebra 2 or Precalculus\* |
| Sept | Whole numbers and fractions1. Place value to 10,000,000

Decimals 1. Understanding thousandths

Algebra 1. Use letters as numbers
 | 1. The real number system
2. Rational number operations
 | 1. The Pythagorean theorem
	1. The Pythagorean theorem describes the relationship among the three sides of a triangle.
2. Geometric transformation
	1. Geometric transformations move figures about on a plane.
 | 1. Linear equations and functions
	1. Functions, graphs and notations
2. System of linear equations
	1. Graphing, substitution, linear combination methods
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| Oct | Ratio1. Ratio and equivalent ratio

Percent 1. Express fractions as percents

Graphs and probability1. Make and interpret data bar graphs
 | 1. Algebraic expressions
2. Algebraic equations and inequalities
 | Congruence and similarityBoth congruent figures and similar figures can be related by geometric transformation. | Inequalities and absolute value1. Solving linear inequalities
2. System of linear inequalities
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| Nov | Area of triangle1. Base and height of a triangle

Angles, properties of triangles and 4-sided figures1. Angles at a point and on a line

Three dimensional shapes, surface area and volume1. Identify prisms and pyramids
 | Direct and inverse proportionTwo quantities that are in a proportional relationship can be used to solve real world and mathematical problems. | 1. Statistics
2. Probability.
 | 1. Quadratic functions and factoring
	1. Graphing quadratic functions
2. Polynomials and polynomial functions
	1. Properties of exponents
 |
| Dec | Algebra 1. Use letters to represent unknown numbers

Fractions 1. Divide a whole number or a fraction by a fraction
 | 1. Angle properties and straight lines
2. Geometric transformation
 | 1. Solving linear equations
	1. Solving equations
2. Graphing linear equations and functions
	1. Coordinates and scatter plots
 | 1. Powers, roots, and radicals
	1. Rational exponents
2. Exponential and logarithmic functions
	1. Exponential growth and decay functions and modeling
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| Jan | Ratio and percentage1. Compare quantities using ratios
2. Express a ratio in simplest form
 | Volume and surface area of solidsSolids can be found and can be used to solve real world problems. | 1. Writing linear equations
	1. Using given information
2. Solving and graphing linear equations
	1. One step, multi-steps, and compound inequalities
 | 1. Rational equations and functions
	1. Graphing rational functions
2. Trigonometry
	1. Functions of any angle
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| Feb | Circle and graphs1. Identify the center, diameter, and radius of a circle
 | 1. Statistic
2. Probability
 | System of linear equations1. Solve linear system by graphing, substitution, and linear combination methods
2. Special types of linear systems
 | 1. Data analysis and probability
	1. Counting principle and permutations
2. Discrete mathematics
	1. Matrix operations
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| Mar | Solid figures1. Associate two-dimensional drawings with three-dimensional shapes

Volume 1. Find volume of a cuboid
 | 1. Exponents
2. Scientific notations
 | 1. Exponents and exponential functions
	1. Properties of exponents
2. Quadratic equations and functions
	1. Solving quadratic equations
 | 1. Triangle relationships
	1. Classifying triangles
2. Congruent triangles
	1. SSS and SAS
3. Similarity
	1. Similar polygons
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| Apr | Triangles and 4 sided figures1. Review angle properties of triangles and quadrilaterals
 | 1. Algebraic linear equations.
2. Lines and linear equations
 | 1. Polynomials and factoring
	1. Polynomial operations
2. Rational equations and functions
	1. Rational expressions
 | Right triangles and trigonometry1. Special right triangles
2. Tangent ratio
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| May | Speed 1. Interpret speed as distance traveled per unit of time
 | 1. System of linear equations
2. Functions
 | Radicals and connections to geometry1. Square roots
2. Radical expressions
 | Circle 1. Parts of a circle
2. Properties of tangents
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| June | 5th grade and 6th grade math review | Grade 7 math and some grade 8 math review | 8th grade and 9th grade math review | 10th grade and 11th grade math review |