

## MS Rtl Tier 3

This course covers the topics shown below.  
Students navigate learning paths based on their level of readiness.  
Institutional users may customize the scope and sequence to meet curricular needs.

Curriculum (107 topics + 91 additional topics)

- Whole Numbers (51 topics)
  - Expanded Form and Numeral Translation (5 topics)
    - Whole number place value: Problem type 1
    - Whole number place value: Problem type 2
    - Expanded form
    - Numeral translation: Problem type 1
    - Numeral translation: Problem type 2
  - Addition and Subtraction (14 topics)
    - One-digit addition with regrouping
    - Addition of 3 or 4 one-digit numbers
    - Adding a 2-digit number and a 1-digit number with regrouping
    - Adding 2-digit numbers without regrouping
    - Adding 2-digit numbers with regrouping a ten
    - Adding with regrouping a hundred
    - Addition of large numbers
    - Subtracting a 1-digit number from a 2-digit number
    - Subtraction of 2-digit numbers without regrouping
    - Subtraction of 2-digit numbers with regrouping
    - Adding or subtracting 10, 100, or 1000
    - Subtraction with multiple regrouping steps
    - Subtraction and regrouping with zeros
    - Word problem with addition or subtraction of whole numbers
  - Multiplication and Division (22 topics)
    - One-digit multiplication
    - Multiplication by 10, 100, and 1000
    - Multiplying 2-digit and 1-digit numbers without regrouping
    - Multiplying with regrouping
    - Introduction to multiplication of large numbers
    - Multiplication with trailing zeros: Problem type 1
    - Multiplication with trailing zeros: Problem type 2
    - Multiplication of large numbers
    - Multiplication as repeated addition
    - Using multiplication to find the number of squares
    - Multiples: Problem type 1
    - Multiples: Problem type 2
    - Division facts
    - Division without regrouping
    - Division with regrouping
    - Division with trailing zeros: Problem type 1
    - Quotient with remainder: 1-digit divisor, 2-digit dividend
    - Word problem on quotient and remainder
    - Quotient with remainder: 1-digit divisor, 3-digit dividend
    - Quotient with remainder: 2-digit divisor, 3-digit dividend
    - Word problem with multiplication or division of whole numbers
    - Word problem with multiplication and addition or subtraction of whole numbers
  - Rounding, Estimation, and Order of Operations (6 topics)
    - Introduction to inequalities
    - Ordering large numbers
    - Rounding to tens or hundreds
    - Rounding to hundreds or thousands
    - Rounding to thousands, ten thousands, or hundred thousands
    - Introduction to parentheses
  - Factors and Prime Numbers (2 topics)
    - Factors
    - Greatest common factor of 2 numbers
  - Properties of Arithmetic, Fact Families, and Sequences (2 topics)
    - Fact families for addition and subtraction

- Fact families for multiplication and division
- Fractions (18 topics)
  - Equivalent Fractions (4 topics)
    - Introduction to fractions
    - Equivalent fractions
    - Introduction to simplifying a fraction
    - Simplifying a fraction
  - Ordering and Plotting Fractions (3 topics)
    - Ordering fractions with the same denominator
    - Ordering fractions with the same numerator
    - Fractional position on a number line
  - Operations with Fractions (7 topics)
    - Addition or subtraction of fractions with the same denominator
    - Addition or subtraction of unit fractions
    - Introduction to addition or subtraction of fractions with different denominators
    - Product of a unit fraction and a whole number
    - Product of a fraction and a whole number: Problem type 1
    - Introduction to fraction multiplication
    - Fraction multiplication
  - Mixed Numbers (4 topics)
    - Writing a mixed number and an improper fraction for a shaded region
    - Writing an improper fraction as a mixed number
    - Writing a mixed number as an improper fraction
    - Addition or subtraction of mixed numbers with the same denominator
- Decimals (16 topics)
  - Decimal Place Value (6 topics)
    - Writing a decimal and a fraction for a shaded region
    - Decimal place value: Tenths and hundredths
    - Rounding decimals
    - Introduction to ordering decimals
    - Converting a decimal to a fraction: Basic
    - Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
  - Operations with Decimals (10 topics)
    - Addition of aligned decimals
    - Addition with money
    - Decimal addition with 3 numbers
    - Subtraction of aligned decimals
    - Subtraction with money
    - Word problem with one decimal operation: Problem type 1
    - Word problem with one decimal operation: Problem type 2
    - Multiplying a decimal by a whole number
    - Word problem with multiple decimal operations: Problem type 1
    - Division of a decimal by a whole number
- Geometry (5 topics)
  - Area and Perimeter (3 topics)
    - Perimeter of a square or a rectangle
    - Perimeter of a polygon
    - Area of a square or a rectangle
  - Volume and Solids (2 topics)
    - Volume of a rectangular prism
    - Volume of a rectangular prism made of unit cubes
- Measurement and Data (11 topics)
  - Customary Measurement (4 topics)
    - Choosing U.S. Customary measurement units
    - Reading a positive temperature from a thermometer
    - Conversions involving measurements in feet and inches
    - U.S. Customary unit conversion with whole number values
  - Time (3 topics)
    - Time unit conversion with whole number values
    - Introduction to adding time

- Introduction to elapsed time
- Data and Graphs (2 topics)
  - Constructing a bar graph for non-numerical data
  - Interpreting a tally table
- Counting and Probability (2 topics)
  - Classifying likelihood
  - Introduction to the probability of an event
- Algebra (6 topics)
  - Integers (2 topics)
    - Reading the temperature from a thermometer
    - Plotting integers on a number line
  - Expressions and Equations (4 topics)
    - Evaluating an algebraic expression: Whole number addition or subtraction
    - Evaluating an algebraic expression: Whole number multiplication or division
    - Additive property of equality with whole numbers
    - Introduction to solving an equation with multiplication or division
- Other Topics Available(\*) (91 additional topics)
  - Whole Numbers (22 topics)
    - Finding the value of a collection of coins
    - Finding the value of a collection of bills and coins
    - Understanding multiplication of a one-digit number with a larger number
    - Using addition and multiplication to count the objects on a grid
    - Division with trailing zeros: Problem type 2
    - Division with remainder involving quotients with intermediate zeros: Problem type 2
    - Word problem with division of whole numbers and rounding: Problem type 2
    - Comparing a numerical expression with a number
    - Estimating a sum of whole numbers: Problem type 2
    - Estimating a difference of whole numbers: Problem type 2
    - Estimating a product
    - Estimating a quotient
    - Introduction to order of operations
    - Order of operations with whole numbers
    - Even and odd numbers
    - Divisibility rules for 2, 5, and 10
    - Prime numbers
    - Prime factorization
    - Least common multiple of 2 numbers
    - Introduction to properties of addition
    - Introduction to properties of multiplication
    - Finding the next terms of a sequence with whole numbers
  - Fractions (10 topics)
    - Understanding equivalent fractions
    - Using a common denominator to order fractions
    - Plotting fractions on a number line
    - Addition or subtraction of fractions with different denominators
    - The reciprocal of a number
    - Division involving a whole number and a fraction
    - Fraction division
    - Mixed number addition with the same denominator and renaming
    - Mixed number subtraction with the same denominator and renaming
    - Mixed number multiplication: Problem type 1
  - Decimals (15 topics)
    - Decimal place value: Hundreds to ten thousandths
    - Ordering decimals
    - Converting a decimal to a proper fraction in simplest form: Advanced
    - Converting a fraction to a terminating decimal
    - Converting a decimal to a mixed number
    - Estimating a decimal sum or difference
    - Multiplication of a decimal by a power of ten
    - Decimal multiplication: Problem type 1
    - Division of a decimal by a power of ten
    - Division of a decimal by a 2-digit decimal
    - Solving a word problem on proportions using a unit rate
    - Finding the percentage of a grid that is shaded

- Converting a percentage to a fraction in simplest form
- Converting a fraction to a percentage: Denominator of 20, 25, or 50
- Finding a percentage of a whole number without a calculator: Basic
- Geometry (9 topics)
  - Measuring an angle with the protractor
  - Acute, obtuse, and right angles
  - Acute, obtuse, and right triangles
  - Finding an angle measure of a triangle given two angles
  - Finding the missing length in a figure
  - Perimeter and area on a grid
  - Distinguishing between the area and perimeter of a rectangle
  - Classifying solids
  - Nets of solids
- Measurement and Data (18 topics)
  - Choosing a measuring tool
  - Measuring length to the nearest inch
  - U.S. Customary unit conversion with whole number values: Two-step conversion
  - Choosing metric measurement units
  - Measuring length to the nearest centimeter
  - Metric distance conversion with whole number values
  - Metric mass or volume conversion with whole number values
  - Telling time and determining a.m. or p.m.
  - Constructing a line plot
  - Interpreting a pictograph table
  - Interpreting a bar graph
  - Interpreting a double bar graph
  - Interpreting a line graph
  - Finding the mode and range of a data set
  - Mean of a data set
  - Mean and median of a data set
  - Interpreting a stem-and-leaf plot
  - Interpreting a Venn diagram of 2 sets
- Algebra (17 topics)
  - Ordering integers
  - Integer addition: Problem type 1
  - Integer addition: Problem type 2
  - Integer subtraction: Problem type 1
  - Integer multiplication and division
  - Evaluating an algebraic expression: Whole numbers with two operations
  - Additive property of equality with decimals
  - Multiplicative property of equality with whole numbers
  - Function tables with one-step rules
  - Function tables with two-step rules
  - Describing an increasing or decreasing pattern from a table of values
  - Writing a function rule given a table of ordered pairs: One-step rules
  - Reading a point in quadrant 1
  - Plotting a point in quadrant 1
  - Graphing a line in quadrant 1
  - Introduction to exponents
  - Writing expressions using exponents

**\*Other Topics Available** By default, these topics are NOT included in the course, but can be added using the content editor in the Teacher Module.