McGraw Hill Education — REDBIRD MATHEMATICS

Course Outline

Grade K

Numbers to 10
- Count 1-4
- Count 1-5
- Count 1-7
- Count 1-9
- Count 1-10
- Count 0-10
- Represent 0-2
- Represent 0-5
- Represent 0-8
- Represent 0-10

Numbers to 20
- Count and Represent 0-13
- Count and Represent 0-16
- Count and Represent 0-19
- Count and Represent 0-20

Compare Numbers to 10
- Match to Find More
- More, Fewer, and Same Amounts
- Count to Find the Greater Number
- Compare Two Numbers
- Compare within 5
- Compare within 10

Understand Addition within 10
- Represent Addition within 5
- Put Together Groups within 5
- Explore Number Pairs for 0–5
- Explore Number Pairs for 6–9
- Explore Number Pairs for 10
- Find Numbers that Make 10
- Represent Addition within 10
- Put Together Groups within 10

Understand Subtraction within 10
- Decompose Numbers within 5
- Represent Subtraction within 5
- Solve Subtraction Equations within 5
- Decompose Numbers 6–9
- Represent Subtraction within 9
- Solve Subtraction Equations within 9
- Decompose 10
- Solve Subtraction Problems within 10

Place Value with Teen Numbers
- Show 11–14 as 10 Ones and Some More
- Show 15–19 as 10 Ones and Some More
- Teen Numbers with Drawings and Equations
- Compose and Decompose Teen Numbers

Number Patterns
- One Less/One More
- Count to 100 by Ones
- Count to 100 by Tens
- Count Forward

Grade 1

Problem Solving: Addition
- Model Joining Stories (to 5)
- Ways to Make 6 and 7
- Ways to Make 8 and 9
- Model Joining Stories (to 9)
- Commutative Property and Add Zero Property
- Ways to Make 10
- Model Equations to Represent Addition Stories
- Write Equations to Represent Addition Stories

Problem Solving: Subtraction
- Addition and Subtraction Fact Families
- Model Take From Stories
- Find Missing Parts of 7 and 8
- Model Equations to Represent Subtraction Stories
- Find Missing Parts of 9 and 10
- Model Take-Apart/Separating Stories
- Write Equations to Represent Subtraction Stories
- Compare Stories
- Relate Addition and Subtraction

Addition and Subtraction Strategies
- Count On
- Use a Known Fact to Add
- Related Subtraction Facts through 12
- Use 10 to Subtract
- Related Subtraction Facts through 20
- Find Unknowns on Addition Table

More Work with Addition
- Numbers Related to 10
- Make 10 to Add 7 and 8
- Make 10 to Add 9
- Use Strategies to Add
- Add Three Addends
- Addition and Subtraction Equations

Understand Place Value
- Count Forward to 120
- Teen Numbers
- Tens and Ones
- Make Numbers with Tens and Extras
- Compare Numbers through Hundreds
- Read and Write Numbers

Use Place Value and Properties of Operations to Add and Subtract
- Add Two Multiples of 10
- Add a Multiple of 10 to a 2-Digit Number on a Hundred Chart
- Add a Multiple of 10 to a 2-Digit Number
- Add 2-Digit Numbers
- Subtract Multiples of 10 from Multiples of 10

Number Strategies and Measurement
- Skip-Counting
- Add or Subtract 1 and 10 on a Number Chart
- Compare and Order Lengths
- Measure Length with Same-Size Units

Course Outline

Grade 2

Use Models to Add and Subtract
Use the Addition Table to Add
Use the Addition Table to Add and Subtract
Find Missing Addends with the Hundred Chart
Add and Subtract with the Hundred Chart
Add and Subtract within 20 Using Base Ten Blocks
Add and Subtract within 20 Using the Number Line
Add and Subtract within 100 Using Base Ten Blocks
Add and Subtract within 100 Using the Number Line
Use Tape Diagrams to Add
Use Tape Diagrams to Add and Subtract

Use Strategies to Add and Subtract
Make a Ten to Add
Make a Ten to Subtract
Two-step Problems
Make a Simpler Problem to Add
Make a Simpler Problem to Subtract
Problem Solving with Sums to 100
Problem Solving with Sums and Differences to 100

Numbers to 1000 and Place Value
Numbers through 100
Numbers through 1000
Represent Numbers on a Number Line
Compare Numbers Using Place Value

Addition with Multi-Digit Numbers Add
Tens to 2-Digit Numbers Find
Sums of 2-Digit Numbers
Use Strategies to Add 3-Digit Numbers
Add Tens to 3-Digit Numbers
Find Sums of 3-Digit Numbers
Find Sums of Multi-Digit Numbers
Find Sums of More than Two Numbers
Problem Solving with Addition

Subtraction with Multi-Digit Numbers Decompose
to Subtract 2-Digit Numbers Find
Differences of 2-Digit Numbers Problem
Solving with 2-Digit Numbers
Use Strategies to Subtract 3-Digit Numbers
Subtract Tens from 3-Digit Numbers
Subtract 3-Digit Numbers
Subtract Multi-Digit Numbers

Measure Length
Measurement Tools
Lengths in Inches and Feet
Lengths in Centimeters and Meters
Compare Lengths

Add and Subtract Lengths
Find the Sums of Lengths
Find the Differences of Lengths
Problem Solving with Lengths
Compare Problems with Lengths

Grade 3

Understand Multiplication
Equal Groups: Repeated Addition
Equal Groups in Multiplication: Unknown Items Per Group
Equal Groups in Multiplication: Unknown Number of Groups
Equal Groups: Rows
Equal Groups: The Array Model
Commutative Property of Multiplication
Multiplicative Identity Property and Zero Property of Multiplication
Multiplication in 1-Step Problem Solving

Concept of Area
Compare Areas of Rectangles
Tile Rectangles to Find Area
Area Formula
Decompose a Rectangle to Find Area
Area with Customary Units
Area with Metric Units
Decompose Figures to Find Area

Patterns in Multiplication
Multiply by 2
Multiply by 3 and 5
Introduction to Multiplication Tables
Use Multiplication Tables
Basic Multiplication Facts
Patterns in the Multiplication Table
Learn Multiplication Facts

Understand Division
Equal Groups in Division: Unknown Items Per Group
Equal Groups in Division: Unknown Number of Groups
Equal Groups: Tape Diagrams
Equal Groups: Arrays
Problem Solving with Related Facts

Use Mixed Operations to Solve Problems
Order of Operations with Parentheses
Order of Operations without Parentheses
Associative and Commutative Properties
Multiples of Ten
Use Tape Diagrams to Solve Multiplication and Div. Problems
Problem Solving with Mixed Operations

Measurement: Time, Volume, and Mass
Tell Time
Problem Solving with Elapsed Time
Liquid Volume
Mass

Fraction Concepts
Model Equal Parts
Use Fraction Bars to Name Fractions
Use Fraction Rectangles and Circles to Name Fractions
Find Equivalent Fractions
Compare Fractions
Find Fractions on a Number Line
Compare Fractions on a Number Line

Course Outline 2018-2019

Grade 4

Foundations in Base Ten
- Read and Write Multi-Digit Numbers
- Place Value Relationships
- Compare Numbers
- Round Numbers
- Addition
- Subtraction
- Problem Solving with Addition and Subtraction

Multiplication and Division
- Multiplication as Comparison
- Tape Diagrams and Multiplicative Comparison
- Find Missing Factors
- Factors and Multiples*
- Investigate Remainders

Extend Multiplication Concepts
- Multiply by 10, 100, and 1000
- Estimate Products
- Use Area Diagram to Multiply by 1-Digit Number
- Use Distributive Property to Multiply by 1-Digit Number
- Use Area Diagram to Multiply by 2-Digit Number
- Use Distributive Property to Multiply by 2-Digit Number
- Multiplication in Problem Solving

Extend Division Concepts
- Divide 10s, 100s, and 1000s
- Estimate Quotients
- Area Diagrams in Division
- Distributive Property in Division
- Zeros in Division
- Problem Solving with 1-Digit Divisors
- Problem Solving with Division and Other Operations

Equivalent Fractions
- Fractions: Compare Whole Numbers to Make New Numbers
- Compare Fractions with Models
- Compare and Order Fractions
- Multiply to Create Equivalent Fractions
- Divide to Create Equivalent Fractions

Operations with Fractions
- Add Unit Fractions
- Add Fractions
- Subtract Fractions
- Mixed Numbers
- Improper Fractions
- Problem Solving with Fractions with Like Denominators
- Multiples of Unit Fractions
- Multiply a Fraction by a Whole Number
- Problem Solving with Fractions and Mixed Operations

Decimal Fraction Concepts
- Decimal Fractions
- Add Decimal Fractions
- Write Fractions in Decimal Notation Compare
- Decimals in Tenths and Hundredths

Grade 5

Whole Numbers: Place Value & Multiplication
- Place Value and Exponents
- Multiply by 1-Digit Factors
- Multiply by 2-Digit Factors
- Use Algorithms with 1-Digit Factors
- Use Algorithms with 2-Digit Factors

Whole Numbers: Division
- Use Multiplication to Estimate Quotients
- Use Rounding to Estimate Quotients
- Use Repeated Subtraction and Multiples of 10
- Use Models with 2-Digit Divisors
- Methods for Division
- Problem Solving with Division

*Decimals: Place Value and Operations
- Decimal Place Value
- Round Decimals
- Compare Decimals
- Add and Subtract Decimals
- Multiply and Divide Tenths and Hundredths
- Multiply Decimals
- Divide Decimals
- Problem Solving with Decimal Operations

Fractions: Addition and Subtraction
- Equivalent Forms
- Find Common Denominators Using Models
- Find Common Denominators
- Add and Subtract Fractions and Mixed Numbers Using Models
- Add and Subtract Fractions and Mixed Numbers
- Estimate Sums and Differences
- Problem Solving with Addition and Subtraction of Fractions

Fractions: Multiplication and Division
- Inverse Operations
- Multiply Fractions Using Bar Models
- Multiply Fractions Using a Number Line
- Multiply Fractions Using an Area Diagram
- Scale
- Divide Whole Numbers by Unit Fractions
- Divide Unit Fractions by Whole Numbers
- Problem Solving with Multiplication and Division of Fractions

Volume: Right Rectangular Prisms
- Unit Cubes
- Determine Volume Using Cubes
- Examine Layers, Rows, and Columns
- Explore Nets
- Volume Formulas
- Problem Solving with Volume

Coordinate Graphs
- Coordinate Plane
- Ordered Pairs
- Connect Points in the Plane
- Use the Coordinate Plane

Course Outline 2018-2019

Grade 6

Rational Numbers and Absolute Value
- Explore Integers
- Rational Numbers
- Compare and Order Rational Numbers
- Understand Absolute Value
- Problem Solving with Absolute Value

Rational Numbers in the Coordinate Plane
- Graphs on the Coordinate Plane
- Distance in the Coordinate Plane
- Reflections on the Coordinate Plane
- Problem Solving with the Coordinate Plane

Division of Fractions
- Model Division with Unit Fractions
- Model Fraction Division
- Write Fraction Division Equations
- Fraction Division with Equations
- Create, Model, and Solve Problems with Fraction Division
- Problem Solving with Fractions and Mixed Numbers

Ratios and Rates
- Visualize and Represent Ratios
- Compare Ratios
- Unit Rates
- Graph Rates and Other Ratios
- Convert Measurement Units
- Problem Solving with Unit Rates

Proportions and Proportional Reasoning
- Write Proportions
- Strategies to Solve Proportions
- Percents
- Solve Percent Problems
- Problem Solving with Proportions

Algebraic Reasoning: Write and Evaluate Expressions
- Introduction to Exponents
- Order of Operations
- Numerical Expressions
- Transition to Algebraic Expressions
- Read and Write Algebraic Expressions Part 1
- Read and Write Algebraic Expressions Part 2
- Equivalent Expressions
- Use Equivalent Expressions to Simplify
- Problem Solving with Algebraic Expressions

Equations and Inequalities
- Check for Solutions to Equations
- Write 1-Variable Equations
- Solve 1-Variable Equations
- Problem Solving with One-Variable Equations
- Represent 2-Variable Relationships
- Analyze Relationships Using Tables and Graphs
- Relate Tables and Graphs to Equations
- Write Inequalities
- Solutions of Inequalities

Grade 7

Operations with Integers
- Add and Subtract Integers on the Number Line
- Add and Subtract Integers
- Multiply Integers on the Number Line
- Multiply Integers
- Multiply and Divide Integers
- Problem Solving with Integers

Operations with Rational Numbers
- Add, Subtract, and Multiply Rational Numbers
- Operations with Rational Numbers
- Multiply and Divide Rational Numbers
- Fractions as Division
- Numerical Expressions with Rational Numbers
- Decimals and Fractions
- Problem Solving with Rational Numbers

Unit Rates and Proportional Reasoning
- Find and Compare Unit Rates
- Identify Proportional Relationships from Tables and Graphs
- Proportional Relationships in Tables and Graphs
- Tables, Graphs, and Equations of Proportional Relationships
- Scale Drawings
- Represent Proportional Relationships
- Problem Solving with Unit Rates and Constant of Proportionality

Proportional Reasoning and Percents
- Represent and Solve Proportions
- Proportional Relationships and Percents
- Proportional Relationships and Percent Change
- Problem Solving with Percent Change
- Problem Solving with Proportional Relationships

Algebraic Expressions
- Add and Subtract Linear Expressions
- Expand Linear Expressions
- Expand and Factor Linear Expressions
- Analyze Equivalent Expressions
- Simplify Multi-Step Expressions

Write and Solve Equations and Inequalities for Problems
- One-Step Equations with Rational Numbers Write
- Multi-Step Equations to Model Problems Solve
- Multi-Step Equations
- Problem Solving with Equations
- Write Inequalities to Model Problems
- Write and Solve Inequalities Part 1
- Write and Solve Inequalities Part 2
- Problem Solving with Inequalities

Equations in Measurement and Geometry
- Circumference of a Circle
- Area and Circumference of a Circle
- Problem Solving with Circles
- Area and Surface Area of 2- and 3-Dimensional Objects
- Surface Area and Volume of 3-Dimensional Objects
- Problem Solving with 2- and 3-Dimensional Objects