

Mathletics

Pennsylvania Core Standards

Activities (Courses) and Skill Quests



Grades 3-6

August, 2025

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Grade 3

2.1.3 Numbers and Operations

B. Numbers & Operations in Base Ten

CC.2.1.3.B.1	
Apply place-value understanding and properties of operations to perform multi-digit arithmetic.	
Course Topics	Activities
Numbers & Operations in Base Ten	Nearest Ten?
	Nearest Hundred?
	Addition Properties
	Add Three 2-Digit Numbers: Regroup
	Add 3-Digit Numbers
	Add 3-Digit Numbers: Regroup
	Add Multi-Digit Numbers 1
	Strategies for Column Addition
	Missing Numbers 1
	3-Digit Differences
	3-Digit Differences with Zeros
	3-Digit Differences: 1 Regrouping
	3-Digit Differences: 2 Regroupings
Topics	Skill Quests
Round to the nearest 10 or 100	Rounding numbers up to 1000 to the nearest 100
	Rounding numbers up to 1000 to the nearest 10
Add within 1000	Adding 2-digit & 3-digit numbers: number line
	Adding 2-digit & 3-digit numbers: jump strategy
	Adding two 2-digit numbers: base ten blocks
	Adding 2-digit & 3-digit numbers: expanded form
	Adding two 2-digit numbers: compensation
Add & subtract within 1000	Add & subtract up to 3-digits: number line
	Add & subtract up to 3-digits: jump strategy
	Add & subtract two 2-digits: place value blocks
	Add & subtract up to 3-digits: expanded form
	Add & subtract two 2-digit numbers: compensation

C. Numbers & Operations - Fractions

CC.2.1.3.C.1	
Explore and develop an understanding of fractions as numbers.	
Course Topics	Activities
Numbers & Operations- Fractions	Halves and Fourths
	Thirds and Sixths
	Shade Fractions
	Model Fractions

	What Fraction Is Shaded 1
	Identifying Fractions on a Number Line
	Compare Fractions 1a
	Comparing Fractions 1
	Equivalent Fraction Wall 1
Topics	Skill Quests
Introduction to fractions	Introducing the numerator & denominator
	Introducing eighths
	Halves, quarters & eighths of objects or shapes
	Halves, thirds or quarters of shapes: partitioning
	Introducing sixths
	Thirds & sixths of objects, shapes & sets
Locate unit fractions on a number line	Locating unit fractions on a number line
Locate fractions on a number line	Locating fractions on a number line
Investigate equivalent fractions	Investigating equivalent fractions
Find simple equivalent fractions	Recognize & generate simple equivalent fractions
Whole numbers as fractions	Express & recognize whole numbers as fractions
Compare fractions	Comparing fractions: same numerator or denominator

2.2.3 Algebraic Concepts

A. Operations and Algebraic Thinking

CC.2.2.3.A.1	
Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.	
Course Topics	Activities
Operations and Algebraic Thinking 1	Groups of Two
	Groups of Three
	Groups of Four
	Groups of Five
	Groups of Six
	Groups of Seven
	Groups of Eight
	Groups of Nine
	Groups of Ten
	Model Multiplication to 5×5
	Multiplication Arrays
	Divide Into Equal Groups
	Dividing Threes
	Dividing Fours

	Dividing Fives
	Dividing Sixes
	Dividing Sevens
	Dividing Eights
	Dividing Nines
	Dividing Tens
	Share the Treasure
Topics	Skill Quests
Introduction to multiplication	Multiplying using arrays & repeated addition
Introduction to division	Dividing by sharing (up to 50)
	Dividing by grouping (up to 50)
	Creating & solving problems involving equal groups
	Using repeated subtraction to divide

CC.2.2.3.A.2	
Understand properties of multiplication and the relationship between multiplication and division.	
Course Topics	Activities
Operations and Algebraic Thinking 2-4	Related Facts 2
	Missing Numbers: \times and \div facts
	Fact Families: Multiply and Divide
	Multiplication Turn-Abouts
	Multiplication Properties
Topics	Skill Quests
Multiplication properties	Multiplication properties
Relation between multiplying & dividing	Relation between multiplication & division

CC.2.2.3.A.3	
Demonstrate multiplication and division fluency.	
Course Topics	Activities
Operations and Algebraic Thinking 2-4	Arrays 1
	Frog Jump Multiplication
	Arrays 2
	Frog Jump Division
	Times Tables
Topics	Skill Quests
Multiplication & division facts	Multiplication facts: 2, 4, 8
	Multiplication facts: 5, 10
	Multiplication facts: 3, 6, 9
	Multiplication facts: 7
	Recalling multiplication facts to 5×5
	Recalling multiplication facts to 10×10
	Division facts: 2, 4, 8
	Division facts: 5, 10
	Division facts: 3, 6, 9
	Division facts: 7

CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.	
Course Topics	Activities
Operations and Algebraic Thinking 2-4	Problems: Times and Divide
	Word Problems with Letters
	Fill the Jars
	Increasing Patterns
	Decreasing Patterns
	Describing Patterns
Topics	Skill Quests
2-step word problems: 4 operations	2-step word problems with the 4 operations
Number patterns	Identifying & creating number patterns

2.3.3 Geometry

A. Geometry

CC.2.3.3.A.1 Identify, compare, and classify shapes and their attributes.	
Course Topics	Activities
Geometry	Shapes
	Collect the Shapes 1
	Collect the Shapes 2
	Collect More Shapes
	Collect the Polygons
	Count Sides and Corners
Topics	Skill Quests
Shapes & their attributes	Sorting & naming quadrilaterals
	Comparing & describing two-dimensional shapes

CC.2.3.3.A.2 Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Partition shapes	Partition shapes into parts with equal areas

2.4.3 Measurement, Data, and Probability

A. Measurement and Data

CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length.	
Course Topics	Activities

Measurement & Data 1-3	Measuring Length
	Measure to the Nearest Half Inch
	Temperature (Fahrenheit)
Topics	Skill Quests
Liquid volume	Estimating, comparing & measuring in liters
	Liquid volume: milliliters
	Solving word problems involving liquid volume
Mass	Mass: kilograms
	Mass: grams
	Mass: measuring in grams & kilograms
Measure temperature	Measuring temperature
	Solving 1-step word problems involving mass

CC.2.4.3.A.2	
Tell and write time to the nearest minute and solve problems by calculating time intervals.	
Course Topics	Activities
Measurement & Data 1-3	What is the Time?
	Five Minute Times
	Time Mentals
	Elapsed Time
Topics	Skill Quests
Tell & write time	Telling & writing time
Calculate elapsed time	Calculating elapsed time
Use real-world timetables	Using real-world timetables

CC.2.4.3.A.3	
Solve problems and make change involving money using a combination of coins and bills.	
Course Topics	Activities
Measurement & Data 1-3	Money - Totaling (USD)
	How Much Money? (USD)
	Making Change (USD)
	Choosing the Fewest Coins (USD)
	Who's got the Money?
Topics	Skill Quests
Money word problems	Money word problems

CC.2.4.3.A.4	
Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.	
Course Topics	Activities
Measurement & Data 4-6	Tally Charts
	Pictographs
	Making Pictographs: With Scale
	Pictographs: with scale & half symbols
	Line Plots
	Bar Graphs 1
	Bar Graphs 2

	Add and Subtract Using Graphs
Topics	Skill Quests
Scaled pictograph & bar graphs	Reading & representing data: scaled pictograph Reading & representing data: scaled bar graph
Represent & read line plots	Representing & reading line plots

CC.2.4.3.A.5	
Determine the area of a rectangle and apply the concept to multiplication and to addition.	
Course Topics	Activities
Measurement & Data 6-8	Area of Shapes
	Calculate Area of Shapes (inches, feet, yards)
	Biggest Shape
	Area of Squares and Rectangles
	Calculate Area of Squares and Rectangles
	Area: Compound Figures
Topics	Skill Quests
Find the area with repeated addition	Finding the area of rectangles, repeated addition
Area problems: multiplication	Solving area problems using multiplication

CC.2.4.3.A.6	
Solve problems involving perimeters of polygons and distinguish between linear and area measures.	
Course Topics	Activities
Measurement & Data 6-8	Perimeter
	Perimeter: Squares and Rectangles
	Perimeter Detectives 1
	Perimeter of Shapes
Topics	Skill Quests
Perimeter problems	Finding the perimeter & area of rectangles
	Relating perimeter & area
	Introducing perimeter
	Finding the perimeter of rectangles
	Finding a missing side length given the perimeter
	Finding the perimeter of polygons

Grade 4

2.1.4 Numbers and Operations

B. Numbers & Operations in Base Ten

CC.2.1.4.B.1	
Apply place-value concepts to show an understanding of multidigit whole numbers.	
Course Topics	Activities
Numbers & Operations in Base Ten 1	Place Value 1 ($\times 10$ and $\div 10$)
	Place Value 2 ($\times 10$ and $\div 10$)
	Place Value 3
	Numbers from Words to Digits 1
	Greater Than or Less Than 1
	Expanded Form
	Expanding Numbers
	Understanding Place Value 2
	Understanding Place Value 3
	Rounding Numbers
	Nearest Thousand?
	Place Value to Millions
	Numbers from Words to Digits 2
Topics	Skill Quests
Place value for multi-digit numbers	Generalizing place value understanding
	Reading & writing 6-digit numbers
	Comparing & ordering 6-digit numbers
	Rounding 6-digit numbers

CC.2.1.4.B.2	
Use place-value understanding and properties of operations to perform multi-digit arithmetic.	
Course Topics	Activities
Numbers & Operations in Base Ten 2	Add Multi-Digit Numbers 1
	Add Multi-Digit Numbers 2
	Adding Colossal Columns
	Subtracting Colossal Columns
	2-Digit Differences: Regroup
	3-Digit Differences: 1 Regrouping
	3-Digit Differences with Zeros
	Multiply 2 Digits Area Model
	Contracted Multiplication
	Double and Halve to Multiply
	Remainders by Arrays
	Remainders by Tables
	Divide: 1-Digit Divisor 1

	Divide: 1-Digit Divisor 2
	Divide: 1-Digit Divisor, Remainder
Topics	Skill Quests
Add multi-digit numbers	Adding multi-digit numbers, no regrouping
	Adding multi-digit numbers, regrouping
Subtract multi-digit numbers	Subtracting multi-digit numbers, no regrouping
	Subtracting multi-digit numbers, regrouping
Multiply multi-digit numbers	Multiplying multi-digit numbers, algorithm
	Multiplying multi-digit numbers using place value
	Multiplying multi-digit numbers, area model
Divide multi-digit numbers	Dividing numbers, place value blocks
	Dividing numbers, area model
	Dividing numbers, place value strategy
	Introducing remainders in division

C. Numbers & Operations - Fractions

CC.2.1.4.C.1	
Extend the understanding of fractions to show equivalence and ordering.	
Course Topics	Activities
Numbers & Operations-Fractions	Equivalent Fraction Wall 1
	Equivalent Fraction Wall 2
	The Equivalent Fraction
	Selecting Equivalent Fractions
	Compare Fractions 1b
	Comparing Fractions 1
Topics	Skill Quests
Fraction equivalence	Equivalent fractions with models
	Equivalent fractions with multiplication
Compare fractions	Comparing fractions using models
	Compare fractions, different numerator/denominator
	Comparing fractions using common denominators

CC.2.1.4.C.2	
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	
Course Topics	Activities
Numbers & Operations-Fractions	Add Like Fractions
	Subtract Like Fractions
	Add Subtract Fractions 1
	Add Like Mixed Numbers
	Model Fractions to Multiply
	Multiply Fraction by Whole Number

Topics	Skill Quests
Understand adding/subtracting fractions	Adding unit fractions, same denominators: models
	Adding fractions, same denominator
	Subtracting fractions, same denominator
	Adding & subtracting fractions, same denominator
Decompose fractions	Decomposing fractions
Add & subtract mixed numbers	Adding mixed numbers, same denominator
	Subtracting mixed numbers, same denominator
Word problems: add & subtract fractions	Word problems: adding & subtracting fractions
Fractions: multiples of unit fractions	Fractions: multiples of unit fractions
Multiply fractions by whole numbers	Multiply fractions by whole numbers using models
Word problems: multiply fractions	Word problems: multiply fractions by whole numbers

CC.2.1.4.C.3	
Connect decimal notation to fractions, and compare decimal fractions.	
Course Topics	Activities
Numbers & Operations-Fractions	Decimals from Words to Digits 1
	Decimals on the Number Line
	Comparing Decimals 1
	Decimal Order 1
Topics	Skill Quests
Introduce decimal notation	Introducing decimal notation
Fractions as decimals	Introducing tenths

2.2.4 Algebraic Concepts

A. Operations and Algebraic Thinking

CC.2.2.4.A.1	
Represent and solve problems involving the four operations.	
Course Topics	Activities
Operations and Algebraic Thinking	Problems: Multiply and Divide
	Word Problems with Letters
	Multiply and Divide Problems 1
Topics	Skill Quests
Word problems: 4 operations	Multi-step multiplication/division word problems
	Solving division word problems
	Solving multiplication word problems
	2-step addition & subtraction word problems

CC.2.2.4.A.2 Develop and/or apply number theory concepts to find factors and multiples.	
Course Topics	Activities
Operations and Algebraic Thinking	Multiples
	Factors
	Find the Factor
	Prime or Composite?
Topics	Skill Quests
Factors, multiples & prime numbers	Finding multiples: whole numbers up to 100
	Finding factors: whole numbers up to 100
	Prime & composite numbers

CC.2.2.4.A.4 Generate and analyze patterns using one rule.	
Course Topics	Activities
Operations and Algebraic Thinking	Increasing Patterns
	Decreasing Patterns
	Describing Patterns
Topics	Skill Quests
Number & shape patterns	Generating shape patterns from a given rule
	Generating addition patterns from a given rule
	Generating subtraction patterns from a given rule
	Generate multiplication patterns from a given rule

2.3.4 Geometry

A. Geometry

CC.2.3.4.A.1 Draw lines and angles and identify these in two-dimensional figures.	
Course Topics	Activities
Geometry	What Line am I?
	Right Angle Relation
	Triangles: Acute, Right, Obtuse
	What Type of Angle?
Topics	Skill Quests
Spatial features in 2-D figures	Classifying angles
	Labeling points & lines
	Identifying spatial features in 2-D shapes

CC.2.3.4.A.2 Classify two-dimensional figures by properties of their lines and angles.	
Course Topics	Activities
Geometry	Shapes
	Collect the Shapes 2

	Triangle - Tasters
Topics	Skill Quests
Classify 2-D figures	Classifying plane shapes by their spatial features
	Classifying quadrilaterals
	Classifying triangles by their sides & angles

CC.2.3.4.A.3	
Recognize symmetric shapes and draw lines of symmetry.	
Course Topics	Activities
Geometry	Symmetry
	Symmetry or Not?
	Lines of Symmetry
	Skill Quests
Lines of symmetry	Lines of symmetry

2.4.4 Measurement, Data, and Probability

A. Measurement and Data

CC.2.4.4.A.1	
Solve problems involving measurement and conversions from a larger unit to a smaller unit.	
Course Topics	Activities
Measurement and Data 1	Customary Units of Weight 1
	Using Timetable
	Money Problems: Four Operations
	Making Change (USD)
	Perimeter: Squares and Rectangles
	Perimeter Detectives 1
	Area: Squares and Rectangles
Topics	Skill Quests
Convert units of measure	Units of length: mm/cm/m/km
	Units of mass: g/kg & oz/lb
	Units of time: sec/min/hr & day/week/year
	Units of volume & capacity: mL/L
Area & perimeter	Finding the area of a rectangle, formula

CC.2.4.4.A.2	
Translate information from one type of data display to another.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Translate to different data displays	Translating to different data displays

CC.2.4.4.A.4	
Represent and interpret data involving fractions using information provided in a line plot.	
Course Topics	Activities

Teacher directed	
Topics	Skill Quests
Fractions on a line plot	Fractions on a line plot

CC.2.4.4.A.6	
Measure angles and use properties of adjacent angles to solve problems.	
Course Topics	Activities
Measurement and Data 6	Comparing Angles
	Equal Angles
	Estimating Angles
	Measuring Angles
	Angles of Revolution: Unknown Values
Topics	Skill Quests
Measure & estimate angles	Measuring & estimating angles
Problems with adjacent angles	Solving problems with adjacent angles

Grade 5

2.1.5 Numbers and Operations

B. Numbers & Operations in Base Ten

CC.2.1.5.B.1	
Apply place-value concepts to show an understanding of operations and rounding as they pertain to whole numbers and decimals.	
Course Topics	Activities
Numbers & Operations in Base Ten 1	Place Value to Millions
	Place Value to Billions
	Place Value 1 ($\times 10$ and $\div 10$)
	Place Value 2 ($\times 10$ and $\div 10$)
	Decimal Place Value
	Multiplying by 10, 100, 1000
	Dividing by 10, 100, 1000
	Multiply Decimals and Powers of 10
	Divide by Powers of 10
	Decimals from Words to Digits 1
	Decimals from Words to Digits 2
	Decimal Order 1
	Decimal Order 2
	Rounding Decimals 1
Topics	Skill Quests
The place value system	Identifying the place value of a digit in a number
	Understanding the place value system: powers of 10
Multiply & divide by powers of 10	Multiplying decimals by powers of 10
	Dividing decimals by powers of 10
	Writing numbers using powers of 10
Read & write decimals to thousandths	Reading & writing decimals to thousandths
Compare decimals to thousandths	Comparing & ordering decimals to thousandths
Round decimals	Rounding decimals

CC.2.1.5.B.2	
Extend an understanding of operations with whole numbers to perform operations including decimals.	
Course Topics	Activities
Numbers & Operations in Base Ten 2	Long Multiplication
	Divide: 2-Digit Divisor, Remainder
	Long Division
	Mental Methods Division 2
	Mental Methods Division 3
	Add Decimals 1

	Subtract Decimals 1
	Multiply Decimals 1
	Multiply Decimals: Area Model
	Divide Decimal by Whole Number
	Money Problems: Four Operations
Topics	Skill Quests
Multiply multi-digit numbers, algorithm	Multiplying multi-digit numbers, algorithm
Divide multi-digit numbers	Dividing multi-digit numbers, algorithm
Operations with decimals	Adding decimals to hundredths, algorithm
	Subtracting decimals using mental strategies
	Subtracting decimals to hundredths, algorithm
	Multiplying decimals & whole numbers
	Multiplying decimals to hundredths, algorithm
	Multiplying decimals using mental strategies
	Multiplicative relationships with decimals
	Divide whole numbers & decimals, mental strategies
	Dividing whole numbers & decimals, algorithm

C. Numbers & Operations - Fractions

CC.2.1.5.C.1	
Use the understanding of equivalency to add and subtract fractions.	
Course Topics	Activities
Numbers & Operations-Fractions	Add Unlike Fractions
	Add Unlike Mixed Numbers
	Subtract Unlike Fractions
	Subtract Unlike Mixed Numbers
	Fraction Word Problems
Topics	Skill Quests
Add & subtract fractions	Adding fractions & mixed numbers
	Subtracting fractions & mixed numbers
	Adding & subtracting fractions & mixed numbers
	Adding fractions, proper & improper
	Adding mixed numbers
	Subtracting fractions, proper & improper
	Subtracting mixed numbers

CC.2.1.5.C.2	
Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	
Course Topics	Activities
Numbers & Operations-Fractions	Partition into Equal Parts
	Model Fractions to Multiply
	Multiply Fraction by Whole Number

	Multiply: Whole Number and Fraction
	Multiply Fraction by Fraction
	Multiply Two Fractions 1
	More Fraction Problems
	Divide Fractions Visual Model
	Divide by a Unit Fraction
Topics	Skill Quests
Multiply fractions	Multiplying a fraction by a whole number
	Multiplying a fraction by a fraction
Effects of multiplying fractions	Interpreting multiplying fractions as scaling
Fractions as division	Interpreting fractions as division
Divide unit fractions by whole numbers	Dividing unit fractions by whole numbers, models
Divide whole numbers by unit fractions	Dividing whole numbers by unit fractions, models

2.2.5 Algebraic Concepts

A. Operations and Algebraic Thinking

CC.2.2.5.A.1	
Interpret and evaluate numerical expressions using order of operations.	
Course Topics	Activities
Operations and Algebraic Thinking	Order of Operations 1 (PEMDAS)
	Operations Order 1 (PEMDAS)
Topics	Skill Quests
Grouping symbols	Order of operations with grouping symbols

CC.2.2.5.A.4	
Analyze patterns and relationships using two rules.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Numerical patterns	Comparing numerical patterns
	Interpreting & creating a number pattern table
	Graphing ordered pairs from numerical patterns

2.3.5 Geometry

A. Geometry

CC.2.3.3.A.1	
Graph points in the first quadrant on the coordinate plane and interpret these points when solving real world and mathematical problems.	
Course Topics	Activities
Geometry	Coordinate Graphs: 1st Quadrant
Topics	Skill Quests
Graph in the first quadrant	Graphing in the first quadrant

CC.2.3.3.A.2	
Classify two-dimensional figures into categories based on an understanding of their properties.	
Course Topics	Activities
Geometry	Properties of Quadrilaterals
	Collect More Shapes
	Collect the Shapes 2
	Collect the Polygons
Topics	Skill Quests
Attributes of 2-D figures	Sorting plane shapes

2.4.5 Measurement, Data, and Probability

A. Measurement and Data

CC.2.4.5.A.1	
Solve problems using conversions within a given measurement system.	
Course Topics	Activities
Measurement and Data	Converting Units of Length
	Customary Units of Length
	Operations with Length
	Meters and Kilometers
	Converting Units of Mass
	Customary Units of Weight 1
	Customary Units of Weight 2
	Milliliters and Liters
	Customary Units of Capacity
Topics	Skill Quests
Convert measurement units	Converting between standard metric units of length
	Converting between standard metric units of mass
	Converting metric units of volume & capacity
	Converting between customary units of length
	Converting customary units of volume & capacity
	Converting between customary units of mass
	Word problems: measurement conversions

CC.2.4.3.A.2	
Represent and interpret data using appropriate scale.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Represent and interpret data	Representing data in picture graphs
	Collecting, recording & interpreting data
	Constructing line graphs

CC.2.4.3.A.4	
Solve problems involving computation of fractions using information provided in a line plot.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Fraction problems: line plots	Represent & interpret measurements: line plots

CC.2.4.3.A.5	
Apply concepts of volume to solve problems and relate volume to multiplication and to addition.	
Course Topics	Activities
Measurement and Data	Volume of Solids and Prisms - 1cm ³ blocks
	How many Blocks?
	Volume: Rectangular Prisms 1
	Volume: Rectangular Prisms 2
Topics	Skill Quests
Measure volume with unit cubes	Measuring volume: unit cubes & cubic centimeters
Volume: rectangular prisms	Volume: additive & multiplicative strategies
Volume formulas: rectangular prism	Applying volume formulas for rectangular prisms
Volume: composite rectangular prisms	Volume of composite rectangular prisms

Grade 6

2.1.6 Numbers and Operations

D. Ratios and Proportional Relationships

CC.2.1.6.D.1	
Understand ratio concepts and use ratio reasoning to solve problems.	
Course Topics	Activities
Ratios & Proportional Relationships	Rates
	Ratios
	Equivalent Ratios
	Rates Word Problems
	Ratio Word Problems
	Average Speed
	Best Buy
	Percentage of an amount using fractions (<100%)
	Solve Percent Equations
	Percentage Word Problems
Topics	Skill Quests
Introduction to ratios	Defining, understanding & writing ratios

E. The Number System

CC.2.1.6.E.1	
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	
Course Topics	Activities
The Number System 1-2	Dividing Fractions
	Divide Fractions by Fractions 1
Topics	Skill Quests
Divide fractions	Dividing a fraction by a fraction
	Dividing fractions & mixed numbers
	Solving word problems: division of fractions

CC.2.1.6.E.2	
Identify and choose appropriate processes to compute fluently with multi-digit numbers.	
Course Topics	Activities
The Number System 1-2	Add Multi-Digit Numbers 2
	Subtracting Colossal Columns
	Divide: 1-Digit Divisor 2
	Divide: 2-Digit Divisor, Remainder
	Adding Decimals
	Subtracting Decimals
	Adding and Subtracting Decimals
	Multiply Decimal by Decimal

	Divide Decimal by Whole Number
	Divide Decimal by Decimal
Topics	Skill Quests
Multiply multi-digit numbers, algorithm	Multiplying multi-digit numbers, algorithm
Divide multi-digit numbers, algorithm	Divide 4-digit by 2-digit numbers, no remainder
	Divide 4-digit by 2-digit numbers, with remainders
	Divide 4-digit by 2-digit numbers
Operations with multi-digit decimals	Adding decimals using the standard algorithm
	Subtracting decimals using the standard algorithm
	Multiplying decimals using the standard algorithm
	Dividing decimals using the standard algorithm
	Word problems: adding & subtracting decimals
	Word problems: multiplying & dividing decimals

CC.2.1.6.E.3	
Develop and/or apply number theory concepts to find common factors and multiples.	
Course Topics	Activities
The Number System 3-4	Find the Factor
	Greatest Common Factor
	Multiples
	Least Common Multiple
Topics	Skill Quests
GCF & LCM	Greatest common factor
	Least common multiple
	Solving word problems: factors & multiples
	Factoring using the distributive property

CC.2.1.6.E.4	
Apply and extend previous understandings of numbers to the system of rational numbers.	
Course Topics	Activities
The Number System 3-4	Integers on a Number Line
	Absolute Value
	Number Plane
	Ordered Pairs
	Coordinate Graphs
	Graphing from a Table of Values
	Graphing from a Table of Values 2
	Ordering Integers (Number Line)
	Comparing Integers
Topics	Skill Quests
Positive & negative numbers	Investigating & interpreting integers
Opposites on the number line	Opposites on the number line

Graph rational numbers	Placing rational numbers on the number line
	Graphing rational numbers on the coordinate plane
Compare rational numbers	Comparing integers
	Comparing rational numbers
Order rational numbers	Exploring the everyday language of integers
	Statements of order: rational numbers
Introduction to absolute value	Introducing absolute value
Absolute value vs order	Interpreting meanings of integers in context
Solve problems by graphing: 4 quadrants	Solving problems by graphing in the 4 quadrants
	Find the distance between 2 points, absolute value

2.2.6 Algebraic Concepts

B. Expressions and Equations

CC.2.2.6.B.1	
Apply and extend previous understandings of arithmetic to algebraic expressions.	
Course Topics	Activities
Expressions and Equations	Exponents
	I am Thinking of a Number!
	Writing Algebraic Expressions
	Simple Substitution 1
	Order of Operations 2 (PEDMAS)
Topics	Skill Quests
Numerical expressions with exponents	Writing numerical expressions with exponents
	Evaluating numerical expressions with exponents
Write expressions: numbers & variables	Writing expressions with numbers & variables
Parts of an expression	Identifying parts of an expression
Evaluate algebraic expressions	Evaluating algebraic expressions
	Evaluating expressions using order of operations
Properties of operations: expressions	Properties of operations: equivalent expressions
Equivalent expressions	Identifying equivalent expressions

CC.2.2.6.B.2	
Understand the process of solving a one-variable equation or inequality and apply it to real-world and mathematical problems.	
Course Topics	Activities
Expressions and Equations	Write an Equation: Word Problems
Topics	Skill Quests
Test solutions	Testing solutions: equations
	Testing solutions: inequalities
Write algebraic expressions	Writing algebraic expressions
Solve 1-step equations	Preserving equality in equations
	Solving simple linear equations using models

	1-step equations: add/subtract, positive integers
	1-step equations: add/subtract, rational numbers
	1-step equations: multiply, positive integers
	1-step equations: multiply, rational numbers
	1-step equations: division, rational numbers
	Writing & solving 1-step equations
Write & represent inequalities	Writing inequalities
	Represent algebraic inequalities on a number line

CC.2.2.6.B.3	
Represent and analyze quantitative relationships between dependent and independent variables.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Independent & dependent variables	Independent & dependent variables

2.3.6 Geometry

A. Geometry

CC.2.3.6.A.1	
Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.	
Course Topics	Activities
Geometry	Area: Right Triangles
	Area: Triangles
	Area: Squares and Rectangles
	Area: Parallelograms
	Area: Quadrilaterals
	Area: Compound Figures
	Volume: Rectangular Prisms 1
	Volume: Rectangular Prisms 2
	Nets
	Surface Area: Rectangular Prisms
	Surface Area: Triangular Prisms
Topics	Skill Quests
Area: triangles & quadrilaterals	Finding the area of a right triangle
	Investigating the area of special quadrilaterals
	Real-world area problems: special quadrilaterals
Volume: rectangular prisms, formula	Volume: rectangular prisms, fraction edge lengths
Polygons in the coordinate plane	Drawing polygons in the coordinate plane
Surface area	Connecting 3-D objects with their nets
	Calculating the surface area of rectangular prisms

2.4.6 Measurement, Data, and Probability

B. Statistics and Probability

CC.2.4.6.B.1 Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.	
Course Topics	Activities
Statistics and Probability	Line Plots
	Dot Plots
	Histograms
	Box Plots 1
	Calculating Interquartile Range
	Mean
	Median
	Mode
	Data Extremes and Range
Topics	Skill Quests
Data displays	Constructing data displays
	Reading & interpreting data in a dot plot
	Reading & interpreting data in a histogram
	Reading & interpreting box plots
Summarize numerical data	Summarizing numerical data
Report observations	Reporting observations in a data display



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