



Mathletics

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Pennsylvania Core Standards

Grades K-8

Mathletics Curriculum Alignment

Kindergarten

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	Counting & Cardinality	CC.2.1.K.A.1	Know number names and write and recite the count sequence.	Counting Up to 20 Counting Forward Going Up 1 to 30 Count by Tens Before, After and Between to 20 Order Numbers to 10 Order Numbers to 20 Matching Numbers to 10 Matching Numbers to 20 Reading Numbers to 30
Numbers and Operations	Counting & Cardinality	CC.2.1.K.A.2	Apply one-to-one correspondence to count the number of objects.	How Many? Dot Display How Many Dots? Concept of Zero Count to 5
Numbers and Operations	Counting & Cardinality	CC.2.1.K.A.3	Apply the concept of magnitude to compare numbers and quantities.	Picture Graphs: More or Less More, Less or the Same to 10 More, Less or the Same to 20
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.K.B.1	Use place value to compose and decompose numbers within 19.	Making Teen Numbers Make Numbers Count
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.K.A.1	Extend the concepts of putting together and taking apart to add and subtract within 10.	Model Addition Model Subtraction Adding to 5 Subtracting From 5 Adding to Ten All about Ten Subtracting from Ten Adding to Make 5 and 10 Adding to 10 Word Problems
Geometry	Geometry	CC.2.3.K.A.1	Identify and describe two- and three-dimensional shapes.	Collect the Shapes Collect Simple Shapes Match the Solid 1
Geometry	Geometry	CC.2.3.K.A.2	Analyze, compare, create, and compose two- and three-dimensional shapes.	Where is it? Left or Right? Count Sides and Corners Relate Shapes and Solids
Measurement, Data, and Probability	Measurement and Data	CC.2.4.K.A.1	Describe and compare attributes of length, area, weight, and capacity of everyday objects.	Everyday Length Everyday Mass Compare Length Which Holds More? Hot or Cold? How Full?

Kindergarten

Standard Area	Strand	Standard	Description	Activities
Measurement, Data, and Probability	Measurement and Data	CC.2.4.K.A.4	Classify objects and count the number of objects in each category.	Sort It Same and Different

Grade 1

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.1.B.1	Extend the counting sequence to read and write numerals to represent objects.	Make Big Numbers Count Counting Forward Going Up Before, After & Between to 100
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.1.B.2	Use place-value concepts to represent amounts of tens and ones and to compare two digit numbers.	Place Value 1 Making Teen Numbers Making Numbers Count Compare Numbers to 20 Compare Numbers to 50 Compare Numbers to 100 Greater or Less to 100
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.1.B.3	Use place-value concepts and properties of operations to add and subtract within 100.	Addition Properties Commutative Property of Addition Adding In Any Order Complements to 10, 20, 50 Complements to 50 and 100 Columns that Add Add Numbers: Regroup a Ten Addictive Addition Simple Subtraction Subtract Tens
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.1.A.1	Represent and solve problems involving addition and subtraction within 20.	Add and Subtract Using Graphs Add and Subtract Problems Adding to 10 Word Problems Problems: Add and Subtract Word Problems: Add and Subtract Add Three 1-Digit Numbers Add 3 Single Digit Numbers Add 3 Numbers Using Bonds to 10 Fact Families: Add and Subtract Adding to Ten Subtracting from Ten All about Twenty Subtracting from 20 Doubles and Near Doubles
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.1.A.2	Understand and apply properties of operations and the relationship between addition and subtraction.	Commutative Property of Addition Adding in Any Order Add 3 Numbers Using Bonds to 10 Related Facts 1 Missing Numbers Fact Families: Add and Subtract
Geometry	Geometry	CC.2.3.1.A.1	Compose and distinguish between two- and three-dimensional shapes based on their attributes.	Collect Simple Shapes Collect the Shapes Collect More Shapes Count Sides and Corners Collect the Objects 2 Match the Solid 2

Grade 1

Standard Area	Strand	Standard	Description	Activities
Geometry	Geometry	CC.2.3.1.A.2	Use the understanding of fractions to partition shapes into halves and quarters.	Halves Halves and Quarters
Measurement, Data, and Probability	Measurement and Data	CC.2.4.1.A.1	Order lengths and measure them both indirectly and by repeating length units.	Compare Length 1 Comparing Length Everyday Length Measuring Length with Blocks
Measurement, Data, and Probability	Measurement and Data	CC.2.4.1.A.2	Tell and write time to the nearest half hour using both analog and digital clocks.	Set Time to the Hour Set Time to the Half Hour
Measurement, Data, and Probability	Measurement and Data	CC.2.4.1.A.4	Represent and interpret data using tables/charts.	Picture Graphs: Who has the Goods? Pictographs Sorting Data Read Graphs

Grade 2

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.2.B.1	Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers.	Model Numbers Understanding Place Value 1 Place Value 2 Place Value Partitioning Which is Bigger? Which is Smaller?
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.2.B.2	Use place-value concepts to read, write, and skip count to 1000.	Place Value 2 Understanding Place Value 1 Place Value Partitioning Count by Fives Count by Tens Count by 2s, 5s and 10s
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.2.B.3	Use place-value understanding and properties of operations to add and subtract within 1000.	Add 3 Numbers: Bonds to 100 Add 3 Numbers: Bonds to Multiples of 10 Columns that Add Add Two 2-Digit Numbers Add Two 2-Digit Numbers: Regroup Add Three 2-Digit Numbers Add 3-Digit Numbers Add 3-Digit Numbers: Regroup Columns that Subtract 2-Digit Differences 2-Digit Differences: Regroup 3-Digit Differences 3-Digit Differences with Zeros 3-Digit Differences: 1 Regrouping 3-Digit Differences: 2 Regroupings
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.2.A.1	Represent and solve problems involving addition and subtraction within 100.	Bar Model Problems 1 Bar Model Problems 2 Complements to 50 and 100 Problems: Add and Subtract Add and Subtract Problems
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.2.A.2	Use mental strategies to add and subtract within 20.	Addition Addition Facts Subtraction Facts to 18 Simple Subtraction Addictive Addition Fact Families: Add and Subtract Add 3 Numbers Using Bonds to 10 Doubles and Near Doubles 10 More, 10 Less
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.2.A.3	Work with equal groups of objects to gain foundations for multiplication.	Odd or Even Groups of Two Groups of Three Groups of Four Groups of Five

Grade 2

Standard Area	Strand	Standard	Description	Activities
Geometry	Geometry	CC.2.3.2.A.1	Analyze and draw two and three-dimensional shapes having specified attributes.	How Many Faces? How many Edges? How many Corners? Count Sides and Corners Collect Simple Shapes Collect More Shapes
Geometry	Geometry	CC.2.3.2.A.2	Use the understanding of fractions to partition shapes into halves, quarters, and thirds.	Shade Fractions Halves Halves and Quarters
Measurement, Data, and Probability	Measurement and Data	CC.2.4.2.A.1	Measure and estimate lengths in standard units using appropriate tools.	Measuring Length How Long Is That (Customary)? Measure to the Nearest Half Inch Inches, Feet, Yards
Measurement, Data, and Probability	Measurement and Data	CC.2.4.2.A.2	Tell and write time to the nearest five minutes using both analog and digital clocks.	Five Minute Times Quarter To and Quarter Past
Measurement, Data, and Probability	Measurement and Data	CC.2.4.2.A.3	Solve problems and make change using coins and paper currency with appropriate symbols.	How Much Money? (USD) Money-Totalling (USD) Making Change (USD) Choosing the Fewest Coins (USD) Who's got the Money?
Measurement, Data, and Probability	Measurement and Data	CC.2.4.2.A.4	Represent and interpret data using line plots, picture graphs, and bar graphs.	Line Plots Picture Graphs: single-unit scale Bar Graphs 1 Bar Graphs 2
Measurement, Data, and Probability	Measurement and Data	CC.2.4.2.A.6	Extend the concepts of addition and subtraction to problems involving length.	Teacher directed

Grade 3

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.3.B.1	Apply place-value understanding and properties of operations to perform multi-digit arithmetic.	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
Numbers and Operations	Numbers & Operations—Fractions	CC.2.1.3.C.1	Explore and develop an understanding of fractions as numbers.	Halves and Quarters 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
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.3.A.1	Represent and solve problems involving multiplication and division.	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 x 5 Divide Into Equal Groups Dividing Threes Dividing Fours Dividing Fives Dividing Sixes Dividing Sevens Dividing Eights Dividing Nines Dividing Tens Share the Treasure
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.3.A.2	Understand properties of multiplication and the relationship between multiplication and division.	Related Facts 2 Missing Numbers: × and ÷ facts Fact Families: Multiply and Divide Multiplication Turn-Abouts Multiplication Properties

Grade 3

Standard Area	Strand	Standard	Description	Activities
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.3.A.3	Demonstrate multiplication and division fluency.	Arrays 1 Multiplication Arrays Frog Jump Multiplication Arrays 2 Frog Jump Division Multiplication Facts Times Tables
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.3.A.4	Solve problems involving the four operations, and identify and explain patterns in arithmetic.	Problems: Times and Divide Multiplication Problems 1 Word Problems with Letters Fill the Jars Increasing Patterns Decreasing Patterns Describing Patterns
Geometry	Geometry	CC.2.3.3.A.1	Identify, compare, and classify shapes and their attributes.	Shapes Collect the Shapes 1 Collect the Shapes 2 Collect More Shapes Collect the Polygons Count Sides and Corners
Geometry	Geometry	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.	Shade Fractions
Measurement, Data, and Probability	Measurement and Data	CC.2.4.3.A.1	Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length.	Mass Word Problems Cups, Pints, Quarts, Gallons Measuring Length Measure to the Nearest Half Inch Temperature (Fahrenheit)
Measurement, Data, and Probability	Measurement and Data	CC.2.4.3.A.2	Tell and write time to the nearest minute and solve problems by calculating time intervals.	What is the Time? Five Minute Times Time Mentals Elapsed Time
Measurement, Data, and Probability	Measurement and Data	CC.2.4.3.A.3	Solve problems and make change involving money using a combination of coins and bills.	Money-Totalling (USD) How Much Money? (USD) Making Change (USD) Choosing the Fewest Coins (USD) Who's got the Money?

Grade 3

Standard Area	Strand	Standard	Description	Activities
Measurement, Data, and Probability	Measurement and Data	CC.2.4.3.A.4	Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.	Tally Charts Pictographs Making Picture Graphs: With Scale Picture Graphs: with scale & half symbols Line Plots Bar Graphs 1 Bar Graphs 2 Add and Subtract Using Graphs
Measurement, Data, and Probability	Measurement and Data	CC.2.4.3.A.5	Determine the area of a rectangle and apply the concept to multiplication and to addition.	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
Measurement, Data, and Probability	Measurement and Data	CC.2.4.3.A.6	Solve problems involving perimeters of polygons and distinguish between linear and area measures.	Perimeter Perimeter: Squares and Rectangles Perimeter Detectives 1 Perimeter of Shapes

Grade 4

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.4.B.1	Apply place-value concepts to show an understanding of multidigit whole numbers.	Place Value 1 (×10 and ÷10) Place Value 2 (×10 and ÷10) Place Value 3 Place Value to Millions Numbers from Words to Digits 1 Numbers from Words to Digits 2 Greater Than or Less Than? Greater Than of Less Than 1 Expanded Notation Expanding Numbers Understanding Place Value 2 Understanding Place Value 3 Rounding Numbers Nearest Thousand?
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.4.B.2	Use place-value understanding and properties of operations to perform multi-digit arithmetic.	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
Numbers and Operations	Numbers & Operations—Fractions	CC.2.1.4.C.1	Extend the understanding of fractions to show equivalence and ordering.	Equivalent Fraction Wall 1 Equivalent Fraction Wall 2 The Equivalent Fraction Selecting Equivalent Fractions Equivalent Fractions on a Number Line 1 Compare Fractions 1b Comparing Fractions 1
Numbers and Operations	Numbers & Operations—Fractions	CC.2.1.4.C.2	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	Add Like Fractions Subtract Like Fractions Add Subtract Fractions 1 Add Like Mixed Numbers Subtract Like Mixed Numbers Model Fractions to Multiply Multiply Fraction by Whole Number
Numbers and Operations	Numbers & Operations—Fractions	CC.2.1.4.C.3	Connect decimal notation to fractions, and compare decimal fractions.	Decimals from Words to Digits 1 Decimals on the Number Line Comparing Decimals 1 Decimal Order 1

Grade 4

Standard Area	Strand	Standard	Description	Activities
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.4.A.1	Represent and solve problems involving the four operations.	Multiplication Problems 1 Problems: Multiply and Divide Word Problems with Letters Multiply and Divide Problems 1
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.4.A.2	Develop and/or apply number theory concepts to find factors and multiples.	Multiples Factors Find the Factor Prime or Composite?
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.4.A.4	Generate and analyze patterns using one rule.	Increasing Patterns Decreasing Patterns Describing Patterns
Geometry	Geometry	CC.2.3.4.A.1	Draw lines and angles and identify these in two-dimensional figures.	What Line am I? Right Angle Relation Triangles: Acute, Right, Obtuse What Type of Angle?
Geometry	Geometry	CC.2.3.4.A.2	Classify two-dimensional figures by properties of their lines and angles.	Shapes Collect the Shapes 2 Triangle Tasters Triangle - Tasters
Geometry	Geometry	CC.2.3.4.A.3	Recognize symmetric shapes and draw lines of symmetry.	Symmetry Symmetry or Not? Line of Symmetry
Measurement, Data, and Probability	Measurement and Data	CC.2.4.4.A.1	Solve problems involving measurement and conversions from a larger unit to a smaller unit.	Centimeters and Millimeters Meters and Kilometers Customary Units of Length Milliliters and Liters Customary Units of Capacity Grams and Kilograms Conversion Converting Units of Mass Customary Units of Weight 1 Time Conversions: Whole Numbers 1 Using Timetables Quarter To and Quarter Past Money Problems: Four Operations Making Change (USD) Perimeter: Squares and Rectangles Perimeter Detectives 1 Area: Squares and Rectangles
Measurement, Data, and Probability	Measurement and Data	CC.2.4.4.A.2	Translate information from one type of data display to another.	Teacher directed
Measurement, Data, and Probability	Measurement and Data	CC.2.4.4.A.4	Represent and interpret data involving fractions using information provided in a line plot.	Teacher directed

Grade 4

Standard Area	Strand	Standard	Description	Activities
Measurement, Data, and Probability	Measurement and Data	CC.2.4.4.A.6	Measure angles and use properties of adjacent angles to solve problems.	Comparing Angles Equal Angles Estimating Angles Measuring Angles Angles of Revolution: Unknown Values

Grade 5

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	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.	Place Value to Millions Place Value to Billions Place Value 1 (x10 and ÷10) Place Value 2 (x10 and ÷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
Numbers and Operations	Numbers & Operations in Base Ten	CC.2.1.5.B.2	Extend an understanding of operations with whole numbers to perform operations including decimals.	Multiply: 2-Digit Number, Regroup 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
Numbers and Operations	Numbers & Operations—Fractions	CC.2.1.5.C.1	Use the understanding of equivalency to add and subtract fractions.	Add Unlike Fractions Add Unlike Mixed Numbers Subtract Unlike Fractions Subtract Unlike Mixed Numbers Fraction Word Problems
Numbers and Operations	Numbers & Operations—Fractions	CC.2.1.5.C.2	Apply and extend previous understandings of multiplication and division to multiply and divide 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
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.5.A.1	Interpret and evaluate numerical expressions using order of operations.	Order of Operations 1 (PEDMAS) Operations Order 1 (PEDMAS)
Algebraic Concepts	Operations and Algebraic Thinking	CC.2.2.5.A.4	Analyze patterns and relationships using two rules.	Teacher directed

Grade 5

Standard Area	Strand	Standard	Description	Activities
Geometry	Geometry	CC.2.3.5.A.1	Graph points in the first quadrant on the coordinate plane and interpret these points when solving real world and mathematical problems.	Coordinate Graphs: 1st Quadrant
Geometry	Geometry	CC.2.3.5.A.2	Classify two-dimensional figures into categories based on an understanding of their properties.	Properties of Quadrilaterals Collect More Shapes Collect the Shapes 2 Collect the Polygons
Measurement, Data, and Probability	Measurement and Data	CC.2.4.5.A.1	Solve problems using conversions within a given measurement system.	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 Mass Addition Milliliters and Liters Customary Units of Capacity Capacity Addition
Measurement, Data, and Probability	Measurement and Data	CC.2.4.5.A.2	Represent and interpret data using appropriate scale.	Teacher directed
Measurement, Data, and Probability	Measurement and Data	CC.2.4.5.A.4	Solve problems involving computation of fractions using information provided in a line plot.	Teacher directed
Measurement, Data, and Probability	Measurement and Data	CC.2.4.5.A.5	Apply concepts of volume to solve problems and relate volume to multiplication and to addition.	Volume of Solids and Prisms - 1cm³ blocks How many Blocks? Volume: Rectangular Prisms 1 Volume: Rectangular Prisms 2

Grade 6

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	Ratios & Proportional Relationships	CC.2.1.6.D.1	Understand ratio concepts and use ratio reasoning to solve problems.	Rates Ratios Equivalent Ratios Rates Word Problems Ratio Word Problems Average Speed Best Buy Mixed decimal, percentage and fraction conversions Percentage of a Quantity Percentage of an amount using fractions (<100%) Solve Percent Equations Percentage Word Problems
Numbers and Operations	The Number System	CC.2.1.6.E.1	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	Dividing Fractions Divide Fractions by Fractions 1
Numbers and Operations	The Number System	CC.2.1.6.E.2	Identify and choose appropriate processes to compute fluently with multi-digit numbers.	Add Multi-Digit Numbers 2 Subtracting Colossal Columns Multiply: 2-Digit Number, Regroup 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
Numbers and Operations	The Number System	CC.2.1.6.E.3	Develop and/or apply number theory concepts to find common factors and multiples.	Find the Factor Greatest Common Factor Multiples Least Common Multiple
Numbers and Operations	The Number System	CC.2.1.6.E.4	Apply and extend previous understandings of numbers to the system of rational numbers.	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
Algebraic Concepts	Expressions and Equations	CC.2.2.6.B.1	Apply and extend previous understandings of arithmetic to algebraic expressions.	Exponents I am Thinking of a Number! Writing Algebraic Expressions Simple Substitution 1 Order of Operations 2 (PEDMAS)

Grade 6

Standard Area	Strand	Standard	Description	Activities
Algebraic Concepts	Expressions and Equations	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.	Write an Equation: Word Problems
Algebraic Concepts	Expressions and Equations	CC.2.2.6.B.3	Represent and analyze quantitative relationships between dependent and independent variables.	Teacher directed
Geometry	Geometry	CC.2.3.6.A.1	Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.	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
Measurement, Data, and Probability	Statistics and Probability	CC.2.4.6.B.1	Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.	Line Plots Dot Plots Histograms Box-and-Whisker Plots 1 Calculating Interquartile Range Mean Median Mode Data Extremes and Range

Grade 7

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	Ratios & Proportional Relationships	CC.2.1.7.D.1	Analyze proportional relationships and use them to model and solve real-world and mathematical problems.	Proportional Relationships Rate Word Problems Rates Average Speed Time Taken y=ax Conversion Graphs Best Buy Commission Percentage Change: Increase and Decrease Percent Increase and Decrease Percentage Error Successive Discounts Profit and Loss Simple Interest Percentage Word Problems
Numbers and Operations	The Number System	CC.2.1.7.E.1	Apply and extend previous understandings of operations with fractions to operations with rational numbers.	Add Integers Adding Integers: Positive, Negative or Zero Subtract Integers Integers: Add and Subtract Negative or Positive? More with Integers Add Mixed Numbers: Signs Can Differ Subtract Mixed Numbers: Signs Differ Subtract Negative Mixed Numbers Multiplying and Dividing Integers Integers: Multiplication and Division Multiply Two Fractions 2 Divide Fractions by Fractions 2 Divide Mixed Numbers with Signs Fractions to Decimals 2 More Fraction Problems Integers: Order of Operations (PEDMAS) Integers: Operations Order
Algebraic Concepts	Expressions and Equations	CC.2.2.7.B.1	Apply properties of operations to generate equivalent expressions.	Using the Distributive Property Factoring Addition Properties Multiplication Properties

Grade 7

Standard Area	Strand	Standard	Description	Activities
Algebraic Concepts	Expressions and Equations	CC.2.2.7.B.2	Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.	Write an Equation: Word Problems Writing Equations Solve Equations: Add, Subtract 1 Solve Equations: Add, Subtract 2 Solve Equations: Multiply, Divide 1 Solve Equations: Multiply, Divide 2 Solve Two-Step Equations Solve Multi-Step Equations Solving Simple Equations Inequalities on a Number Line: Basics Inequalities on a Number Line: Mixed Basics Graphing Inequalities 2 Graphing Inequalities on Number Line Solve One-Step Inequalities 1 Solve One-Step Inequalities 2
Geometry	Geometry	CC.2.3.7.A.1	Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.	Calculate Circumference of Circles Area: Circles 1 Area: Circles 2 Area: Annulus Area of Triangles Area of Squares and Rectangles Area: Parallelograms Area of Quadrilaterals Area: Compound Figures Area: Composite Shapes Nets Surface Area: Rectangular Prisms Surface Area: Triangular Prisms 1 Volume of Rectangular Prisms 1 Volume of Triangular Prisms Volume: Prisms Equal, Complement, or Supplement? Vertically Opposite: Value of x Introduction to Angles on Parallel Lines 1 Introduction to Angles on Parallel Lines 3 Parallel Lines Angles and Parallel Lines Angles on Parallel Lines Angle Measures in a Triangle Exterior Angles of a Triangle Angle Sum of a Triangle

Grade 7

Standard Area	Strand	Standard	Description	Activities
Geometry	Geometry	CC.2.3.7.A.2	Visualize and represent geometric figures and describe the relationships between them.	Scale Factor Scale Measurement Floor Plans Perimeter, Area, Dimension Change Triangle - Tasters Triangle Tasters Triangles: Acute, Right, Obtuse
Measurement, Data, and Probability	Statistics and Probability	CC.2.4.7.B.1	Draw inferences about populations based on random sampling concepts.	Teacher directed
Measurement, Data, and Probability	Statistics and Probability	CC.2.4.7.B.2	Draw informal comparative inferences about two populations.	Mean Median Mode Data Extremes and Range
Measurement, Data, and Probability	Statistics and Probability	CC.2.4.7.B.3	Investigate chance processes and develop, use, and evaluate probability models.	Chance Dial Probability Scale Find the Probability Simple Probability Introductory Probability Probability Tables Probability - Replacement Probability - No Replacement Counting Principle Counting Techniques 1 Dice and Coins

Grade 8

Standard Area	Strand	Standard	Description	Activities
Numbers and Operations	The Number System	CC.2.1.8.E.1	Distinguish between rational and irrational numbers using their properties.	Irrational Numbers Fraction to Terminating Decimal Recurring Decimals
Numbers and Operations	The Number System	CC.2.1.8.E.4	Estimate irrational numbers by comparing them to rational numbers.	Estimating Square Roots
Algebraic Concepts	Expressions and Equations	CC.2.2.8.B.1	Apply concepts of radicals and integer exponents to generate equivalent expressions.	Exponent Notation Exponent Notation and Algebra Properties of Exponents Exponent Laws with Brackets The Zero Exponent Negative Exponents Integer Exponents Multiplication with Exponents Simplifying with Exponent Laws 1 Exponent Laws and Algebra Exponent Form to Numbers Square Roots Square Roots 1 Square and Cube Roots Scientific Notation Scientific Notation 1 Scientific Notation 2 Scientific notation to decimal Ordering Scientific Notation
Algebraic Concepts	Expressions and Equations	CC.2.2.8.B.2	Understand the connections between proportional relationships, lines, and linear equations.	y=ax Determining a Rule for a Line Gradient Slope of a Line Equation of a Line 1 Which Straight Line? Equation from Point and Gradient Modeling Linear Relationships
Algebraic Concepts	Expressions and Equations	CC.2.2.8.B.3	Analyze and solve linear equations and pairs of simultaneous linear equations.	Equations with Grouping Symbols Equations with Fractions Equations from Decimals Equations to Solve Problems Equations: Variables, Both Sides Solving More Equations Solve Systems by Graphing Linear Modelling Simultaneous Equations 1 Simultaneous Equations 2 Simultaneous Linear Equations
Algebraic Concepts	Functions	CC.2.2.8.C.1	Define, evaluate, and compare functions.	Function Rules and Tables Vertical Line Test Find the Function Rule

Grade 8

Standard Area	Strand	Standard	Description	Activities
Algebraic Concepts	Functions	CC.2.2.8.C.2	Use concepts of functions to model relationships between quantities.	Travel Graphs Line Graphs: Interpretation
Geometry	Geometry	CC.2.3.8.A.1	Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.	Volume: Cylinders Volume: Cones Volume: Spheres Volume: Composite Figures
Geometry	Geometry	CC.2.3.8.A.2	Understand and apply congruence, similarity, and geometric transformations using various tools.	Flip, Slide, Turn Transformations Transformations: Coordinate Plane Rotations: Coordinate Plane Congruent Figures (Dot Grid) Congruent Figures (Grid) Scale Factor Similar Figures 1
Geometry	Geometry	CC.2.3.8.A.3	Understand and apply the Pythagorean Theorem to solve problems.	Pythagorean Triads Pythagorean Theorem Pythagoras: Find a Short Side (integers only) Pythagoras: Find a Short Side (decimal values) Pythagoras: Find a Short Side (rounding needed) Pythagoras' Theorem Find Slant Height Distance Between Two Points
Measurement, Data, and Probability	Statistics and Probability	CC.2.4.8.B.1	Analyze and/or interpret bivariate data displayed in multiple representations.	Data Analysis: Scatter Plots Scatter Plots
Measurement, Data, and Probability	Statistics and Probability	CC.2.4.8.B.2	Understand that patterns of association can be seen in bivariate data utilizing frequencies.	Probability Tables Relative Frequency Two-way Table Probability

Mathletics

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