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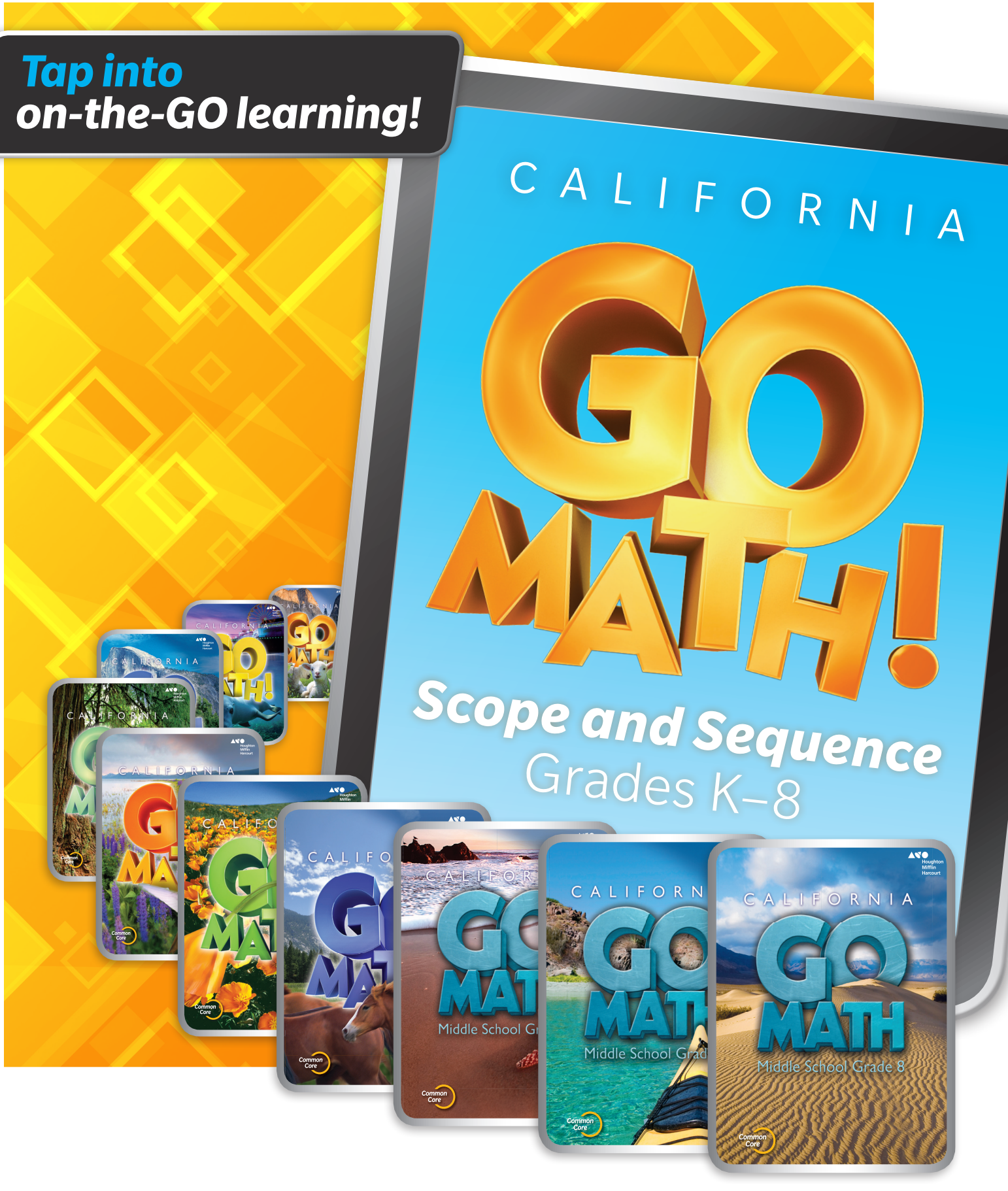

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Scope and Sequence Matrix

Grades K–6

Grades 6–8

Counting and Cardinality

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Counting and Cardinality (CC)							
Compare numbers	●						
Count by ones	●						
Count by tens	●						
Count objects	●						
Count sets of objects	●						
Find how many in all	●						
Use one-to-one correspondence to count	●						
Write numbers	●						

Number and Operations in Base Ten

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Number and Operations in Base Ten (NBT)							
Addition							
Add decimals						●	●
Add whole numbers		●	●	●	●		
Addition strategies		●	●	●			
Estimate decimal sums						●	
Estimation in 3-digit addition			●				
Properties of addition		●	●	♦	♦	●	●
Real-word problems						●	
Counting Sequence							
Count backward			●				
Count forward	●	●	●				
Model whole numbers	●	●	●				
Read whole numbers	●	●	●				
Skip count		●	●				
Write whole numbers	●	●	●				
Division							
Divide decimals						●	♦
Divide whole numbers			●			●	♦
Division strategies			●				
Remainders			●				

Number and Operations in Base Ten

... Continued

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Multiplication							
Area and array models					●		
Equations					●	♦	♦
Multiples of ten				●			
Multiplication strategies					●		
Multiply decimals						●	♦
Multiply whole numbers					●	●	
Properties of multiplication					●	♦	♦
Place Value of Decimals							
Compare and order decimals						●	
Decimal notation						●	
Read decimals						●	
Round decimals					●	●	
Write decimals in different forms						●	
Place Value of Whole Numbers							
Compare whole numbers		●	●	●	●		
Decompose into tens and ones	●	●					
Expanded form				●	●		
Exponents						●	♦
Make a ten		●					
Model whole numbers	●	●	●				
Order whole numbers					●		
Place-value models	●	●	●				
Powers of ten						●	♦
Subtraction							
Estimate decimal differences						●	
Estimation in 3-digit subtraction			●				
Real-world problems						●	
Subtract decimals						●	
Subtract whole numbers		●	●	●	●		
Subtraction strategies		●	●	●			

Number and Operations—Fractions

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Number and Operations—Fractions (NF)							
Addition with Fractions							
Add fractions					●	●	
Add mixed numbers					●	●	
Benchmark fractions						●	
Rename fractions and mixed numbers to add					●	♦	
Visual fraction models					●	♦	
Word problems					●	●	
Decimal Fractions							
Compare decimal fractions					●	●	
Decimal notation					●	●	
Equivalent fractions and decimals					●		
Money and decimals					●		
Place value of decimals					●	●	
Write decimals					●	●	
Division with Fractions							
Divide unit fractions						●	
Fractions as division						●	
Interpret division with fractions						●	
Real-world problems						●	♦
Visual fraction models						●	♦
Fraction Equivalence							
Common denominators					●	♦	
Compare and order fractions				●	●	♦	
Equivalent fractions				●	●	●	
Simplest form					●	♦	
On the number line				●	●	♦	
Use regions				●			
Multiplication with Fractions							
Distributive Property						●	
Find area of a rectangle with fractional measurements						●	
Multiples of unit fractions					●	●	
Multiply fractions					●	●	
Multiply mixed numbers					●	●	

Number and Operations—Fractions

... Continued

• Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Scale and multiplication of fractions						•	
Visual fraction models					•	•	
Word problems					•	•	
Read and Write Fractions							
Fractions				•			
Whole numbers as fractions				•			
Subtraction of Fractions							
Estimate differences						•	
Subtract fractions					•	•	
Subtract mixed numbers					•	•	
Subtraction with renaming					•	•	
Visual fraction models					•	•	
Word problems					•	•	
Understand Fractions							
Part of a group				•			
Part of a partitioned whole				•			
On the number line				•			
Unit fractions				•			
Whole numbers and fractions				•			

Ratios and Proportional Relationships

• Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Ratios and Proportional Relationships (RP)							
Concept of Ratio							
Fractions and ratio							•
Model ratios							•
Notation for ratio							•
Rate language							•
Write ratios							•
Rate and Ratio Reasoning							
Convert measurements							•
Distance, rate, time formula							•

Ratios and Proportional Relationships

... Continued

• Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Equivalent ratios							•
Percent							•
Real-world problems							•
Unit rate							•

The Number System

• Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
The Number System (NS)							
Addition and Subtraction of Decimals							
Add decimals							•
Subtract decimals							•
Common Factors and Multiples							
Greatest common factor							•
Least common multiple							•
Prime factorization							•
Division with Fractions							
Divide fractions							•
Divide mixed numbers							•
Reciprocal and inverse operations							•
Visual fraction models							•
Division with Whole Numbers and Decimals							
Divide decimals							•
Divide whole numbers							•
Multiplication							
Multiply decimals							•
Rational Numbers							
Absolute value							•
Compare and order rational numbers							•
Find distance							•
Graph on the coordinate plane							•
Negative and positive numbers							•
Opposites							•

The Number System

... Continued

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Plot on the number line							●
Real-world problems							●
Reflection on the axes							●

Operations and Algebraic Thinking

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Operations and Algebraic Thinking (OA)							
Addition							
Add whole numbers	●	●	●	●			
Addition strategies		●	●				
Additive comparison					●		
Basic facts		●	●	♦			
Decompose numbers	●	●					
Equal symbol	●	●					
Equations		●	●	●	●		
Estimate sums			●	●	♦		
Expressions	●						
Inverse of subtraction	●	●	♦				
Missing addend	●	●	♦				
Model addition	●	●	♦				
Multi-step word problems				●	●		
Plus symbol	●	●					
Real-world problems	●	●	●				
Three addends		●	●				
Word problems		●	●	●			
Write number sentences		●	●				
Division							
Basic facts			●	♦			
Division strategies			●	♦			
Equations			●	●			
Measurement quantities				●			
Model division				●			

Operations and Algebraic Thinking

... Continued

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Multi-step word problems					●	♦	
Relationship with multiplication				●	♦		
Remainders					●		
Strategies to divide				●	♦		
Understand division				●	●		
Factors and Multiples							
Common factors					●		♦
Common multiples					●		♦
Divisibility rules					●		
Even and odd numbers					●		
Factors					●		
Multiples					●		
Prime numbers					●		
Multiplication							
Arrays			●	♦			
Basic facts				●	●		
Equal groups			●	●			
Equations				●	●		
Even and odd numbers			●		♦		
Measurement quantities				●			
Model multiplication				●			
Multiplication strategies				●			
Multiplicative comparison					●		
Real-world problems				●	●		
Relationship with division				●			
Strategies to multiply				●			
Understand multiplication			●	●	●		
Number and Shape Patterns							
Even and odd numbers				●	●		
Function tables				●	●	♦	
Generate two numerical patterns						●	
Graph two numerical patterns on the coordinate plane						●	
Identify, generate, explain number patterns				●	●		
Patterns on facts tables				●			

Operations and Algebraic Thinking

... Continued

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Skip-counting patterns				●			
Write a rule					●	♦	
Numerical Expressions							
Evaluate numerical expressions						●	
Interpret numerical expressions						●	
Write numerical expressions						●	
Properties of Operations							
Additive Identity Property		●	●	●	●	♦	♦
Associative Property of Addition		●	●	●	●	♦	♦
Associative Property of Multiplication				●	●	♦	♦
Commutative Property of Addition		●	●	●	●	♦	♦
Commutative Property of Multiplication				●	●	♦	♦
Distributive Property				●	●	♦	♦
Identity Property of Multiplication				●	●	♦	♦
Zero Property of Multiplication				●	●	♦	♦
Subtraction							
Basic facts		●	●	♦			
Decompose numbers	●	♦					
Equal symbol	●	♦					
Equations		●	●	●	●		
Estimate differences				●	♦		
Expressions	●	♦					
Inverse of addition	●	●					
Minus symbol	●	●					
Missing numbers in subtraction	●	●					
Model subtraction	●	●					
Multi-step word problems				●	●		
Real-world problems	●	●	●	●	●		
Subtract whole numbers	●	●	●	●			
Subtract zero		●					
Subtraction strategies		●	●				
Word problems		●	●	●			
Write number sentences		●	●				

Expressions and Equations

• Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Expressions and Equations (EE)							
Algebraic Expressions							
Equivalent algebraic expressions							•
Evaluate algebraic expressions							•
Identify parts of expressions							•
Model algebraic expressions							•
Write algebraic expressions							•
Dependent and Independent Variables							
Analyze relationships between variables							•
Express relationships between variables							•
Graph relationships							•
Linear equations							•
Translate between equations and table values							•
Equations							
Linear equations on the coordinate plane							•
Meaning of equality							•
Model equations							•
Solve one-variable equations							•
Symbols showing relations							•
Inequalities							
Graph inequalities with one variable							•
Identify solutions							•
Solutions of inequalities on a number line							•
Solutions of inequalities using substitution							•
Symbols showing relations							•
Write inequalities							•
Numerical Expressions							
Write numerical expressions							•
Evaluate numerical expressions							•

Measurement and Data

• Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Measurement and Data (MD)							
MEASUREMENT							
Length and Distance							
Add lengths			•				
Benchmarks and relative size					•		
Choose appropriate tool and unit		•	•				
Compare lengths	•	•	•				
Convert units			•			•	
Customary system			•		•		
Estimate length			•		•		
Measure length		•	•				
Measurements on a line plot			•				
Metric system			•		•		
Order lengths		•	•				
Real-world problems	•	•			•		
Subtract lengths			•				
Transitive property		•					
Liquid Volume and Capacity							
Benchmarks and relative size					•		
Convert units						•	
Estimate liquid volume				•	•		
Measure liquid volume				•			
Word problems				•	•	•	
Mass and Weight							
Benchmarks and relative size					•		
Compare weights	•						
Choose the appropriate unit				•			
Convert units						•	
Estimate mass				•	•		
Measure mass				•			
Order weights	•						
Word problems				•	•	•	
Money							
Count coins and bills			•				

Measurement and Data

... Continued

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Decimal point in money amounts			●				
Decimals and money					●		
Fractions and money					●		
Identify coins and bills			●				
Operations with money					●		
Real-world problems			●		●		
Symbolic notation			●				
Time							
A.M. and P.M.			●	●			
Clocks		●	●	●			
Convert units						●	
Elapsed time					●	●	
Equivalent units			●				
Fractions and time					●		
Real-world problems		●	●	●	●	●	
Tell time		●	●	●			
Units of time			●		●		
DATA							
Classify and count objects	●						
Interpret data							
Bar graph		●	●	●			
Compare data				●	●	♦	♦
Draw conclusions			●	●	●		
Frequency table				●	♦	♦	♦
Line plot			●	●	●	●	♦
Measurement data on a line plot			●	●	●	●	
Picture graph		●	●	●			
Real-world problems		●	●	●	●	●	♦
Tally chart		●	●	●			
Represent data							
Bar graph		●	●	●			
Frequency table				●	♦	♦	♦
Line plot			●	●	●	●	
Measurement data on a line plot			●	●	●	●	

Measurement and Data

... Continued

• Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Picture graph		•	•	•			
Tally chart		•	•	•			
GEOMETRIC MEASUREMENT							
Angles							
Concept of angle					•		
Related to circles					•		
Measure angles with a protractor					•		
Measure angles using an equation					•		
Sketch angles					•		
Area							
Concept of area				•			
Find area of a complex figure				•	•		
Find area of a rectangle				•	•		
Formula for area					•		
Real-world problems				•	•		
Relate area to multiplication and division				•			
Relate area to perimeter				•			
Units of area					•		
Perimeter							
Compare area and perimeter				•			
Find perimeter of a polygon				•			
Find perimeter of a rectangle				•	•		
Formula for perimeter					•		
Linear and area measures				•			
Real-world problems				•	•		
Relate area to perimeter				•			
Volume							
Attribute in solid figures						•	
Compare volumes						•	
Estimate volume						•	
Measure volume						•	
Real-world problems						•	
Volume as additive						•	

Geometry

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Geometry (G)							
Area							
Changing dimensions and area							●
Draw polygons on the coordinate plane							●
Find area of a composite figure							●
Find area of a parallelogram							●
Find area of a polygon							●
Find area of a trapezoid							●
Find area of a triangle							●
Formulas for area							●
Real-world problems							●
Coordinate Plane							
Define a coordinate system						●	
Graph in the first quadrant						●	
Ordered pairs						●	
Real-world problems						●	
Surface Area							
Find surface area of a cube							●
Find surface area of a prism							●
Find surface area of a pyramid							●
Nets							●
Real-world problems							●
Three-dimensional Shapes							
Attributes of three-dimensional shapes	●	●	●				
Classify shapes		●					
Compose and decompose shapes	●	●	●				
Identify and describe shapes	●	●	●				
Identify shapes in the environment	●						
Make and draw shapes		●	●				
Sort shapes	●	●	●				
Two-dimensional Shapes							
Angles				●	●	●	
Attributes of two-dimensional shapes	●	●	●	●			
Classify angles					●		

Geometry

... Continued

• **Investigate and Analyze** ♦ **Apply and Extend**

	K	1	2	3	4	5	6
Classify polygons						•	
Classify quadrilaterals					•	•	
Classify shapes		•	•	•			
Classify triangles by angles					•	•	
Classify triangles by sides					•		
Compose and decompose shapes	•	•	•	•			
Congruency						•	
Equal parts			•				
Identify and describe shapes	•	•	•	•			
Identify shapes in the environment	•						
Line symmetry					•		
Lines					•	♦	
Model and draw shapes	•	•	•	•			
Partition shapes		•	•	•			
Real-world problems						•	
Sort shapes	•	•	•				
Triangles				•	•		
Volume							
Formula for volume							•
Fractional side lengths and volume							•
Real-world problems							•
Rectangular prism							•
Use cubes to find volume							•

Statistics and Probability

● Investigate and Analyze ♦ Apply and Extend

	K	1	2	3	4	5	6
Statistics and Probability (SP)							
Display Data							
Box plot							●
Dot plot							●
Frequency table							●
Histogram							●
Statistical Questions							
Describe data collections							●
Distribution of data							●
Measure of center							●
Measure of variation							●
Recognize statistical questions							●
Summarize Data							
Box plot							●
Describe data collections							●
Describe distributions							●
Dot plot							●
Effects of outliers							●
Frequency table							●
Histogram							●
Interpret data displays							●
Mean as fair share and balance point							●
Measures of central tendency							●
Measures of variability							●

Ratios and Proportional Relationships

• Investigate and Analyze ♦ Apply and Extend

	6	7	8
Ratios and Proportional Relationships (RP)			
Concept of Ratio			
Fractions and ratio	•	•	♦
Model ratios	•	♦	
Notation for ratio	•	♦	♦
Rate language	•	♦	♦
Unit rates and ratios	•	•	♦
Write ratios	•	♦	♦
Proportional Relationships			
Equations		•	•
Multistep problems		•	♦
Relationship between two quantities		•	•
Rate and Ratio Reasoning			
Constant of proportionality		•	♦
Convert measurements	•		
Distance, rate, time formula	•	♦	♦
Equivalent ratios	•	♦	♦
Percent	•		
Real-world problems	•	♦	♦
Unit rate	•	•	♦

The Number System

• Investigate and Analyze ♦ Apply and Extend

	6	7	8
The Number System (NS)			
Addition and Subtraction of Decimals			
Add decimals	•		
Subtract decimals	•		
Common Factors and Multiples			
Greatest common factor	•		
Least common multiple	•		♦
Prime factorization	•		

The Number System

... Continued

• Investigate and Analyze ♦ Apply and Extend

	6	7	8
Division with Fractions			
Divide fractions	•		
Divide mixed numbers	•		
Reciprocal and inverse operations	•		
Visual fraction models	•		
Division with Whole Numbers and Decimals			
Divide decimals	•		
Divide whole numbers	•		
Irrational numbers			
Decimal expansion			•
Estimate			•
Rational approximations			•
Sets of real numbers			•
Multiplication			
Multiply decimals	•		
Rational Numbers			
Absolute value	•	♦	
Addition and subtraction		•	
Compare and order rational numbers	•	♦	
Decimals	•	•	♦
Distance with rational numbers	•		
Graph on the coordinate plane	•		
Multiplication and division	•	•	
Negative and positive numbers	•	•	
On the number line	•	•	
Opposites	•	♦	
Real-world problems	•	•	•
Reflection on the axes	•		

Expressions and Equations

● Investigate and Analyze ♦ Apply and Extend

	6	7	8
Expressions and Equations (EE)			
Algebraic Expressions			
Equivalent algebraic expressions	●	●	♦
Evaluate algebraic expressions	●	♦	♦
Identify parts of expressions	●	♦	♦
Model algebraic expressions	●	●	♦
Properties of operations		●	♦
Rewrite expressions		●	♦
Write algebraic expressions	●	●	♦
Equations			
Analyze relationships	●	♦	♦
Collect like terms		●	●
Dependent and independent variables	●	♦	♦
Determine solution sets			●
Expand expressions using Distributive Property		●	●
Express relationships	●	♦	♦
Graph relationships	●	●	●
Linear equations	●	●	●
Linear equations on the coordinate plane	●	●	●
Meaning of equality	●		
Model equations	●	●	♦
Multistep problems with positive and negative numbers		●	♦
One-variable equations	●	●	●
Pairs of simultaneous linear equations			●
Rational number coefficients			●
Real-world problems		●	♦
Symbols showing relations	●		
Translate between equations and table values	●		
Inequalities			
Graph inequalities with one variable	●	●	
Identify solutions	●	●	
Real-world problems	●	●	
Solutions of inequalities on a number line	●	●	
Solutions of inequalities using substitution	●	●	

Expressions and Equations

... Continued

● Investigate and Analyze ♦ Apply and Extend

	6	7	8
Symbols showing relations	●	●	
Write inequalities	●	●	
Integer exponents			
Properties			●
Scientific notation			●
Numerical Expressions			
Evaluate numerical expressions	●	♦	
Write numerical expressions	●	♦	
Proportional Relationships			
Equations		●	●
Graph proportional relationships			●
Multistep ratio problems			●
Relationship between two quantities		●	●
Slope			●
Radicals			
Cube root			●
Square root			●

Functions

● Investigate and Analyze ♦ Apply and Extend

	6	7	8
Functions (F)			
Functions			
Analyze functions			●
Compare two function representations			●
Construct functions			●
Define a function			●
Function graphs			●

Geometry

• Investigate and Analyze ♦ Apply and Extend

	6	7	8
Geometry (G)			
Angles			
Angle sum			•
Angle-angle criterion for triangle symmetry			•
Angles formed by transversal			•
Equations to find unknown angle	•	•	•
Exterior angle of triangles			•
Multistep problems to find unknown angles		•	•
Types of angles		•	•
Area			
Area of a circle		•	
Area of a composite figure	•	•	
Area of a parallelogram	•	•	
Area of a polygon	•	•	
Area of a trapezoid	•	•	
Area of a triangle	•	•	
Changing dimensions and area	•		
Distance on the coordinate plane	•		
Draw polygons on the coordinate plane	•		
Formulas for area	•	•	♦
Real-world problems	•	•	♦
Side lengths on the coordinate plane	•		
Circumference			
Find circumference		•	
Formula for circumference		•	
Congruence and Similarity			
Describe a sequence			•
Transformations			•
Cross Sections			
Right rectangular prisms		•	
Right rectangular pyramids		•	

Geometry

... Continued

• Investigate and Analyze ♦ Apply and Extend

	6	7	8
Geometric Shapes			
Construct triangles		•	♦
Draw geometric shapes		•	♦
Pythagorean Theorem			
Distance between two points			•
Proof			•
Real-world problems in two- and three-dimensions			•
Unknown side lengths of right triangles			•
Scale Drawings			
Compute lengths		•	•
Find area		•	
Reproduce at different scale		•	•
Surface Area			
Nets	•	•	
Real-world problems	•	•	
Surface area of a composite solid		•	
Surface area of a cube	•	♦	
Surface area of a prism	•	•	
Surface area of a pyramid	•		
Three-Dimensional Figures			
Right rectangular prisms		•	
Right rectangular pyramids		•	
Volume			
Formula for volume	•	•	•
Fractional side lengths and volume	•		
Real-world problems	•	•	•
Use cubes to find volume	•		•
Volume of a composite solid		•	
Volume of a cone			•
Volume of a cylinder			•
Volume of a rectangular prism	•	♦	
Volume of a sphere			•
Volume of a trapezoidal prism		•	
Volume of a triangular prism		•	

Statistics and Probability

• Investigate and Analyze ♦ Apply and Extend

	6	7	8
Statistics and Probability (SP)			
Bivariate Data			
Equation of a linear model			•
Scatter plot			•
Two-way table			•
Compare Data			
Comparative inference		•	♦
Display Data			
Box plot	•	♦	
Dot plot	•	♦	
Frequency table	•	♦	♦
Histogram	•		
Two-way frequency table			•
Probability			
Compound events		•	
Probability model		•	
Probability of chance event		•	
Statistical Questions			
Describe data collections	•	•	
Distribution of data	•	•	
Measure of center	•	•	
Measure of variation	•		
Recognize statistical questions	•		
Statistical Samples			
Random samples		•	
Representative samples		•	
Validity		•	

Statistics and Probability

... Continued

Investigate and Analyze ♦ **Apply and Extend**

	6	7	8
Summarize Data			
Box plot	•	•	
Describe data collections	•	•	•
Describe distributions	•	•	•
Dot plot	•	•	
Effects of outliers	•	♦	•
Frequency table	•	♦	♦
Histogram	•		
Interpret data displays	•	•	•
Measures of central tendency	•	•	
Measures of variability	•	•	
Multiples of variability		•	

Notes

Scope and Sequence

Grades K–8

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