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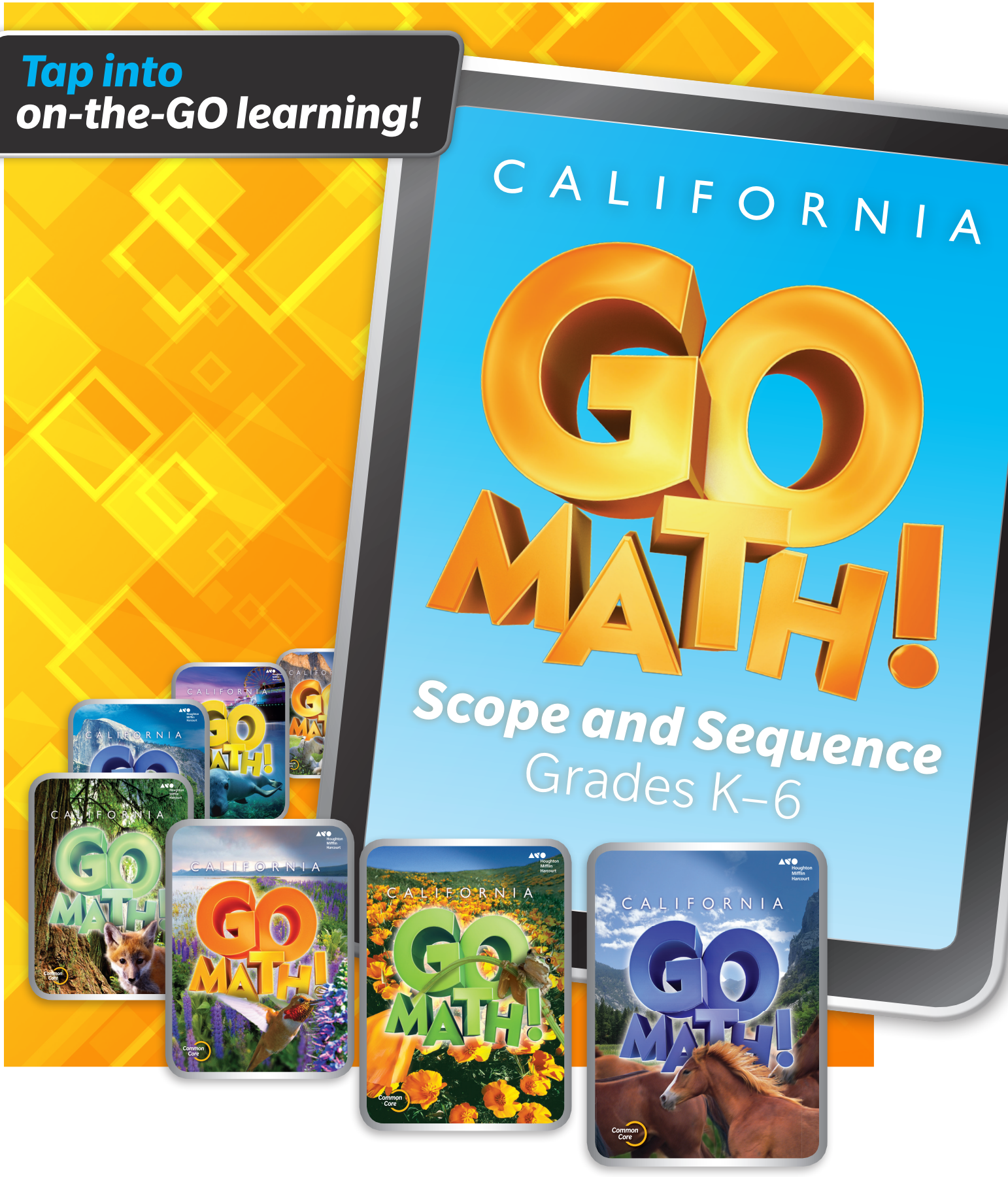

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Scope and Sequence Matrix

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							•
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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
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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							•
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Interpret data displays							•
Mean as fair share and balance point							•
Measures of central tendency							•
Measures of variability							•

Notes

CALIFORNIA

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Scope and Sequence

Grades K–6

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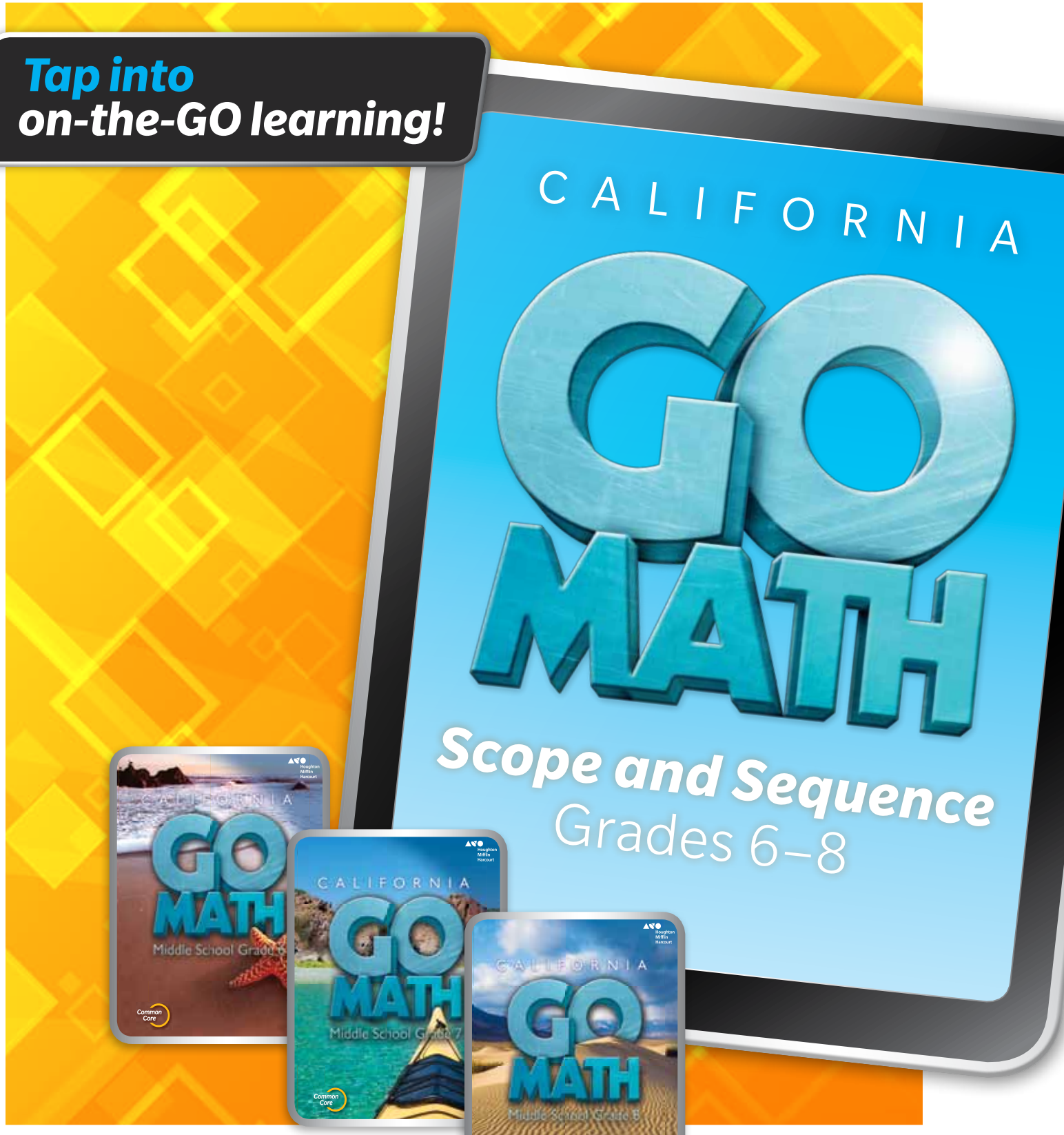

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● Investigate and Analyze ♦ Apply and Extend

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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	•		
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Division with Whole Numbers and Decimals			
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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			•
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Numerical Expressions			
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• Investigate and Analyze ♦ Apply and Extend

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Compare two function representations			•
Construct functions			•
Define a function			•
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Geometry

• Investigate and Analyze ♦ Apply and Extend

	6	7	8
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Angle-angle criterion for triangle symmetry			•
Angles formed by transversal			•
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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	•	•	♦
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Circumference			
Find circumference		•	
Formula for circumference		•	
Congruence and Similarity			
Describe a sequence			•
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Geometry

... Continued

• Investigate and Analyze ♦ Apply and Extend

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Draw geometric shapes		•	♦
Pythagorean Theorem			
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Scale Drawings			
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Reproduce at different scale		•	•
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Surface area of a cube	•	♦	
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Surface area of a pyramid	•		
Three-Dimensional Figures			
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Volume			
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Fractional side lengths and volume	•		
Real-world problems	•	•	•
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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			
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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	•	•	
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Grade 6

RATIOS AND PROPORTIONAL RELATIONSHIPS (6.RP)

Understand ratio concepts and use ratio reasoning to solve problems.

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THE NUMBER SYSTEM (6.NS)

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

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Compute fluently with multi-digit numbers and find common factors and multiples.

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- by decimals 125, 127, 128–130

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Apply and extend previous understandings of numbers to the system of rational numbers.

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EXPRESSIONS AND EQUATIONS (6.EE)

Apply and extend previous understandings of arithmetic to algebraic expressions.

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Grade 6

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Reason about and solve one-variable equations and inequalities.

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GEOMETRY (6.G)

Solve real-world and mathematical problems involving area, surface area, and volume.

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- drawing polygons on the coordinate plane 409–411, 412–414
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STATISTICS AND PROBABILITY (6.SP)

Develop understanding of statistical variability.

Statistical questions

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distribution of data
- dot plots 472–474, 475–478
- frequency tables 479–480, 482–484

recognizing statistical questions 471, 475–478

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- measure of variation 466–467, 468–470

Summarize and describe distributions.

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Grade 7

RATIOS AND PROPORTIONAL RELATIONSHIPS (7.RP)

Analyze proportional relationships and use them to solve real-world and mathematical problems.

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unit rates and ratios 117–119, 120–122

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THE NUMBER SYSTEM (7.NS)

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

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EXPRESSIONS AND EQUATIONS (7.EE)

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GEOMETRY (7.G)

Draw, construct, and describe geometrical figures and describe the relationships between them.

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STATISTICS AND PROBABILITY (7.SP)

Use random sampling to draw inferences about a population.

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- understanding probability between 0–1 367–368, 373–374

Grade 8

THE NUMBER SYSTEM (8.NS)

Know that there are numbers that are not rational, and approximate them by rational numbers.

Irrational numbers

EXPRESSIONS AND EQUATIONS (8.EE)

Work with radicals and integer exponents.

Integer exponents

Radicals

Understand the connections between proportional relationships, lines, and linear equations.

Proportional relationships

Analyze and solve linear equations and pairs of simultaneous linear equations.

Linear equations

FUNCTIONS (8.F)

Define, evaluate, and compare functions.

Functions

Use functions to model relationships between quantities.

GEOMETRY (8.G)

Understand congruence and similarity using physical models, transparencies, or geometry software.

Angles

Congruence and similarity

Grade 8

... Continued

Understand and apply the Pythagorean Theorem.

Pythagorean Theorem

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

Volume

STATISTICS AND PROBABILITY (8.SP)

Investigate patterns of association in bivariate data.

Bivariate data

Notes

Notes

Scope and Sequence

Grades 6–8

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