MATHEMATICS

Third Edition Scope and Sequence

Material included in ACSI Mathematics Series, 3rd Edition *California Standards

	K	1	2	3	4	5	6
I. PATTERNS							
A. Sorting							
Identifying attributes	•*	•*	•*				
Sorting objects by 2 or more attributes		•*	•*				
Sorting objects into groups	•*	•*	•*				
Identifying attributes that distinguish a set	•*	•*					
Identifying objects that do not belong in a set	•*	•*	•*				
Identifying and distinguishing sets by number or attribute	•*	•	•*				
Classifying geometric shapes by attribute	•*	•*	•*				
Organizing information using a Venn diagram		•	•	•		•	
B. Patterns							
Identifying patterns	•*	•*	•*	•	•	•	
Copying a given pattern	•	•	•			•	
Describing a pattern	•*	•*	•*				
Describing a pattern using math manipulatives	•*	•*	•*				
Identifying the next object in a pattern	•*	•*	•*	•	•	•	
Extending and designing patterns	•*	•*	•*		•	•	
Finding patterns in sequencing of counting	•	•	•*	•			
Writing the next number in sequence to 100		•*					
Identifying the number before, after, or between given numbers	•	•*	•				
Finding number patterns using a hundred chart	•	•	•				
Finding number patterns using a table			•			•	
Exploring and predicting number patterns			•				•

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	K	1	2	3	4	5	6
Skip counting by 2s, 5s, and 10s	•	•*	•*	•			
Skip counting by 100s			•	•			
Designing patterns with 2s, 5s, and 10s		•	•				
Identifying number patterns as they relate to the Distributive Property							•
Identifying odd and even numbers			•*	•*	•		
Identifying even numbers as matched pairs			•	•			
Identifying prime and composite numbers					•	•*	•
Exploring square numbers					•	•	•
Exploring square roots							•
Distinguishing between terminating and repeating						•	•
C. Geometric Patterns							
Exploring patterns with slide symmetry (translation)	•	•	•				
Exploring patterns with spin or turn symmetry (rotation)	•	•	•				
Exploring patterns with mirror or flip symmet y (refle tion)	•	•	•				
Identifying and extending patterns of slides, flip , and turns				•	•	•	
Performing transformations of two- and three-dimensional figu es						•	•
Identifying and drawing congruent lines, angles, and figu es						•	•
II. NUMBER THEORY							
A. Writing Numerals							
Reading and writing numbers to 31	•*						
Counting numbers to 100	•						
Reading and writing numbers to 100		•*	•*				
Reading and writing numbers through the thousands			•*				
Reading and writing numbers through the hundred thousands				•*	•		
Reading and writing numbers through the hundred millions					•*		
Reading and writing numbers through the hundred billions						•*	
Reading and writing numbers through the hundred trillions							•*
Writing Roman numerals					•	•	•
Identifying integers						•*	•*

	K	1	2	3	4	5	6
Identifying abundant, deficie t, and perfect numbers							•
Exploring binary numbers							•
B. Rounding Numbers							
Rounding numbers to the nearest ten			•*	•*		•*	•
Rounding numbers to the nearest hundred				•*	•*	•*	•
Rounding numbers to the nearest thousand					•*	•*	•
Rounding numbers to the nearest ten thousand					•*	•*	•
Rounding numbers to the nearest hundred thousand					•*	•*	•
Rounding numbers to the nearest hundred million					•	•*	•
Rounding decimals to the nearest whole number				•*	•*	•*	•
Rounding decimals to the nearest tenth						•*	•
Rounding decimals to the nearest hundredth						•*	•
C. Ordinal Numbers							
Using ordinal names first th ough fi th	•						
Using ordinal names first th ough tenth	•	•	•	•	•		
Using ordinal names through twentieth			•	•	•		
Using ordinal names through hundredth				•	•		
Using a calendar to review ordinal numbers	•	•	•		•		
III. PLACE VALUE							
A. Number Identification							
Reading and writing numbers to the tens place	•*	•*	•*				
Reading and writing numbers to the hundreds place		•	•*				
Exploring the number 100	•	•*					
Modeling 2-digit numbers	•*						
Modeling 2- and 3-digit numbers		•*	•*				
Reading and writing numbers to the thousands place			•*				
Modeling 4-digit numbers			•*	•*	•*		
Exploring the number 1,000			•*				
Using expanded notation			•*	•*	•*	•*	•*
Reading and writing numbers to the hundred thousands place				•	•*		
Reading and writing numbers to the hundred millions place					•*		

	K	1	2	3	4	5	6
Reading and writing numbers to the hundred billions place						•*	
Reading and writing numbers to the hundred trillions place							•*
Reading and writing decimals to the tenths and hundredths place				•*	•*		
Reading and writing decimals to the thousandths place						•*	
Reading and writing decimals to the hundred-thousandths place							•*
B. Comparing Numbers							
Comparing number sets	•*	•*	•*				
Comparing numbers up to 100		•*	•*				
Comparing numbers up to 1,000			•*				
Comparing numbers to 10,000				•*	•		
Comparing numbers to hundred millions					•*		
Comparing numbers to hundred billions						•*	
Comparing numbers to hundred trillions							•*
Comparing decimals to the hundredths place				•*	•*		
Comparing decimals to the thousandths place						•*	
Comparing decimals to the ten-thousandths place							•*
Comparing integers						•	•*
Finding equal sets	•*	•*					
Identifying numbers before or after a number, or between two given numbers	•	•*	•*	•*	•*	•*	•*
Using a number line to find numbers reater than or less than	•	•			•*	•*	•*
Using a hundred chart to find numbers reater than or less than	•	•					
C. Ordering Numbers							
Ordering 1-digit numbers	•*	•*					
Ordering 2-digit numbers	•*	•*	•*				
Ordering 3-digit numbers		•*	•*				
Ordering 4-digit numbers			•*	•*	•*		
Ordering 5-digit numbers					•*		
Ordering 6-digit numbers						•*	
Ordering 13-digit numbers							•*
Ordering decimals to the hundredths place				•	•*		

	K	1	2	3	4	5	6
Ordering decimals to the thousandths place						•*	
Ordering decimals to the ten-thousandths place							•*
Ordering integers						•*	•
IV. STATISTICS							
A. Graph Reading and Analysis							
Reading and interpreting bar graphs	•	•*	•*	•*	•*	•*	•*
Reading and interpreting pictographs	•*	•*	•*	•*	•*	•*	
Reading and interpreting tables		•	•*	•*	•*	•*	•*
Reading and interpreting tally charts	•*	•*	•	•*	•	•	•
Reading and interpreting line graphs				•*	•*	•*	•*
Reading and interpreting histograms						•*	•*
Reading and interpreting circle graphs					•*	•*	•*
Reading and interpreting line plots						•	•*
Reading and interpreting stem-and-leaf plots							•
Identifying factors that make graphs misleading; correcting graphs							•*
B. Collecting and Recording Data							
Collecting data by conducting a survey				•	•*	•	•*
Collecting data by other methods					•*	•	•*
Recording information from an experiment	•*	•	•*	•*	•*	•*	•*
Recording information on a tally chart	•*	•*			•	•	•
C. Designing Graphs							
Designing bar graphs		•*	•*	•*	•*	•*	•
Designing pictographs			•	•	•	•	
Designing line graphs				•*	•*	•*	•*
Designing histographs						•*	•*
Designing circle graphs					•*	•*	•*
Selecting appropriate types of graphs for different data						•*	•*
D. Statistics							
Making line plots						•	•*

	K	1	2	3	4	5	6
Finding mean, median, and mode						•*	•*
Finding the range of given data						•	•*
V. ADDITION							
A. Addition Basics							
Adding numbers with sums to 4	•*	•*					
Adding numbers with sums to 6	•*	•*					
Adding numbers with sums to 8	•	•*					
Adding numbers with sums to 10	•	•*	•*				
Adding numbers with sums to 12		•*	•*				
Adding numbers with sums to 14		•*	•*				
Adding numbers with sums to 18		•*	•*	•*			
Using the "counting-on" strategy	•*	•*	•*	•			
Using a number line for counting on	•	•	•				
Using the "doubles" strategy		•	•	•	•		
Using the "doubles + 1" strategy		•	•	•	•		
Using the "making a 10" strategy		•	•	•	•		
Using an addition table			•				
Using the Grouping (Associative) Property of Addition				•*	•*	•*	•*
Using the Order (Commutative) Property of Addition	•	•	•*	•*	•*	•*	•*
Addition fact families for sums up to 10	•	•*	•*	•*			
Using the Zero Property of Addition			•	•*	•*	•*	•*
Adding 3 or more addends	•	•*	•*	•*	•*	•*	
Adding 2-digit numbers		•*	•*		•*		
Adding money amounts to ninety-nine cents	•	•	•*				
Adding 3-digit numbers			•*	•*	•*		
Adding 4-digit numbers				•*	•*		
Checking addition by using subtraction			•*	•			
Using addition facts to mentally add			•*	•*			
Estimating sums		•	•*	•*	•*	•*	•*

	K	1	2	3	4	5	6
B. Addition with Regrouping							
Learning to regroup 10 ones as one 10	•	•	•*				
Adding a 1-digit number to a 2-digit number		•*	•*	•*			
Adding 2-digit numbers, regrouping ones as tens		•	•*	•*			
Adding three 2-digit addends			•	•*			
Adding cents or whole dollar figu es			•*				
Adding 3-digit numbers, regrouping ones as tens			•*	•*	•*		
Adding 3-digit numbers, regrouping tens as hundreds			•*	•*	•*		
Adding 3-digit numbers, regrouping ones and tens (2 regroupings)			•*	•*	•*		
Adding 4-digit numbers with regrouping				•*	•*		
Adding 5-digit numbers with regrouping					•*	•*	
Adding 6-digit numbers with regrouping							•*
Adding mixed dollar and cents amounts				•*	•*	•*	•*
C. Adding Fractions							
Adding fractions with common denominators				•*	•*	•	•
Determining the least common multiple						•	•
Determining the least common denominator						•	•
Adding fractions without common denominators					•	•*	•*
Adding mixed numbers					•	•*	•*
Adding mixed numbers with renaming						•	•
Estimating fraction and mixed-number sums						•	•
D. Adding Decimals							
Adding decimals through the hundredths place				•*	•*	•*	
Adding decimals through the thousandths place						•*	
Adding decimals through the ten-thousandths place							•*
Estimating decimal sums				•	•*	•	•
VI. SUBTRACTION							
A. Subtraction Basics							
Subtracting from numbers up to 6	•*	•*					
Subtracting from numbers up to 10	•	•*	•*				
Subtracting from numbers up to 12		•*	•*				

	K	1	2	3	4	5	6
Subtracting from numbers up to 14		•*	•*				
Using a number line to subtract	•	•	•				
Using ten-frames to subtract numbers up to 10	•						
Using ten-frames to subtract numbers up to 18		•					
Using the "counting-back" strategy to subtract	•	•	•	•			
Using the "doubles minus one" strategy			•				
Subtracting a number from itself, and subtracting zero	•*	•*	•*				
Subtracting 2-digit numbers		•	•*		•*		
Subtracting 2-digit numbers using tens mats		•					
Subtracting 3-digit numbers			•*		•*		
Subtracting money amounts to ninety-nine cents	•	•	•*				
Relating subtraction to addition by using fact families	•	•	•*	•*	•*		
Using subtraction to check addition			•*				
Using addition to check subtraction			•*	•*	•*		
B. Subtraction with Regrouping							
Practicing regrouping tens as ones	•	•	•*				
Subtracting a 1-digit number from a 2-digit number		•*	•*				
Subtracting 2-digit numbers, regrouping tens as needed		•	•*	•*	•*		
Subtracting from a number having a zero in the ones place			•*	•*			
Subtracting across zeroes				•*	•*	•	
Subtracting 3-digit numbers, regrouping tens as ones			•*	•*	•*		
Subtracting 3-digit numbers, regrouping hundreds as tens			•*	•*	•*		
Subtracting 3-digit numbers, regrouping hundreds and tens			•*	•*	•*		
Subtracting 4-digit numbers, more than one regrouping				•*	•*		
Subtracting 5-digit numbers, more than one regrouping					•*	•*	
Subtracting 6-digit numbers with regrouping							•*
Estimating differences			•*	•*	•*	•*	•
Subtracting money amounts			•*	•*	•*	•*	•*
C. Subtracting Fractions							
Subtracting fractions with common denominators				•*	•*	•*	•*
Determining the least common multiple						•	•

	K	1	2	3	4	5	6
Determining the least common denominator						•	•
Subtracting fractions without common denominators					•	•*	•*
Subtracting mixed numbers					•	•*	•*
Subtracting fractions from a whole number with renaming						•*	•*
Subtracting mixed numbers with renaming						•*	•*
Estimating differences in fractions and mixed numbers						•	•
D. Subtracting Decimals							
Subtracting decimals through the hundredths place				•*	•*	•*	
Subtracting decimals through the thousandths place						•*	
Subtracting decimals through the ten-thousandths place							•*
Estimating decimal differences					•*	•	•
VII. MULTIPLICATION							
A. Multiplication Basics							
Exploring multiplication by making groups of equal size		•	•*				
Exploring the relationship between multiplication and repeated addition		•	•*				
Relating repeated addition or skip counting to multiplication			•*	•	•		
Multiplying single-digit numbers by 2			•*	•*	•*		
Multiplying single-digit numbers by 3			•*	•*	•*		
Multiplying single-digit numbers by 4			•*	•*	•*		
Multiplying single-digit numbers by 5			•*	•*	•*		
Multiplying single-digit numbers by 6				•*	•*		
Multiplying single-digit numbers by 7				•*	•*		
Multiplying single-digit numbers by 8				•*	•*		
Multiplying single-digit numbers by 9				•*	•*		
Multiplying single-digit numbers by 10			•*	•*	•*		
Multiplying by 11					•*		
Multiplying by 12					•*		
Using a number line to find a p oduct			•	•*			
Making arrays to model multiplication facts			•*	•*	•		
Using the Order (Commutative) Property of Multiplication			•*	•*	•*	•*	•*

	K	1	2	3	4	5	6
Using the Zero Property of Multiplication				•*	•*	•*	•*
Using the Multiplication Identity Property of One				•*	•*	•*	•*
Using the Grouping (Associative) Property of Multiplication					•*	•*	•*
Using the Distributive Property						•*	•*
Using a multiplication table to learn facts			•	•	•		
Relating multiplication and division facts			•*	•*	•		
Multiplying by tens					•*	•*	•*
Multiplying by hundreds				•	•	•*	•*
Multiplying by thousands					•	•*	•*
Multiplying by ten thousands							•*
Multiplying 2-digit numbers without regrouping				•	•*		
Multiplying 3-digit numbers without regrouping				•	•*		
Factoring; distinguishing between prime and composite numbers					•*	•*	•*
Determining the greatest common factor						•	•*
Exploring exponents					•	•*	•*
B. Multiplication with Regrouping							
Multiplying 2-digit numbers by single-digit numbers, regrouping ones				•*	•*		
Multiplying 2-digit numbers by single-digit numbers, regrouping ones and tens				•*	•*		
Estimating products				•*	•*	•	
Multiplying 3-digit numbers by single-digit numbers, regrouping ones				•*	•*		
Multiplying 3-digit numbers by single-digit numbers, regrouping ones and tens				•*	•*		
Multiplying 3-digit numbers by single-digit numbers, regrouping ones, tens, and hundreds				•*	•*	•*	
Multiplying 4-digit numbers by single-digit numbers, regrouping as needed					•*		
Multiplying 4-digit money amounts by a single-digit number					•*	•*	
Multiplying larger numbers by single-digit numbers						•*	•*
C. Multi-Digit Multiplication							
Estimating products of 2- and 3-digit factors					•	•	•
Estimating products of 3- and 4-digit factors					•	•	•

	K	1	2	3	4	5	6
Multiplying 2-digit factors by multiples of 10					•		
Multiplying two 2-digit factors					•*	•*	•*
Multiplying 3-digit numbers by 2-digit numbers					•*	•*	•*
Multiplying money amounts up to $10.00 by 2-digit factors					•*	•*	•*
Multiplying 2-, 3-, and 4-digit numbers by 3-digit factors						•	•*
Using lattice multiplication						•	
D. Multiplying Fractions							
Using multiplication to find equi alent fractions					•	•*	•*
Using multiplication to find f actional parts of whole numbers						•*	•
Multiplying two fractions						•*	•*
Multiplying fractions with whole numbers						•*	•*
Multiplying fractions with mixed numbers						•*	•*
Estimating products of fractions, whole numbers, and mixed numbers						•	•
E. Multiplying Decimals							
Estimating products by rounding factors						•	•
Multiplying decimal factors by whole numbers						•*	•*
Multiplying two decimal factors						•*	•*
Multiplying decimals with zeros in the product						•*	•*
Multiplying decimals by multiples of 10						•*	•*
VIII. DIVISION							
A. Division Basics							
Exploring sharing-type division		•	•*				
Relate multiplication to division		•	•*	•*	•*	•	•
Relating division to repeated subtraction			•*	•			•
Using multiplication and division fact families				•*	•*		
Using 2 as a divisor				•*	•*		
Using 3 as a divisor				•*	•*		
Using 4 as a divisor				•*	•*		
Using 5 as a divisor				•*	•*		
Using 6 as a divisor				•*	•*		

	K	1	2	3	4	5	6
Using 7 as a divisor				•*	•*		
Using 8 as a divisor				•*	•*		
Using 9 as a divisor				•*	•*		
Dividing with 1				•*	•*	•*	•*
Dividing with 0				•*	•*	•*	•*
Dividing by multiples of 10, 100, and 1,000				•	•*	•*	•*
Using division facts to estimate quotients of unfamiliar division problems				•	•	•	•
B. Long Division							
Learning steps of division				•*			
Dividing a 2-digit dividend by a 1-digit divisor; no remainders				•*	•*	•*	
Estimating 2- and 3-digit quotients					•	•	•
Dividing up to 4-digit numbers by a 1-digit divisor with remainders				•*	•*	•*	•*
Dividing 5-digit numbers by a 1-digit divisor with remainders						•*	•*
Interpreting remainders				•*	•*	•*	•*
Finding averages				•	•*	•*	•*
Dividing money amounts by a 1-digit divisor					•*	•*	•
Rules of divisibility						•*	•*
C. Multi-Digit Division							
Estimating quotients with 2-digit divisors						•	•
Correcting an estimated quotient					•	•	
Dividing up to 5-digit numbers by a 2-digit divisor						•*	•*
Dividing up to 5-digit numbers by a 3-digit divisor							•*
Checking multi-digit division by multiplication							•*
D. Dividing Fractions							
Exploring the division of fractions using objects and pictures						•*	•*
Dividing whole numbers by fractions						•*	•*
Dividing fractions by fractions						•*	•*
Dividing fractions and mixed numbers							•
Using division to simplify complex fractions							•
Estimating fraction quotients							•
Using division in the betweenness property							•

	K	1	2	3	4	5	6
E. Dividing Decimals							
Dividing a decimal by a whole number						•*	•*
Mentally dividing a decimal by 10, 100, and 1,000						•	•
Dividing money amounts						•*	•
Dividing whole numbers by decimals to the tenth, hundredth, and thousandth places							•*
Dividing with a decimal divisor and decimal dividend							•*
Estimating decimal quotients							•
IX. FRACTIONS							
A. Identifying Fractions							
Recognizing equal and non-equal parts	•*	•*	•*				
Identifying one-half of wholes or sets	•	•	•*	•*			
Identifying thirds of wholes or sets		•	•*	•*			
Identifying fourths of wholes or sets		•	•*	•*			
Identifying fractional parts of a whole and a set	•	•	•*	•*	•*	•	
Writing fractions for fractional parts		•	•*	•*	•*	•	
Dividing wholes and sets into fractional parts	•	•	•	•*	•*	•	
Showing or drawing fractional parts of a whole or set	•	•	•*	•*	•*	•	
Finding a fraction of a number					•*	•	
B. Comparing Fractions							
Using models to compare fractions with and without common denominators			•*	•*	•	•	
Using a number line to compare and order fractions				•*	•*	•*	
Comparing fractions with greater than, less than, and equal signs				•	•*	•*	•
Recognizing equal fractions			•*	•*	•*	•*	•
Using models to make equivalent fractions				•*	•*	•	•
Using multiplication and division to make equivalent fractions				•	•	•	•
Writing a fraction in simplest terms					•	•*	•*
C. Mixed Numbers and Improper Fractions							
Identifying mixed numbers and whole numbers for fractional models				•	•*	•	•
Writing mixed numbers or whole numbers for fractions				•	•*	•	•

	K	1	2	3	4	5	6
D. Adding Fractions							
Adding fractions with common denominators				•*	•*	•*	•*
Determining the least common multiple						•	•
Determining the least common denominator						•	•
Adding fractions without common denominators					•*	•*	•*
Adding mixed numbers					•*	•*	•*
Adding mixed numbers with renaming						•*	•*
Estimating fraction and mixed number sums						•	•
E. Subtracting Fractions							
Subtracting fractions with common denominators				•*	•*	•*	•*
Determining the least common multiple						•	•
Determining the least common denominator						•	•
Subtracting fractions without common denominators					•	•*	•*
Subtracting mixed numbers					•	•*	•*
Subtracting fractions from a whole number with renaming						•*	•*
Subtracting mixed numbers with renaming						•*	•*
Estimating differences in fractions and mixed numbers						•	•
F. Multiplying Fractions							
Using multiplication to find equi alent fractions					•	•*	•*
Using multiplication to find f actional parts of whole numbers						•	•*
Multiplying two fractions						•*	•*
Multiplying fractions with mixed numbers						•*	•*
Estimating products of fractions, whole numbers, and mixed numbers						•	•
G. Dividing Fractions							
Exploring the division of fractions using objects and pictures						•	•
Dividing whole numbers by fractions						•*	•*
Dividing fractions by fractions						•*	•*
Dividing fractions and mixed numbers							•
Using division to simplify complex fractions							•

	K	1	2	3	4	5	6
Estimating fraction quotients							•
Using division in the betweenness property							•
X. DECIMALS							
A. Identifying Decimals							
Relating fraction concepts to decimals				•*	•*	•*	
Making models of decimals to the hundredths place				•*	•*		
Reading and writing decimals in the tenths place				•*	•*	•*	•*
Reading and writing decimals in the hundredths place				•*	•*	•*	•*
Reading and writing decimals greater than one				•*	•*	•*	•*
Exploring decimals in the thousandths place					•		
Reading and writing decimals in the thousandths place						•*	•*
Reading and writing decimals in the ten-thousandths place							•*
B. Comparing Decimals							
Comparing and ordering decimals to the hundredths place				•	•*		
Comparing and ordering decimals to the thousandths place						•*	
Comparing and ordering decimals to the ten-thousandths place							•*
Recognizing equivalent decimals; writing equal decimals through the hundredths place					•*	•*	•*
Rounding decimals to the nearest whole number				•	•*	•*	
Rounding decimals to the nearest tenth or hundredth						•*	
Rounding decimals through the hundred-thousandths place							•
C. Adding Decimals							
Adding decimals through the hundredths place				•*	•*	•*	
Adding decimals through the thousandths place						•*	
Adding decimals through the ten-thousandths place							•*
Estimating decimal sums				•*		•*	•
D. Subtracting Decimals							
Subtracting decimals through the hundredths place				•*	•*	•*	
Subtracting decimals through the thousandths place						•*	

	K	1	2	3	4	5	6
Subtracting decimals through the ten-thousandths place							•*
Estimating decimal differences						•*	•
E. Multiplying Decimals							
Estimating products by rounding factors						•	
Multiplying decimal factors by whole numbers						•*	•*
Multiplying two decimal factors						•*	•*
Multiplying decimals with zeros in the product						•*	•*
Multiplying decimals by multiples of 10						•	•*
F. Dividing Decimals							
Dividing a decimal by a whole number						•*	•*
Mentally dividing a decimal by 10, 100, and 1,000						•*	•*
Dividing money amounts						•*	•*
Dividing whole numbers by decimals to the tenth, hundredth, and thousandth places							•*
Dividing with a decimal divisor and decimal dividend							•*
Estimating decimal quotients							•
XI. ALGEBRA							
A. Equations							
Writing number sentences	•	•*	•*	•*	•*	•*	•*
Finding missing addends	•	•	•*	•*	•*	•*	•*
Finding a missing number in subtraction using various strategies			•	•*	•*		•*
Finding the missing factor				•	•*	•*	•*
Solving for a variable in a number sentence				•		•*	•*
Understanding related addition and subtraction facts		•*	•*	•	•*	•*	•*
Understanding related multiplication and division facts			•*	•*	•*	•*	•*
Checking computation by using the inverse operation			•*	•*	•*	•*	•*
Solving equations using inverse operations							•*
B. Properties							
Using the Order (Commutative) Property of Addition	•	•	•*	•*	•*	•*	•*
Using the Order (Commutative) Property of Multiplicaton				•*	•*	•*	•*
Using the Zero Property of Addition			•*	•*	•*	•*	•*

	K	1	2	3	4	5	6
Using the Zero Property of Multiplicaton				•*	•*	•*	•*
Using the Multiplicaton Property of One				•*	•*	•*	•*
Using the Grouping (Associative) Property of Addition				•*	•*	•*	•*
Using the Grouping (Associative) Property of Multiplication				*	•*	•*	•*
Using the Distributive Property						•*	•*
C. Factoring							
Distinguishing between a prime and composite number					•*	•*	•*
Prime factorization						•*	•*
Finding and listing factors of composite numbers					•*	•*	•
Finding the greatest common factor						•	•*
D. Coordinates							
Using grid coordinates		•					
Graphing ordered pairs				•		•*	•
Locating a point using ordered pairs				•		•	•
Using a four-quadrant grid							•
E. Formulas							
Using the formula for area					•*	•*	•
Using the formula for area of rectangles and squares						•*	•
Using the formula for area of quadrilaterals							•
Using the formula for area of triangles						•*	•
Applying the area formulas to irregular figu es						•	•
Using the formula for area of circles							•*
Using the formula for perimeter					•*	•*	•
Using the formula for perimeter of a square and rectangle					•*	•*	•
Using the formula for circumference						•	•*
Using the formula for volume					•	•*	•*
Using the formula for volume of a triangular prism							•*
Using the formula for volume of a cube and rectangular prism						•*	•*
Using the formula for volume of a cylinder							•
Calculating interest						•	•*

	K	1	2	3	4	5	6
F. Exponents							
Exploring exponents						•*	•*
G. Integers							
Exploring integers						•*	•*
Comparing and ordering integers						•*	•*
Using a number line to add and subtract integers						•*	•*
Adding and subtracting integers (without number line)							•*
Multiplying and dividing integers							•*
H. Ratio and Proportions							
Solving proportions						•	•*
Using cross products						•	•*
Finding rate and unit rate							•*
XII. GEOMETRY							
A. Symmetry							
Recognizing slide symmetry (translation)	•	•	•	•	•	•	•
Recognizing spin or turn symmetry (rotation)	•	•	•	•	•*	•	•
Recognizing mirror or flip symmet y (refle tion)	•	•	•	•	•*	•	•
Modeling slides, flip , and turns				•	•	•	•
Identifying lines of symmetry	•	•	•	•	•	•	•
Identifying planes of symmetry							•
B. Shapes							
Identifying solid shapes	•*	•*	•*	•*	•*	•	•
Identifying faces, edges, and vertices of solid figu es				•*	•*	•	•
Identifying polyhedrons						•	•
Identifying prisms			•*		•*	•	•
Identifying plane shapes	•*	•*	•*	•*	•*	•*	•
Distinguishing between similar solid and plane shapes (e.g., sphere and circle)	•*	•*	•*	•*			
Distinguishing between squares and rectangles	•*	•*	•*	•*	•*		
Classifying quadrilaterals (parallelograms, trapezoids, rhombuses, rectangles, squares)			•*		•*	•*	•
Identifying triangles by the length of sides and type of angles					•*	•	•

	K	1	2	3	4	5	6
Identifying the center, radius, and diameter of circles					•*	•	•*
Identifying central angles							•
Identifying chords						•	•
Identifying concentric circles							•
Constructing circles by using a compass					•	•*	•
Identifying polygons by number of sides					•*	•	•
Identifying regular polygons						•	•
Constructing polygons by using a compass							•
Drawing plane shapes	•	•	•*	•*			
Distinguishing between open and closed figu es		•		•	•		
Identifying congruent figu es				•*	•*	•	•
Identifying similar figu es					•*	•	•
Using the geoboard	•	•	•	•	•		
Using pentominoes			•			•	
Exploring tessellations					•		
C. Angles							
Recognizing acute, obtuse, and right angles			•*	•*	•*	•	•
Identifying straight angles						•	•
Identifying and naming angles				•	•*	•	•
Identifying refl x angles							•
Measuring and constructing angles with a protractor						•*	•
Identifying complementary and supplementary angles							•*
D. Lines and Line Segments							
Identifying points					•	•	•
Identifying lines and line segments				•	•*	•	•
Identifying rays					•	•	•
Naming points, lines, line segments, and rays					•	•	•
Identifying parallel and intersecting lines				•	•*	•	•
Identifying perpendicular lines					•*	•	•
Identifying skew lines							•
Constructing congruent line segments							•

	K	1	2	3	4	5	6
Bisecting line segments							•
Identifying planes						•*	•
E. Coordinates							
Locating ordered pairs				•	•	•*	•
F. Measurement of Geometric Figures							
Finding area by counting square units		•		•*	•		
Finding the area of rectangles and squares				•	•*	•*	•
Finding the area of quadrilaterals							•
Finding the area of triangles						•*	•
Finding the area of irregular figu es						•*	•
Finding surface area						•*	•
Finding the perimeter of polygons				•*	•*	•	•
Finding circumference						•	•*
Relating circumference and diameter as *pi*						•	•*
Finding the area of a circle							•*
Finding volume by counting cubic units					•	•	
Finding the volume of rectangular prisms					•	•	•*
Finding the volume of triangular prisms and cylinders							•*
XIII. PROBLEM SOLVING							
A. Data Sources							
Using information from pictures	•*	•*	•*				
Using a code		•	•				
Using a calendar to solve problems	•	•	•	•	•	•	
Using information from a line plot						•*	•*
Using information from a menu					•		
Using information from a recipe				•	•	•	•
Using information from a nutrition label							•
Using a stem-and-leaf plot							•
Using information from tables and graphs	•*	•*	•*	•*	•*	•*	•*

B. Skills and Strategies	K	1	2	3	4	5	6
Acting out a problem	•	•			•		
Analyzing the data	•	•*	•*	•*	•*	•*	•*
Choosing the best strategy for a given problem					•*	•*	•*
Choosing the correct operation		•*	•*	•*	•*	•*	•*
Choosing mental math, pencil and paper, or calculator			•*	•*	•		•*
Conducting an experiment; drawing conclusions	•*	•	•*	•*	•*	•*	•*
Determining the best measurement tool for specific situ tions		•	•				
Determining reasonable answers	•*	•*	•*	•*	•*	•*	•*
Drawing a picture, diagram, or model	•*	•*	•*	•*	•*	•*	•*
Estimating and verifying measurements		•*	•*	•*	•*	•*	•*
Looking for a pattern	•*	•*	•*	•*	•*	•*	•*
Making a graph	•*	•*	•*	•*	•*	•*	•*
Making a systematic list				•*	•*	•*	•*
Making a table	•	•	•*	•*	•*	•*	•*
Recognizing that there is insuffici t information		•			•	•*	
Recognizing unnecessary information		•			•*	•*	
Solving analogies							•
Solving two-step word problems			•	•*	•*	•*	•*
Solving multi-step word problems					•*	•*	•*
Solving problems with more than one answer				•	•	•	•
Using a calculator			•	•	•	•	•*
Using formulas					•*	•	•*
Using inverse operations			•*			•*	•*
Using known equations						•*	•*
Using logical reasoning			•*			•*	•*
Using variables to solve for a missing number				•		•*	•*
Using the STAR Problem-Solving Path		•	•				
Using the Pathway to Problem Solving (Problem-Solving Path)				•	•		
Using the Problem-Solving Guide						•	•

	K	1	2	3	4	5	6
Using the "try and check" method					•	•	
Working backward				•	•	•	•
Writing an equation					•*	•*	•*
Writing a math sentence or story using information from pictures	•*	•*	•*	•*			
C. Computational Skills Application							
Estimating sums		•*	•*	•*	•*	•*	•*
Estimating differences			•*	•*	•*	•*	•*
Addition	•*	•*	•*	•*	•*	•*	•*
Subtraction	•*	•*	•*	•*	•*	•*	•*
Addition and subtraction of money	•		•*	•*	•*	•*	•*
Estimating products				•*	•*	•*	•*
Estimating quotients				•*	•*	•*	•*
Multiplication			•*	•*	•*	•*	•*
Division			•*	•*	•*	•*	•*
Multiplication and division of money				•*	•*	•*	•*
Division, interpreting remainders				•*	•*	•*	•*
Fractions			•*	•*	•*	•*	•*
Decimals				•*	•*	•*	•*
Percents						•*	•*
Checking and correcting computation (inverse operations)			•*	•*	•*	•*	•*
Elapsed time	•	•	•*	•*	•*	•*	•*
Adding and subtracting hours and minutes						•*	•*
D. Map Skills							
Using a compass and directional words		•					
Identifying locations on a map		•		•	•	•	•
Following directions on a map		•				•	
Determining the best route				•	•	•	•
Calculating mileage					•	•	•
Using a scale to calculate mileage						•	•
Using data from scale drawings						•	•
Using a map to calculate area and perimeter							•

	K	1	2	3	4	5	6
XIV. PROBABILITY							
A. Probability Basics							
Relating favorable outcomes to the number of possible outcomes		•		•*	•*	•	•*
Making predictions	•	•		•*	•*	•*	•*
Identifying outcomes as certain (1), probable, or impossible (0)				•*	•*	•*	•*
Identifying outcomes as less likely, more likely, or equally likely					•*	•	•*
Writing probability as a fraction				•	•*	•	•
Using proportions in probability				•	•	•	•
Writing probability as a percent							•
B. Advanced Probability							
Distinguishing between experimental probability and mathematical (or theoretical) probability							•
Representing possible outcomes with a tree diagram or sample space							•*
Arranging items when order matters (permutations) and when order does not matter (combinations)							•
Recording outcomes on a line plot							•
Determining probability of compound events							•*
XV. TECHNOLOGY							
A. Keyboard Skills							
Recognizing number and operational keys on calculators		•	•	•			
Performing key sequences					•	•	•
Using the percent key						•	•
Using the square root key							•
Using the square (exponent) key							•
Using the integer sign change key							•
B. Problem Solving							
Distinguishing problems best solved by calculator, pencil and paper, or mental math			•*	•*	•		•*
Using the calculator to check and correct computation		•				•	
Using the calculator for advanced addition and subtraction		•	•		•	•	•*
Using the calculator for addition and subtraction of money			•		•	•	•
Using the calculator for multiplication					•	•	•*

	K	1	2	3	4	5	6
Using the calculator for division					•	•	•*
Calculating average or mean					•	•*	•*
Calculating range						•	•*
Finding decimal equivalents for fractions						•*	•*
Finding percents						•*	•*
Using a calculator for completing formulas							•*
Using calculator computation to design tables and graphs						•	•
C. Patterns							
Finding patterns by repeated multiplication (constant multipliers)					•	•*	•
Distinguishing between terminating and repeating decimals						•	•
Finding multiples of larger numbers						•	•
Patterns of equations							•
Using calculators to square numbers					•		•
XVI. MEASUREMENT							
A. Linear Measurement							
Comparing lengths of everyday objects (without measuring)	•*	•*			•		
Measuring length with nonstandard units	•	•*		•*	•*		
Measuring by whole inches	•	•*	•*	•*	•*	•	
Measuring to the nearest half inch				•*	•*	•	
Measuring to the nearest quarter inch					•*	•	
Measuring to the nearest eighth inch						•	
Measuring to the nearest sixteenth inch						•	
Estimating and measuring by whole feet	•	•	•*	•*	•*		
Estimating and measuring by whole yards			•*	•*	•*		
Estimating length by miles				•*			
Converting measurements from one customary unit to another					•	•	•
Adding and subtracting mixed customary units of linear measurement							•
Estimating and measuring by millimeters					•*	•	
Estimating and measuring by centimeters		•	•*	•*	•*	•	
Estimating and measuring by decimeters			•		•*	•	

	K	1	2	3	4	5	6
Estimating and measuring by meters			•*	•*	•*	•	
Estimating length by meters or kilometers				•*	•*	•	
Converting measurements from one metric unit to another					•	•	•
B. Capacity							
Comparing volume of everyday objects	•	•	•*		•	•	
Comparing different units of capacity (cups, pints, and quarts)		•	•*	•*	•	•	
Estimating and measuring by cups, pints, quarts, and gallons		•	•*	•*	•	•	
Converting measurements from one customary unit to another					•	•	•
Adding and subtracting mixed customary units of capacity							•
Comparing other units of capacity to the liter		•		•*	•	•	
Estimating and measuring by liters				•*	•	•	
Estimating and measuring by milliliters					•	•	
Converting measurements from one metric unit of capacity to another					•	•	•
C. Weight and Mass							
Comparing the weight of everyday objects to one pound	•	•	•	•*	•	•	
Estimating and measuring weight in ounces and pounds	•	•	•	•*	•	•	
Estimating weight in tons					•		
Converting measurements from one customary unit of weight to another					•	•	•
Adding and subtracting mixed customary units of weight							•
Estimating and measuring mass in grams and kilograms		•	•	•*	•	•	
Converting measurements from one metric unit of mass to another					•	•	•
Distinguishing between mass and weight							•
D. Temperature							
Estimating, measuring, and recording temperature using a Fahrenheit thermometer	•	•	•	•	•	•	•
Estimating, measuring, and recording temperature using a Celsius thermometer	•			•	•	•	•
E. Measurement Formulas							
Finding area by counting square units		•		•*	•		
Using the formula for finding a ea of rectangles and squares					•*	•*	•
Using the formula for finding area of parallelograms and trapezoids							•

	K	1	2	3	4	5	6
Finding the area of a triangle						•*	•
Finding the surface area of a prism						•*	•
Finding the surface area of a pyramid							•
Finding the surface area of a cylinder							•
Finding perimeter by adding the length of sides				•*	•*	•	•
Using the formula for finding pe imeter of rectangles and squares					•*	•	•
Finding the circumference of a circle						•	•
Finding volume by counting cubic units				•*	•	•	
Using the formula for finding olume of solid figu es					•	•*	•
F. Maps and Scale Drawings							
Finding and calculating distances					•	•	•
XVII. TIME							
A. Using the calendar							
Relating activities to months and seasons	•	•*	•*				
Reading the calendar	•*	•*	•*	•	•		
Completing a calendar	•	•	•				
Naming the date, weeks before or after a given date			•	•	•		
Finding elapsed time on a calendar			•		•		
B. Telling and Writing Time							
Telling time to the hour	•*	•*					
Telling time to the half hour	•	•*	•*	•*			
Telling time to the quarter hour		•	•*	•*			
Telling time in 5-minute intervals			•	•*			
Telling time to the minute				•*	•		
Telling time by minutes before and after the hour				•*			
Distinguishing between AM and PM			•*				
Writing time in digital notation			•				
C. Comparing Time							
Comparing durations of time (activities that take more or less time)		•					
Comparing durations of elapsed time					•		
Choosing an appropriate unit of time					•		

	K	1	2	3	4	5	6
D. Calculating Time							
Calculating elapsed time (15-minute intervals)			•				
Calculating elapsed time (whole hour intervals)	•	•	•*				
Calculating elapsed time (hours and minute intervals)			•	•*	•	•	•
Stating an end time for a given elapsed time		•	•*	•*	•	•	•
Reading a schedule	•	•	•	•	•		
Organizing information on a schedule chart	•			•*			
Calculating time in other time zones					•	•	•
Calculating elapsed time between time zones						•	•
Adding and subtracting hours and minutes						•	•
Adding and subtracting hours, minutes, and seconds						•	•
XVIII. MONEY							
A. Identifying U.S. Currency							
Recognizing and counting pennies, nickels, and dimes	•	•*	•*	•*			
Recognizing and counting quarters	•	•*	•*	•*			
Recognizing one dollar and identifying amounts equal to one dollar	•	•*	•*	•*			
Recognizing and counting half-dollars			•*	•*			
Comparing money amounts	•	•*	•*	•*			
Identifying equivalent groups of coins		•*	•*				
Identifying equivalent groups of coins or bills	•		•*	•*			
Rounding money amounts to the nearest dollar or 10 dollars					•*	•	•
Exploring the symbols and history of the US dollar bill					•		
B. Calculating Money Amounts							
Adding and subtracting up to 10 cents	•	•					
Adding and subtracting up to one dollar		•	•*				
Adding mixed dollar and cent amounts		•	•*	•*	•*	•	•
Subtracting mixed dollar and cent amounts			•*	•*	•*	•	•
Estimating a sum or difference by rounding to the nearest whole dollar				•*	•*	•	•
Estimating a sum or difference by rounding to the nearest 10 dollars						•	•

	K	1	2	3	4	5	6
Multiplying 4-digit money amounts by 1-digit multipliers					•*	•	•
Multiplying money amounts by 2-digit multipliers					•	•	•
Multiplying money amounts by other decimals						•	•
Dividing money amounts by 1-digit divisors					•	•	•
Dividing money amounts by 2-digit divisors						•	•
Dividing money amounts by other decimals							•
C. Everyday Application							
Making buying decisions	•	•	•*	•	•	•	•*
Making change		•	•*	•	•	•	•
Designing a budget					•		•
Balancing a checking account							•
Calculating taxes and discounts						•	•*
Calculating interest						•	•*
XIX. RATIO, PROPORTION, AND PERCENT							
A. Ratio							
Identifying fractions	•	•	•*	•*	•*	•*	
Writing fractions	•	•	•	•*	•*	•*	•*
Comparing fractions			•	•*	•*	•*	•*
Relating fractions and decimals				•*	•	•*	•*
Defining atio					•	•	•*
Expressing ratio as a fraction, decimal, or percent					•	•	•*
Writing ratios for given situations					•	•	•*
Distinguishing between rate and ratio							•
Calculating unit rate							•
B. Proportion							
Writing equivalent fractions using models				•*	•*	•	
Writing equivalent fractions by multiplying and dividing				•*	•	•	•
Writing equivalent ratios, completing ratio tables						•	•*
Defining and ecognizing proportions						•	•*
Solving proportions						•	•*
Using proportions to solve problems						•	•*

	K	1	2	3	4	5	6
C. Percent							
Relating fractions and decimals to percents					•	•*	•*
Relating ratio to percent					•	•	•*
Converting fractions with denominators of 100 to percents					•	•	
Converting fractions to percents and percents to fractions						•	•
Writing decimals as percents and percents as decimals						•*	•
Using mental math to find pe cent based on multiples of 10						•	•
Estimating percent by rounding						•	•
Finding percent of a number						•*	•
Finding what percent one number is of another							•
Writing and solving equations involving percent						•	•
Using percent skills in everyday applications						•	•