

Core Progress for Math

Skills List

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Core Progress for Math

Core Progress™ for math is a research-based learning progression identifying the continuum of math concepts and skills needed for students to be successful in math. Core Progress for math was developed after an extensive content review, analysis of state standards, and the guidance of leading experts in the field of mathematics and instruction. Student data was then collected for validation and was examined quantitatively, through the calibration process used to analyze assessment items. The concepts and skills in Core Progress for math align with Common Core Standards. Download a copy of the Core Progress for math white paper to learn more about its development. <http://doc.renlearn.com/KMNet/R00552482161352C.pdf>

Using a Star Math Enterprise™ scaled score, the STAR Math Enterprise Instructional Planning Reports connect students to the skills within the learning process they are ready to learn. Within the software, educators additionally have access to the Core Progress portal, providing a robust search tool including prerequisite skills, worked examples, and sample items.

Organizational Structure

Core Progress™ for math has four domains that form the base of the learning progression. Within each domain, closely related skills are organized into skill areas. The resulting hierarchical structure is divided into three areas: domain, skill area, and skill statements. Skill statements represent the various knowledge and skills students gain as they progress in their math development. The chart on page 4 shows the four math domains and the 32 skill areas that define Core Progress for math. The chart also includes a column outlining which grades contain grade-level skill statements available for each of the 32 skill areas.

The grade-level skill statements identify the incremental steps students take as they progress in acquiring specific mathematical concepts and skills. These skill statements begin in the early grades and continue through high-school level math. There are over 1300 grade-level skill statements. In the following pages, the grade-level skill statements are presented in two views, by domain and by grade.

View Options

Domain

The domain view shows the progression of grade-level skill statements from grade to grade within the domain. Use this view to understand the progression of skills within the domain.

Grade

The grade view shows all of the grade-level skill statements for a particular grade, organized by domain. Use this view to understand what skills are associated with a particular grade.

Column Definitions

Domains – there are four domains, which form the base of the learning progression: 1) Numbers and Operations; 2) Algebra; 3) Geometry and Measurement; and 4) Data Analysis, Statistics, and Probability

Skill Set – a set of closely related skills within each of the math domains

Grade-level skill statements – the incremental steps students take as they progress in acquiring specific concepts and skills, beginning in the early grades and continuing through high-school math

Core skills – the most critical skills a student must learn at grade level that serve as the key building blocks in a student's mathematics education

General Organization of Core Progress for Math

Domain	Skill Area	Grades with Grade-Level Skill statements
Numbers and Operations		
	Whole Numbers: Place Value	Early Numeracy, 1-5
	Whole Numbers: Counting, Comparing, and Ordering	Early Numeracy, 1-3
	Whole Numbers: Addition and Subtraction	Early Numeracy, 1-4
	Whole Numbers: Multiplication and Division	2-6
	Decimal Concepts and Operations	4-8
	Fraction Concepts and Operations	1-8
	Evaluate Numerical Expressions	4-9
	Percents, Ratios, and Proportions	5-8
	Powers, Roots, and Radicals	6-9
	Integers	6-7
Algebra		
	Powers, Roots, and Radicals	8-9
	Algebraic Thinking	Early Numeracy, 1-5
	Evaluate and Use Variable Expressions	5-9
	Relations and Functions	5-9
	Linear Equations and Inequalities	6-9
	Algebra of Polynomials	8-9
	Quadratic and Nonlinear Equations and Inequalities	9
	Systems of Equations and Inequalities	9
Geometry and Measurement		
	Measurement	Early Numeracy, 1-8
	Geometry: 2-Dimensional Shapes and Attributes	Early Numeracy, 1-7
	Angles, Segments, and Lines	3-4, 6-8, 10
	Congruence and Similarity	3-4, 6-8, 10
	Polygons and Circles	6-7, 10
	Perimeter, Circumference, and Area	2-8, 10
	Coordinate Geometry	2-7, 10
	Right Triangles and Trigonometry	8, 10
	Transformations	1-7, 10
	Geometry: 3-Dimensional Shapes and Attributes	2-3, 5-8
	Surface Area and Volume	4-8, 10
	Money	1-4
	Time	1-6
Data Analysis, Statistics, and Probability		
	Data Representation and Analysis	Early Numeracy, 1-8
	Combinatorics and Probability	4-8, 10

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Early Numeracy		
Whole Numbers: Place Value	Recognize numbers 0-20	
Whole Numbers: Counting, Comparing, and Ordering	Count 1-20	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 3 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 5 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 7 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 9 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 10 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count the number of any one type of object in a group of up to 10 mixed objects	
Whole Numbers: Counting, Comparing, and Ordering	Recognize that there are 0 objects	
Whole Numbers: Counting, Comparing, and Ordering	Compare sets of up to 5 objects	
Whole Numbers: Counting, Comparing, and Ordering	Complete a sequence of numbers between 0 and 5 in ascending order	
Whole Numbers: Counting, Comparing, and Ordering	Count on or count back with numbers 1 to 5	
Whole Numbers: Counting, Comparing, and Ordering	Compare sets of up to 10 objects using "more" or "fewer"	
Whole Numbers: Counting, Comparing, and Ordering	Identify two sets with equal numbers of up to 10 objects	
Whole Numbers: Counting, Comparing, and Ordering	Determine the difference in number between two sets of objects	
Whole Numbers: Counting, Comparing, and Ordering	Complete a sequence of numbers between 0 and 10 in ascending order	
Whole Numbers: Counting, Comparing, and Ordering	Count on or count back with numbers 1 to 10	
Whole Numbers: Counting, Comparing, and Ordering	Recognize ordinal numbers 1st - 10th	
Whole Numbers: Counting, Comparing, and Ordering	Identify the object in a given ordinal position up to "tenth"	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 15 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count on or count back with numbers 1 to 15	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 20 objects	
Whole Numbers: Counting, Comparing, and Ordering	Complete a sequence of numbers between 0 and 20 in ascending order	
Whole Numbers: Counting, Comparing, and Ordering	Count on or count back with numbers 1 to 20	
Whole Numbers: Counting, Comparing, and Ordering	Compare sets of up to 20 objects using "more" or "fewer"	
Whole Numbers: Addition and Subtraction	Compose an equivalent number out of two numbers by using pictures	
Whole Numbers: Addition and Subtraction	Decompose a number into two numbers by using pictures	
Whole Numbers: Addition and Subtraction	Add 1 to a set	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 5 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 7 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 9 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 10 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 12 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 15 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 20 using pictures	
Whole Numbers: Addition and Subtraction	Subtract 1 from a set	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 5 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 7 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 9 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 10 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 12 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 15 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 20 using pictures	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Early Numeracy (continued)		
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 5 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 7 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 9 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 10 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 12 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 15 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 20 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 15 in vertical format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 20 in vertical format	
Whole Numbers: Addition and Subtraction	Use turn-around facts to find the sum of two numbers	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 3 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 5 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 7 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 9 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 10 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 12 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 15 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 20 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 15 in vertical format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 20 in vertical format	
Grade 1		
Whole Numbers: Place Value	Read a whole number to 30	
Whole Numbers: Place Value	Read a whole number from 31 to 100	
Whole Numbers: Place Value	Determine the word form of a whole number to 30	
Whole Numbers: Place Value	Determine the word form of a whole number from 31 to 100	
Whole Numbers: Counting, Comparing, and Ordering	Count objects to 20	○
Whole Numbers: Counting, Comparing, and Ordering	Count on by ones from a number less than 100	○
Whole Numbers: Counting, Comparing, and Ordering	Count back by ones from a number less than 20	○
Whole Numbers: Counting, Comparing, and Ordering	Count back by ones from a number between 20 and 100	
Whole Numbers: Counting, Comparing, and Ordering	Identify a number to 20 represented by a point on a number line	○
Whole Numbers: Counting, Comparing, and Ordering	Locate a number to 20 on a number line	○
Whole Numbers: Counting, Comparing, and Ordering	Determine one more than or one less than a given number	○
Whole Numbers: Counting, Comparing, and Ordering	Determine ten more than or ten less than a given number	○
Whole Numbers: Counting, Comparing, and Ordering	Count by 2s to 50 starting from a multiple of 2	○
Whole Numbers: Counting, Comparing, and Ordering	Count by 5s or 10s to 100 starting from a multiple of 5 or 10, respectively	○
Whole Numbers: Counting, Comparing, and Ordering	Identify odd and even numbers less than 100	○
Whole Numbers: Counting, Comparing, and Ordering	Answer a question involving an ordinal number up to "tenth"	
Whole Numbers: Counting, Comparing, and Ordering	Count objects grouped in tens and ones	○
Whole Numbers: Place Value	Identify the number of 10's in 10, 20, 30, 40, 50, 60, 70, 80, 90	
Whole Numbers: Place Value	Model a number to 100 using tens and ones	
Whole Numbers: Place Value	Recognize a number from a model of tens and ones to 100	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 1 (continued)		
Whole Numbers: Place Value	Represent a 2-digit number as tens and ones	○
Whole Numbers: Place Value	Determine the 2-digit number represented as tens and ones	○
Whole Numbers: Place Value	Determine the value of a digit in a 2-digit number	○
Whole Numbers: Place Value	Recognize equivalent forms of a 2-digit number using tens and ones	
Whole Numbers: Counting, Comparing, and Ordering	Compare sets of objects using words	
Whole Numbers: Counting, Comparing, and Ordering	Compare whole numbers to 100 using words	○
Whole Numbers: Counting, Comparing, and Ordering	Order whole numbers to 100 in ascending order	○
Whole Numbers: Counting, Comparing, and Ordering	Order whole numbers to 100 in descending order	
Whole Numbers: Addition and Subtraction	Determine equivalent forms of a number, up to 10	○
Whole Numbers: Addition and Subtraction	Relate a picture model to a basic addition fact	
Whole Numbers: Addition and Subtraction	Determine the basic addition fact shown by a picture model	
Whole Numbers: Addition and Subtraction	Relate a number-line model to a basic addition fact	
Whole Numbers: Addition and Subtraction	Determine the basic addition fact shown by a number-line model	
Whole Numbers: Addition and Subtraction	Relate a picture model to a basic subtraction fact	
Whole Numbers: Addition and Subtraction	Determine the basic subtraction fact shown by a picture model	
Whole Numbers: Addition and Subtraction	Determine the basic subtraction fact shown by a number-line model	
Whole Numbers: Addition and Subtraction	Relate a number-line model to a basic subtraction fact	
Whole Numbers: Addition and Subtraction	Apply the relationship between addition and counting on	
Whole Numbers: Addition and Subtraction	Apply the relationship between subtraction and counting back	
Whole Numbers: Addition and Subtraction	Know basic addition facts to 10 plus 10	○
Whole Numbers: Addition and Subtraction	Know basic subtraction facts to 20 minus 10	○
Whole Numbers: Addition and Subtraction	Add three 1-digit numbers	
Whole Numbers: Addition and Subtraction	WP: Use basic addition or subtraction facts to solve problems	○
Whole Numbers: Addition and Subtraction	Complete an addition and subtraction fact family	
Whole Numbers: Addition and Subtraction	Add multiples of 10, sums to 90	
Whole Numbers: Addition and Subtraction	Subtract multiples of 10 up to 90	
Whole Numbers: Addition and Subtraction	Add zero to any number less than 100	
Whole Numbers: Addition and Subtraction	Subtract zero from any number less than 100	
Whole Numbers: Addition and Subtraction	Add a 2-digit and a 1-digit number without regrouping	○
Whole Numbers: Addition and Subtraction	Add two 2-digit numbers without regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 1-digit number from a 2-digit number without regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 2-digit number from a 2-digit number without regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract a 1- and 2-digit number without regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract two 2-digit numbers without regrouping	○
Fraction Concepts and Operations	Identify a shape divided into equal parts	
Library: Grade 2		
Whole Numbers: Place Value	Read a whole number to 1,000	○
Whole Numbers: Place Value	Determine the word form of a whole number to 1,000	○

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 2 (continued)		
Whole Numbers: Counting, Comparing, and Ordering	Complete a skip pattern starting from a multiple of 2, 5, or 10	○
Whole Numbers: Counting, Comparing, and Ordering	Complete a skip pattern of 2, 5, or 10 starting from any number	○
Whole Numbers: Counting, Comparing, and Ordering	Count on by 100s from any number	○
Whole Numbers: Counting, Comparing, and Ordering	Identify odd and even numbers between 100 and 1,000	
Whole Numbers: Counting, Comparing, and Ordering	Solve problems involving the concept of odd and even numbers	
Whole Numbers: Counting, Comparing, and Ordering	Answer a question using an ordinal number up to "twentieth"	
Whole Numbers: Place Value	Determine the value of a digit in a 3-digit number	
Whole Numbers: Place Value	Determine which digit is in a specified place in a 3-digit whole number	
Whole Numbers: Place Value	Determine the result of changing a digit in a 3-digit whole number	
Whole Numbers: Place Value	Model a number using hundreds, tens, and ones to 1,000	
Whole Numbers: Place Value	Recognize a number from a model of hundreds, tens, and ones to 1,000	
Whole Numbers: Place Value	Represent a 3-digit number as hundreds, tens, and ones	○
Whole Numbers: Place Value	Determine the 3-digit number represented as hundreds, tens, and ones	○
Whole Numbers: Place Value	Recognize equivalent forms of a 3-digit number using hundreds, tens, and ones	○
Whole Numbers: Counting, Comparing, and Ordering	Compare whole numbers to 1,000 using words	
Whole Numbers: Counting, Comparing, and Ordering	Compare whole numbers to 1,000 using the symbols $<$, $>$, and $=$	○
Whole Numbers: Counting, Comparing, and Ordering	Order whole numbers to 1,000 in ascending order	○
Whole Numbers: Counting, Comparing, and Ordering	Order whole numbers to 1,000 in descending order	○
Whole Numbers: Addition and Subtraction	Determine a number pair that totals 100	○
Whole Numbers: Addition and Subtraction	Determine a number pair that totals 1,000	
Whole Numbers: Addition and Subtraction	Add two 3-digit numbers without regrouping	
Whole Numbers: Addition and Subtraction	Add two 2-digit numbers with regrouping, given a model	
Whole Numbers: Addition and Subtraction	Add a 2-digit number to a 1-digit number with regrouping	
Whole Numbers: Addition and Subtraction	Add two 2-digit numbers with regrouping	○
Whole Numbers: Addition and Subtraction	Add three 2-digit numbers with one regrouping, sum less than 100	
Whole Numbers: Addition and Subtraction	Add 2- and 3-digit numbers with no more than one regrouping	○
Whole Numbers: Addition and Subtraction	Add two 3-digit numbers with one regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 3-digit number from a 3-digit number without regrouping	
Whole Numbers: Addition and Subtraction	Subtract a 1- or 2-digit number from a 2-digit number with one regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 1- or 2-digit number from a 3-digit number with one regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 3-digit number from a 3-digit number with one regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract numbers without regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract up to 2-digit numbers with one regrouping	
Whole Numbers: Addition and Subtraction	Estimate the sum of two 2-digit numbers	
Whole Numbers: Addition and Subtraction	Estimate the difference of two 2-digit numbers	
Whole Numbers: Multiplication and Division	Determine the sum of equal groups using pictures	
Whole Numbers: Multiplication and Division	Use a repeated addition sentence to represent the sum of equal groups	
Whole Numbers: Multiplication and Division	Use a multiplication sentence to represent the sum of equal groups	
Whole Numbers: Multiplication and Division	Represent repeated addition as multiplication	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 2 (continued)		
Whole Numbers: Multiplication and Division	Relate a multiplication sentence to an array model	
Whole Numbers: Multiplication and Division	Know multiplication tables for 2, 5, and 10	
Whole Numbers: Multiplication and Division	WP: Multiply a 1-digit number by 2, 5, or 10	
Whole Numbers: Multiplication and Division	Recognize the number of equal groups using pictures	
Whole Numbers: Multiplication and Division	Divide objects into equal groups using pictures	
Whole Numbers: Multiplication and Division	Determine the remainder when dividing objects into equal groups	
Whole Numbers: Multiplication and Division	Determine the number of equal groups of objects excluding the remainder	
Whole Numbers: Multiplication and Division	WP: Divide objects into equal groups by sharing	○
Fraction Concepts and Operations	Identify a unit fraction as part of a whole	
Fraction Concepts and Operations	Identify a unit fraction as part of a set of objects	
Fraction Concepts and Operations	Identify a fraction as part of a set of objects	
Fraction Concepts and Operations	Identify a fraction as part of a whole	
Fraction Concepts and Operations	Relate a fraction equal to a whole to a pictorial model	
Fraction Concepts and Operations	Compare unit fractions using pictorial models	
Fraction Concepts and Operations	Order unit fractions using pictorial models	
Grade 3		
Whole Numbers: Place Value	Read a 4- or 5-digit whole number	○
Whole Numbers: Place Value	Determine the word form of a 4- or 5-digit whole number	○
Whole Numbers: Place Value	Determine the value of a digit in a 4- or 5-digit whole number	
Whole Numbers: Place Value	Determine which digit is in a specified place in a 4- or 5-digit whole number	
Whole Numbers: Place Value	Represent a 4-digit whole number as thousands, hundreds, tens, and ones	○
Whole Numbers: Place Value	Determine the 4-digit whole number represented in thousands, hundreds, tens, and ones	○
Whole Numbers: Place Value	Represent a 4- or 5-digit whole number in expanded form	○
Whole Numbers: Place Value	Determine the 4- or 5-digit whole number represented in expanded form	○
Whole Numbers: Place Value	Determine an equivalent form of a 4-digit whole number using thousands, hundreds, tens, and ones	○
Whole Numbers: Place Value	Determine the result of changing a digit in a 4- or 5-digit whole number	
Whole Numbers: Counting, Comparing, and Ordering	Compare 4- or 5-digit whole numbers using the symbols $<$, $>$, and $=$	
Whole Numbers: Counting, Comparing, and Ordering	Order 4- or 5-digit whole numbers in ascending or descending order	
Whole Numbers: Addition and Subtraction	Add 3- and 4-digit whole numbers with regrouping	○
Whole Numbers: Addition and Subtraction	Add three 2- to 3-digit whole numbers	
Whole Numbers: Addition and Subtraction	Subtract 3- and 4-digit whole numbers with regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract 3- and 4-digit whole numbers with regrouping	○
Whole Numbers: Place Value	Round a 2- to 4-digit whole number to its greatest place	
Whole Numbers: Addition and Subtraction	Estimate a sum or difference of whole numbers to 10,000 by rounding	
Whole Numbers: Addition and Subtraction	Estimate a sum or difference of two 3- or 4-digit whole numbers using front-end estimation	
Whole Numbers: Addition and Subtraction	Estimate a sum or difference of 2- to 4-digit whole numbers using any method	○
Whole Numbers: Addition and Subtraction	Estimate a sum of three 2- to 4-digit numbers using any method	
Whole Numbers: Addition and Subtraction	WP: Estimate a sum or difference of two 3- or 4-digit whole numbers using any method	○

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 3 (continued)		
Whole Numbers: Multiplication and Division	Use a multiplication sentence to represent an area or an array model	○
Whole Numbers: Multiplication and Division	Use a division sentence to represent objects divided into equal groups	○
Whole Numbers: Multiplication and Division	Know basic multiplication facts to 10×10	○
Whole Numbers: Multiplication and Division	Know basic multiplication facts for 11 and 12	
Whole Numbers: Multiplication and Division	Know basic division facts to $100 \div 10$	○
Whole Numbers: Multiplication and Division	Know basic division facts for 11 and 12	
Whole Numbers: Multiplication and Division	WP: Multiply using basic facts to 10×10	○
Whole Numbers: Multiplication and Division	WP: Divide using basic facts to $100 \div 10$	○
Whole Numbers: Multiplication and Division	Complete a multiplication and division fact family	
Whole Numbers: Multiplication and Division	Multiply a 1-digit whole number by a multiple of 10 to 100	
Whole Numbers: Multiplication and Division	Multiply a 2-digit whole number by a 1-digit number	
Fraction Concepts and Operations	Determine a pictorial model of a fraction of a whole	○
Fraction Concepts and Operations	Determine a pictorial model of a fraction of a set of objects	○
Fraction Concepts and Operations	Identify a fraction represented by a point on a number line	○
Fraction Concepts and Operations	Locate a fraction on a number line	○
Fraction Concepts and Operations	Compare fractions using models	○
Fraction Concepts and Operations	Order fractions using models	○
Fraction Concepts and Operations	Identify equivalent fractions using models	○
Fraction Concepts and Operations	Compare fractions with like denominators	
Fraction Concepts and Operations	Compare fractions with like numerators	
Fraction Concepts and Operations	WP: Compare equal unit fractions of different-sized wholes	
Fraction Concepts and Operations	Determine fraction pairs that total 1	
Fraction Concepts and Operations	Estimate fractions of a whole	
Whole Numbers: Multiplication and Division	WP: Determine a multiplication or division sentence for a given situation	○
Grade 4		
Whole Numbers: Place Value	Read a 6-digit whole number	
Whole Numbers: Place Value	Determine the word form of a 6-digit whole number	
Whole Numbers: Place Value	Determine the value of a digit in a 6-digit whole number	
Whole Numbers: Place Value	Determine which digit is in a specified place in a 6-digit whole number	
Whole Numbers: Place Value	Determine the whole number represented in expanded form written in powers of ten	
Whole Numbers: Place Value	Represent a 6-digit whole number in expanded form using powers of ten	
Whole Numbers: Place Value	Convert between proper expanded form and improper expanded form up to a 5-digit whole number	
Whole Numbers: Place Value	Convert between standard form and improper expanded form up to a 5-digit whole number	
Whole Numbers: Addition and Subtraction	Add up to 4-digit whole numbers in expanded form	
Whole Numbers: Addition and Subtraction	Add a 5-digit or greater whole number and a 3-digit or greater whole number	
Whole Numbers: Addition and Subtraction	Add three multi-digit whole numbers	
Whole Numbers: Addition and Subtraction	Subtract a smaller number from a 3- or 4-digit whole number in expanded form	
Whole Numbers: Addition and Subtraction	Subtract a 3-digit or greater whole number from a 5-digit or greater whole number	
Whole Numbers: Addition and Subtraction	WP: Add a 5-digit or greater whole number and a 3-digit or greater whole number	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 4 (continued)		
Whole Numbers: Addition and Subtraction	WP: Add three multi-digit whole numbers	
Whole Numbers: Addition and Subtraction	WP: Subtract a 3-digit or greater whole number from a 5-digit or greater whole number	
Whole Numbers: Place Value	Round a 4- to 6-digit whole number to a specified place	○
Whole Numbers: Addition and Subtraction	WP: Estimate the sum or difference of two whole numbers, all values less than 1,000,000	
Whole Numbers: Addition and Subtraction	WP: Solve a 2-step problem involving addition and/or subtraction of multi-digit whole numbers	
Whole Numbers: Multiplication and Division	Multiply a 1- or 2-digit whole number by a multiple of 10, 100, or 1,000	○
Whole Numbers: Multiplication and Division	Apply the distributive property to the multiplication of a 2-digit number by a 1- or 2-digit number	
Whole Numbers: Multiplication and Division	Apply the distributive property to multiply a multi-digit number by a 1-digit number	○
Whole Numbers: Multiplication and Division	Multiply a 3- or 4-digit whole number by a 1-digit whole number	○
Whole Numbers: Multiplication and Division	Multiply a 2-digit whole number by a 2-digit whole number	○
Whole Numbers: Multiplication and Division	Multiply a 3-digit whole number by a 2-digit whole number	
Whole Numbers: Multiplication and Division	Multiply three 1- and 2-digit whole numbers	
Whole Numbers: Multiplication and Division	WP: Multiply a multi-digit whole number by a 1-digit whole number	○
Whole Numbers: Multiplication and Division	WP: Multiply a 2-digit whole number by a 2-digit whole number	○
Whole Numbers: Multiplication and Division	WP: Multiply a 3-digit whole number by a 2-digit whole number	
Whole Numbers: Multiplication and Division	Estimate a product of whole numbers by rounding	
Whole Numbers: Multiplication and Division	Estimate a product of whole numbers using any method	○
Whole Numbers: Multiplication and Division	WP: Estimate a product of two whole numbers using any method	○
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by 10 or 100 with no remainder	
Whole Numbers: Multiplication and Division	Divide a 2-digit whole number by a 1-digit whole number with no remainder in the quotient	
Whole Numbers: Multiplication and Division	Divide a 3-digit whole number by a 1-digit whole number with no remainder in the quotient	
Whole Numbers: Multiplication and Division	Divide a 2-digit whole number by a 1-digit whole number with a remainder in the quotient	
Whole Numbers: Multiplication and Division	Divide a 3-digit whole number by a 1-digit whole number with a remainder in the quotient	○
Whole Numbers: Multiplication and Division	WP: Divide a 2-digit whole number by a 1-digit whole number with no remainder in the quotient	
Whole Numbers: Multiplication and Division	WP: Divide a 3-digit whole number by a 1-digit whole number with no remainder in the quotient	○
Whole Numbers: Multiplication and Division	WP: Divide a 2-digit whole number by a 1-digit whole number with a remainder in the quotient	
Whole Numbers: Multiplication and Division	WP: Divide a 3-digit whole number by a 1-digit whole number with a remainder in the quotient	○
Whole Numbers: Multiplication and Division	WP: Solve a 2-step whole number problem using more than 1 operation	
Fraction Concepts and Operations	Identify a mixed number represented by a model	
Fraction Concepts and Operations	Identify a mixed number represented by a point on a number line	
Fraction Concepts and Operations	Locate a mixed number on a number line	
Fraction Concepts and Operations	WP: Use a mixed number to represent an amount in a sharing situation	
Fraction Concepts and Operations	Identify an improper fraction represented by a model of a mixed number	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 4 (continued)		
Fraction Concepts and Operations	Identify an improper fraction represented by a point on a number line	
Fraction Concepts and Operations	Locate an improper fraction on a number line	
Fraction Concepts and Operations	Simplify a fraction	
Fraction Concepts and Operations	Determine a set of equivalent fractions	
Fraction Concepts and Operations	Compare fractions on a number line	
Fraction Concepts and Operations	Order fractions on a number line	
Fraction Concepts and Operations	Add fractions with like denominators no greater than 10 using models	
Fraction Concepts and Operations	Add fractions with like denominators no greater than 10	○
Fraction Concepts and Operations	Add fractions with like denominators no greater than 10 and simplify the sum	
Fraction Concepts and Operations	WP: Add fractions with like denominators no greater than 10 and simplify the sum	
Fraction Concepts and Operations	Subtract fractions with like denominators no greater than 10 using models	
Fraction Concepts and Operations	Subtract fractions with like denominators no greater than 10	○
Fraction Concepts and Operations	Subtract fractions with like denominators no greater than 10 and simplify the difference	
Fraction Concepts and Operations	WP: Subtract fractions with like denominators no greater than 10 and simplify the difference	
Decimal Concepts and Operations	Read a decimal number through the hundredths place	○
Decimal Concepts and Operations	Determine the word form of a decimal number through the hundredths place	
Decimal Concepts and Operations	Determine the decimal number from a pictorial model of tenths or hundredths	○
Decimal Concepts and Operations	Identify a pictorial model of tenths or hundredths of a decimal number	○
Decimal Concepts and Operations	Identify a decimal number to tenths represented by a point on a number line	○
Decimal Concepts and Operations	Locate a decimal number to tenths on a number line	○
Decimal Concepts and Operations	Determine the decimal number equivalent to a fraction with a denominator of 10 or 100	
Decimal Concepts and Operations	Determine a fraction equivalent to a decimal, using a denominator of 10 or 100	
Decimal Concepts and Operations	Determine the decimal number equivalent to a fraction model	○
Decimal Concepts and Operations	Determine the fraction equivalent to a decimal number model	○
Decimal Concepts and Operations	Compare decimal numbers through the hundredths place	○
Decimal Concepts and Operations	Order decimal numbers through the hundredths place	○
Decimal Concepts and Operations	Determine decimal number pairs that total 1 or 10	
Decimal Concepts and Operations	Add two decimal numbers through hundredths	
Decimal Concepts and Operations	Subtract two decimal numbers through hundredths	
Decimal Concepts and Operations	WP: Add or subtract decimal numbers of the same place through hundredths	
Decimal Concepts and Operations	Round a decimal number to a specified place through hundredths	○
Decimal Concepts and Operations	Estimate a decimal number sum or difference by rounding to whole numbers	
Evaluate Numerical Expressions	Evaluate a numeric expression involving two operations	
Grade 5		
Whole Numbers: Multiplication and Division	Determine if a number to 50 is prime or composite	
Whole Numbers: Multiplication and Division	Determine a complete list of whole number factor pairs for a number to 50	
Whole Numbers: Multiplication and Division	Determine all the factors of a whole number to 50	
Whole Numbers: Multiplication and Division	Determine the prime factorization of a number to 50	
Whole Numbers: Multiplication and Division	Determine the common factors for two whole numbers to 50	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 5 (continued)		
Whole Numbers: Multiplication and Division	Determine the greatest common factor of two whole numbers to 50	
Whole Numbers: Multiplication and Division	Determine the multiple(s) of a number	
Whole Numbers: Multiplication and Division	Determine common multiples for two whole numbers	
Whole Numbers: Multiplication and Division	Determine the least common multiple of two whole numbers	
Whole Numbers: Multiplication and Division	Apply divisibility rules for 2, 5, or 10	
Whole Numbers: Multiplication and Division	Multiply a 3- or 4-digit whole number by a 3-digit whole number	
Whole Numbers: Multiplication and Division	WP: Multiply a 3- or 4-digit whole number by a 3-digit whole number	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by multiples of 100 or 1,000	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 1-digit number, with no remainder and at least one zero in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 1-digit number, with a remainder and at least one zero in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 1-digit number and express the quotient as a mixed number	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 1-digit number and express the quotient as a decimal	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number, with no remainder and no zeros in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number, with a remainder and no zeros in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number, with no remainder and at least one zero in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number, with a remainder and at least one zero in the quotient	○
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number and express the quotient as a mixed number	○
Whole Numbers: Multiplication and Division	WP: Divide a whole number, with no remainder	○
Whole Numbers: Multiplication and Division	WP: Divide a whole number and interpret the remainder	○
Whole Numbers: Multiplication and Division	WP: Solve a 2-step problem involving whole numbers	○
Whole Numbers: Place Value	Know the effects of rounding	
Whole Numbers: Multiplication and Division	Estimate a quotient using compatible numbers	
Whole Numbers: Multiplication and Division	Estimate a quotient using any method	○
Whole Numbers: Multiplication and Division	WP: Estimate a quotient using any method	○
Fraction Concepts and Operations	Relate a sharing situation to a fraction	
Fraction Concepts and Operations	Determine equivalent fractions not in simplest form	○
Fraction Concepts and Operations	Determine the simplest form of a fraction	
Fraction Concepts and Operations	Compare fractions with unlike denominators	○
Fraction Concepts and Operations	Order fractions with unlike denominators in ascending or descending order	○
Fraction Concepts and Operations	Add fractions with like denominators greater than 10 and simplify the sum	
Fraction Concepts and Operations	Add fractions with unlike denominators using a model and do not simplify the sum	
Fraction Concepts and Operations	Add fractions with unlike denominators and do not simplify the sum	
Fraction Concepts and Operations	Add fractions with unlike denominators that have factors in common and simplify the sum	○
Fraction Concepts and Operations	Add fractions with unlike denominators that have no factors in common	○
Fraction Concepts and Operations	Subtract fractions with like denominators greater than 10 and simplify the difference	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 5 (continued)		
Fraction Concepts and Operations	Subtract fractions with unlike denominators using a model and do not simplify the difference	
Fraction Concepts and Operations	Subtract fractions with unlike denominators and do not simplify the difference	
Fraction Concepts and Operations	Subtract fractions with unlike denominators that have factors in common and simplify the difference	○
Fraction Concepts and Operations	Subtract fractions with unlike denominators that have no factors in common	○
Fraction Concepts and Operations	WP: Add or subtract fractions with like denominators and simplify the sum or difference	○
Fraction Concepts and Operations	WP: Add or subtract fractions with unlike denominators that have no factors in common	○
Fraction Concepts and Operations	Convert a mixed number to an improper fraction	○
Fraction Concepts and Operations	Convert an improper fraction to a mixed number	○
Fraction Concepts and Operations	Add mixed numbers with like denominators and simplify the sum	
Fraction Concepts and Operations	Add mixed numbers with unlike denominators and simplify the sum	
Fraction Concepts and Operations	Subtract mixed numbers with like denominators and simplify the difference	
Fraction Concepts and Operations	Subtract mixed numbers with unlike denominators and simplify the difference	
Fraction Concepts and Operations	WP: Add or subtract mixed numbers with like denominators and simplify the sum or difference	○
Fraction Concepts and Operations	WP: Add or subtract mixed numbers with unlike denominators that have no factors in common	
Fraction Concepts and Operations	Round a fraction to a benchmark number of 0, $\frac{1}{2}$, or 1	
Fraction Concepts and Operations	Estimate a fraction sum using benchmark numbers 0, $\frac{1}{2}$, and 1	
Fraction Concepts and Operations	Estimate a fraction difference using benchmark numbers 0, $\frac{1}{2}$, and 1	
Fraction Concepts and Operations	WP: Estimate a fraction sum or difference using benchmark numbers 0, $\frac{1}{2}$, and 1	
Fraction Concepts and Operations	Multiply a whole number by a unit fraction using a model	
Fraction Concepts and Operations	Multiply a whole number by a unit fraction	
Fraction Concepts and Operations	Multiply a proper fraction by a whole number using a model	
Fraction Concepts and Operations	Multiply a proper fraction by a whole number	
Fraction Concepts and Operations	Divide a whole number by a unit fraction using a model	
Fraction Concepts and Operations	Divide a whole number by a unit fraction	
Fraction Concepts and Operations	Divide a unit fraction by a whole number	
Fraction Concepts and Operations	Divide a whole number by a fraction, with a whole number quotient using a model	
Fraction Concepts and Operations	Divide a whole number by a fraction, with a whole number quotient	
Fraction Concepts and Operations	WP: Multiply or divide a whole number by a unit fraction	
Decimal Concepts and Operations	Determine the value of a digit in a decimal number to thousandths	
Decimal Concepts and Operations	Determine a decimal number represented in expanded form	
Decimal Concepts and Operations	Represent a decimal number in expanded form	
Decimal Concepts and Operations	Compare decimal numbers to thousandths represented in expanded form	
Decimal Concepts and Operations	Compare decimal numbers of differing places to thousandths	○
Decimal Concepts and Operations	Order decimal numbers of differing places to thousandths in ascending or descending order	○
Decimal Concepts and Operations	Add two decimal numbers of differing places to thousandths	○
Decimal Concepts and Operations	Add three or more decimal numbers	
Decimal Concepts and Operations	Add decimal numbers and whole numbers	○

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 5 (continued)		
Decimal Concepts and Operations	Subtract two decimal numbers of differing places to thousandths	○
Decimal Concepts and Operations	Subtract a decimal number from a whole number or a whole number from a decimal number	
Decimal Concepts and Operations	WP: Add or subtract decimal numbers through thousandths	○
Decimal Concepts and Operations	WP: Add or subtract a decimal number through thousandths and a whole number	○
Decimal Concepts and Operations	Round a decimal number to a specified decimal place to thousandths	
Decimal Concepts and Operations	Estimate the sum of two decimal numbers through thousandths and less than 1 by rounding to a specified place	○
Decimal Concepts and Operations	Estimate the difference of two decimal numbers through thousandths and less than 1 by rounding to a specified place	○
Decimal Concepts and Operations	WP: Estimate the sum or difference of two decimal numbers through thousandths using any method	○
Decimal Concepts and Operations	Multiply a decimal number through thousandths by 10, 100, or 1,000	○
Decimal Concepts and Operations	WP: Multiply a decimal through thousandths by 10, 100, or 1,000	
Whole Numbers: Multiplication and Division	Multiply a money amount by a 2- or 3-digit whole number	
Whole Numbers: Multiplication and Division	WP: Multiply a money amount by a 2-digit whole number	
Decimal Concepts and Operations	Convert a decimal number through thousandths to a simplified fraction	
Decimal Concepts and Operations	Convert a fraction with a denominator that is a factor of 10, 100, or 1,000 to decimal notation	
Percents, Ratios, and Proportions	Determine a model of a percent on a 100 grid	
Percents, Ratios, and Proportions	Determine the percent represented by a model on a 100 grid	
Percents, Ratios, and Proportions	Relate an equivalent fraction and percent given a grid	
Percents, Ratios, and Proportions	Relate an equivalent decimal and percent given a grid	
Evaluate Numerical Expressions	Evaluate a numerical expression involving three operations, with no parentheses, using order of operations	
Evaluate Numerical Expressions	Evaluate a numerical expression involving three operations, with parentheses, using order of operations	
Grade 6		
Whole Numbers: Multiplication and Division	Determine the prime factorization of a number between 50 and 200	
Whole Numbers: Multiplication and Division	Determine the greatest common factor of three numbers to 100	
Whole Numbers: Multiplication and Division	Determine the least common multiple of three numbers	
Whole Numbers: Multiplication and Division	WP: Determine the least common multiple of two or more numbers	
Whole Numbers: Multiplication and Division	Apply divisibility rules for 3, 4, 6, and 9	
Whole Numbers: Multiplication and Division	Find the product of three identical factors	
Powers, Roots, and Radicals	Determine the square of a whole number to 15	
Powers, Roots, and Radicals	Determine the cube of a whole number to 15	
Decimal Concepts and Operations	Divide a whole number by a 1-digit whole number resulting in a decimal quotient through thousandths	○
Decimal Concepts and Operations	Divide a whole number by a 2-digit whole number resulting in a decimal quotient through thousandths	○
Decimal Concepts and Operations	WP: Divide a whole number by a 1- or 2-digit whole number resulting in a decimal quotient	○
Whole Numbers: Multiplication and Division	WP: Solve a multi-step problem involving whole numbers	○
Fraction Concepts and Operations	Add fractions with unlike denominators and simplify the sum	
Fraction Concepts and Operations	Subtract fractions with unlike denominators and simplify the difference	
Fraction Concepts and Operations	Subtract a fraction from a whole number	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 6 (continued)		
Fraction Concepts and Operations	WP: Add or subtract fractions with unlike denominators and simplify the sum or difference	
Fraction Concepts and Operations	Add mixed numbers with unlike denominators or a mixed number and a fraction with unlike denominators and simplify the sum	
Fraction Concepts and Operations	Subtract a mixed number from a whole number	
Fraction Concepts and Operations	Subtract mixed numbers with unlike denominators or a mixed number and a fraction and simplify the difference	
Fraction Concepts and Operations	Add and subtract three unlike-denominator fractions, mixed numbers, or fractions and mixed numbers, and simplify the answer	
Fraction Concepts and Operations	WP: Add or subtract mixed numbers with unlike denominators or a mixed number and a fraction with unlike denominators and simplify the sum or difference	
Fraction Concepts and Operations	Multiply a fraction by a fraction	○
Fraction Concepts and Operations	Multiply a mixed number by a whole number	○
Fraction Concepts and Operations	Multiply a mixed number by a fraction	○
Fraction Concepts and Operations	Multiply a mixed number by a mixed number	○
Fraction Concepts and Operations	Determine the reciprocal of a whole number, a proper fraction, or an improper fraction	
Fraction Concepts and Operations	Determine the reciprocal of a mixed number	
Fraction Concepts and Operations	Divide a fraction by a whole number resulting in a fractional quotient	○
Fraction Concepts and Operations	Divide a fraction by a fraction	○
Fraction Concepts and Operations	Divide a whole number by a fraction resulting in a fractional quotient	○
Fraction Concepts and Operations	Divide a mixed number by a fraction	
Fraction Concepts and Operations	Divide a mixed number by a mixed number	
Fraction Concepts and Operations	WP: Multiply or divide a fraction by a fraction	○
Fraction Concepts and Operations	WP: Multiply or divide two mixed numbers or a mixed number and a fraction	○
Fraction Concepts and Operations	WP: Solve a 2-step problem involving fractions	○
Decimal Concepts and Operations	Represent a decimal number in expanded form using powers of ten	○
Decimal Concepts and Operations	Determine the decimal number represented in expanded form using powers of ten	○
Decimal Concepts and Operations	Determine the power of ten that relates a decimal number and a whole number	
Decimal Concepts and Operations	Determine the power of ten that relates two decimal numbers	
Decimal Concepts and Operations	Add three decimal numbers	
Decimal Concepts and Operations	Add and subtract three decimal numbers	
Decimal Concepts and Operations	WP: Add and subtract three decimal numbers	
Decimal Concepts and Operations	Multiply a decimal number through thousandths by a whole number	○
Decimal Concepts and Operations	WP: Multiply a decimal number through thousandths by a whole number	○
Whole Numbers: Multiplication and Division	WP: Multiply a money expression by a decimal number	
Decimal Concepts and Operations	Multiply a decimal number greater than one, in tenths, by a decimal number in tenths	
Decimal Concepts and Operations	Multiply decimal numbers to thousandths using basic facts	
Decimal Concepts and Operations	Multiply decimal numbers less than one in hundredths or thousandths	○
Decimal Concepts and Operations	Multiply a decimal number greater than one by a decimal number to thousandths that has only 1 nonzero digit	
Decimal Concepts and Operations	Multiply decimal numbers greater than one where the product has 2 or 3 decimal places	○

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 6 (continued)		
Decimal Concepts and Operations	WP: Multiply two decimal numbers to thousandths	○
Decimal Concepts and Operations	WP: Estimate the product of two decimals	○
Decimal Concepts and Operations	Divide a decimal number by 10, 100, or 1,000	○
Decimal Concepts and Operations	Relate division by a whole number power of ten to multiplication by the related decimal fraction power of ten	
Decimal Concepts and Operations	Divide a decimal number through thousandths by a 1- or 2-digit whole number where the quotient has 2-5 decimal places	○
Decimal Concepts and Operations	WP: Divide a decimal number through thousandths by a 1- or 2-digit whole number	○
Decimal Concepts and Operations	Divide a whole number or a decimal number by 0.1, 0.01, or 0.001	
Decimal Concepts and Operations	Relate division by a decimal fraction power of ten to multiplication by the related whole number power of ten	
Decimal Concepts and Operations	Locate the decimal point in the quotient of a whole number, or a decimal number, divided by a decimal number	
Decimal Concepts and Operations	Divide a 1- to 3-digit whole number by a decimal number to tenths where the quotient is a whole number	○
Decimal Concepts and Operations	Divide a 1- to 3-digit whole number by a decimal number to tenths where the quotient is a decimal number to thousandths	○
Decimal Concepts and Operations	Divide a 2- or 3-digit whole number by a decimal number to hundredths or thousandths, rounded quotient if needed	○
Decimal Concepts and Operations	Divide a decimal number by a decimal number through thousandths, rounded quotient if needed	○
Decimal Concepts and Operations	WP: Divide a whole number by a decimal number through thousandths, rounded quotient if needed	○
Decimal Concepts and Operations	WP: Divide a decimal through thousandths by a decimal through thousandths, rounded quotient if needed	○
Decimal Concepts and Operations	WP: Estimate the quotient of two decimals	○
Decimal Concepts and Operations	WP: Solve a 2-step problem involving decimals	○
Decimal Concepts and Operations	Convert a mixed number to a decimal number	
Decimal Concepts and Operations	Convert a decimal number to a mixed number	
Decimal Concepts and Operations	Convert a fraction to a repeating decimal number	
Percents, Ratios, and Proportions	Determine the approximate percent of a region shaded	
Percents, Ratios, and Proportions	Convert a decimal number to a percentage	
Percents, Ratios, and Proportions	Convert a percentage to a decimal number	
Percents, Ratios, and Proportions	Convert a fraction to a percentage	
Percents, Ratios, and Proportions	Convert a percentage to a fraction	
Decimal Concepts and Operations	Compare numbers in decimal and fractional forms	○
Decimal Concepts and Operations	Order numbers in decimal and fractional forms	○
Percents, Ratios, and Proportions	Determine a percent where a ratio, not in 100ths, is given in words	○
Percents, Ratios, and Proportions	Calculate a percent of a whole number where the answer is a whole number	
Percents, Ratios, and Proportions	WP: Calculate the percent of a whole number where the answer is a whole number	
Percents, Ratios, and Proportions	WP: Determine a ratio using whole numbers less than 50	
Percents, Ratios, and Proportions	Determine if ratios, using whole numbers less than 50, are equivalent	○
Percents, Ratios, and Proportions	WP: Determine a part given a ratio and the whole where the whole is less than 50	○
Percents, Ratios, and Proportions	WP: Determine a part given a ratio and another part where the whole is less than 50	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 6 (continued)		
Percents, Ratios, and Proportions	WP: Determine the whole given a ratio and a part where the whole is less than 50	○
Percents, Ratios, and Proportions	WP: Determine a unit rate with a whole number value	○
Percents, Ratios, and Proportions	WP: Use a unit rate, with a whole number or whole cent value, to solve a problem	○
Evaluate Numerical Expressions	Evaluate a numerical expression of four or more operations, with parentheses, using order of operations	○
Integers	Identify or locate an integer on a number line	
Integers	Compare two negative integers or a negative integer and a positive integer	
Integers	Order negative integers or a mix of positive and negative integers	
Evaluate Numerical Expressions	Determine which property of addition or multiplication justifies a step in the simplification of an expression	
Percents, Ratios, and Proportions	Solve a proportion	
Integers	Determine a temperature change given a picture of thermometers	
Grade 7		
Powers, Roots, and Radicals	Determine the exponential notation that represents a repeated multiplication	
Powers, Roots, and Radicals	Determine the repeated multiplication that is represented by a number raised to a power	
Powers, Roots, and Radicals	Determine the whole number that can be squared to make a given number	
Powers, Roots, and Radicals	Evaluate the positive square root of a perfect square	
Powers, Roots, and Radicals	Evaluate a whole number power of a whole number	
Powers, Roots, and Radicals	Determine an exponential form of a whole number	
Powers, Roots, and Radicals	Determine the prime factorization of a number using exponents	
Powers, Roots, and Radicals	Convert a whole number greater than 10 to scientific notation	
Powers, Roots, and Radicals	Convert a whole number greater than 10 from scientific notation to standard form	
Evaluate Numerical Expressions	Evaluate an expression containing the fraction bar as the division sign	
Evaluate Numerical Expressions	Evaluate a numerical expression, with parentheses and exponents, using order of operations	
Percents, Ratios, and Proportions	Convert a decimal number to a percentage greater than 100%	
Percents, Ratios, and Proportions	Convert a percentage to a decimal number greater than 1	
Percents, Ratios, and Proportions	Convert a decimal number in thousandths to a percentage	
Percents, Ratios, and Proportions	Convert a percentage to a decimal number in thousandths	
Percents, Ratios, and Proportions	Convert a mixed number to a percentage	
Percents, Ratios, and Proportions	Convert a percentage to a mixed number	
Percents, Ratios, and Proportions	Determine a percent of a whole number using less than 100%	
Percents, Ratios, and Proportions	Determine a percent of a whole number using more than 100%	
Percents, Ratios, and Proportions	Determine the percent a whole number is of another whole number, with a result less than 100%	
Percents, Ratios, and Proportions	Determine a whole number given a part and a percentage less than 100%	
Percents, Ratios, and Proportions	WP: Determine a percent of a whole number using less than 100%	○
Percents, Ratios, and Proportions	WP: Determine the percent a whole number is of another whole number, with a result less than 100%	○
Percents, Ratios, and Proportions	WP: Determine a whole number given a part and a percentage	○
Percents, Ratios, and Proportions	WP: Determine the percent of decrease applied to a number	○
Percents, Ratios, and Proportions	WP: Determine the percent of increase applied to a number	○

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 7 (continued)		
Percents, Ratios, and Proportions	WP: Determine the result of applying a percent of decrease to a value	○
Percents, Ratios, and Proportions	WP: Determine the result of applying a percent of increase to a value	○
Percents, Ratios, and Proportions	WP: Answer a question involving a fraction and a percent	○
Decimal Concepts and Operations	WP: Answer a question involving a fraction and a decimal	
Decimal Concepts and Operations	WP: Solve a multi-step problem involving decimal numbers	○
Fraction Concepts and Operations	WP: Solve a multi-step problem involving fractions or mixed numbers	○
Integers	Evaluate the absolute value of an integer	
Integers	Determine the opposite of an integer	
Integers	Add integers using a number line	
Integers	Add integers using a model	
Integers	Add integers	○
Integers	Subtract integers using a number line	
Integers	Subtract integers	○
Integers	WP: Add and subtract using integers	○
Integers	Multiply integers	○
Integers	Divide integers	○
Integers	WP: Multiply or divide integers	○
Percents, Ratios, and Proportions	WP: Determine the ratio of two whole numbers, at least one of which is larger than 50	
Percents, Ratios, and Proportions	Determine ratios equivalent to a given ratio of two whole numbers, at least one of which is larger than 50	
Percents, Ratios, and Proportions	WP: Determine a part, given part to whole ratio and the whole, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine a part, given part to part ratio and the whole, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine a part, given part to whole ratio and a part, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine a part, given part to part ratio and a part, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine the whole, given part to whole ratio and a part, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine the whole, given part to part ratio and a part, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine a unit rate	○
Percents, Ratios, and Proportions	WP: Use a unit rate to solve a problem	○
Fraction Concepts and Operations	Estimate the product of a fraction and a whole number	
Fraction Concepts and Operations	Estimate the quotient of a whole number divided by a fraction	
Fraction Concepts and Operations	WP: Estimate the result of dividing or multiplying a whole number by a fraction	
Decimal Concepts and Operations	Identify a positive or negative rational number represented by a point on a number line	
Decimal Concepts and Operations	Locate a positive or negative rational number on a number line	
Decimal Concepts and Operations	Compare rational numbers (positive and negative)	
Decimal Concepts and Operations	Order rational numbers (positive and negative)	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 7 (continued)		
Percents, Ratios, and Proportions	Solve a proportion involving decimals	○
Percents, Ratios, and Proportions	WP: Solve a proportion	○
Percents, Ratios, and Proportions	WP: Use direct variation to solve a problem	
Grade 8		
Powers, Roots, and Radicals	Evaluate an integer raised to a whole number power	○
Powers, Roots, and Radicals	Evaluate a zero or negative power of an integer	
Powers, Roots, and Radicals	Evaluate a numerical expression involving integer exponents and/or integer bases	○
Powers, Roots, and Radicals	Convert a number less than 1 to scientific notation	○
Powers, Roots, and Radicals	Convert a number less than 1 from scientific notation to standard form	○
Fraction Concepts and Operations	Add or subtract signed fractions or mixed numbers	
Fraction Concepts and Operations	Multiply or divide signed fractions or mixed numbers	
Decimal Concepts and Operations	Add or subtract signed decimals	
Decimal Concepts and Operations	Multiply or divide signed decimals	
Evaluate Numerical Expressions	Evaluate a numerical expression involving nested parentheses	
Powers, Roots, and Radicals	Determine the square of a fraction or a decimal	
Powers, Roots, and Radicals	Determine the square root of a perfect-square fraction or decimal	○
Powers, Roots, and Radicals	Determine both square roots of a perfect square	
Powers, Roots, and Radicals	Determine the two closest integers to a given square root	○
Powers, Roots, and Radicals	Approximate the location of a square root on a number line	○
Powers, Roots, and Radicals	Determine the square root of a whole number to the nearest tenth	
Decimal Concepts and Operations	Convert a repeating decimal to a fraction or a mixed number	
Powers, Roots, and Radicals	Identify rational or irrational numbers	
Powers, Roots, and Radicals	Compare rational numbers and/or irrational numbers in various forms	
Powers, Roots, and Radicals	Order rational numbers and irrational numbers	
Percents, Ratios, and Proportions	Determine a percent of a number given a percent that is not a whole percent	○
Percents, Ratios, and Proportions	Determine the percent one number is of another number	○
Percents, Ratios, and Proportions	Determine a number given a part and a decimal percentage or a percentage more than 100%	○
Percents, Ratios, and Proportions	WP: Determine a given percent of a number	○
Percents, Ratios, and Proportions	WP: Determine the percent one number is of another number	○
Percents, Ratios, and Proportions	WP: Determine a number given a part and a decimal percentage or a percentage more than 100%	○
Percents, Ratios, and Proportions	Solve a problem involving simple interest	
Percents, Ratios, and Proportions	Solve a problem involving annually compounded interest	
Percents, Ratios, and Proportions	WP: Find the result of two consecutive percentage changes applied to a given number	
Percents, Ratios, and Proportions	WP: Estimate a given percent of a number	○
Algebra 1		
Evaluate Numerical Expressions	Evaluate a numerical expression involving multiple forms of rational numbers	
Evaluate Numerical Expressions	Simplify a complex fraction	
Evaluate Numerical Expressions	Evaluate a multi-step numerical expression involving absolute value	
Powers, Roots, and Radicals	Evaluate a fraction raised to an integer power	

Domain: Numbers and Operations

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra 1 (continued)		
Evaluate Numerical Expressions	Evaluate a numerical expression involving one or more exponents and multiple forms of rational numbers	○
Powers, Roots, and Radicals	Compare expressions involving unlike forms of real numbers	
Powers, Roots, and Radicals	Apply the product of powers property to a monomial numerical expression	
Powers, Roots, and Radicals	Apply the power of a power property to a monomial numerical expression	
Powers, Roots, and Radicals	Apply the power of a product property to a monomial algebraic expression	○
Powers, Roots, and Radicals	Apply the quotient of powers property to monomial numerical expressions	
Powers, Roots, and Radicals	Compare monomial numerical expressions using the properties of powers	
Powers, Roots, and Radicals	Simplify a monomial numerical expression involving the square root of a whole number	○
Powers, Roots, and Radicals	Multiply monomial numerical expressions involving radicals	
Powers, Roots, and Radicals	Divide monomial numerical expressions involving radicals	
Powers, Roots, and Radicals	Add and/or subtract numerical radical expressions	
Powers, Roots, and Radicals	Multiply a binomial numerical radical expression by a numerical radical expression	
Powers, Roots, and Radicals	Rationalize the denominator of a numerical radical expression	

Domain: Algebra

Skill Area	Grade-Level Skill Statement	Core Skill
Early Numeracy		
Algebraic Thinking	Complete a picture pattern	
Algebraic Thinking	Determine the missing addend in an addition sentence using pictures	
Grade 1		
Algebraic Thinking	Determine the missing portion in a partially screened (hidden) collection of up to 10 objects	○
Algebraic Thinking	Determine equivalent addition or subtraction expressions involving words or symbols	
Algebraic Thinking	Apply the inverse relationship between addition facts and subtraction facts	
Algebraic Thinking	Determine a missing addend in a basic addition-fact number sentence	○
Algebraic Thinking	Determine a missing subtrahend in a basic subtraction-fact number sentence	○
Algebraic Thinking	Determine equivalent addition or subtraction expressions involving 1-digit numbers	
Algebraic Thinking	Determine a missing addend in an addition sentence with three 1-digit numbers	
Algebraic Thinking	WP: Determine a missing addend or subtrahend in a basic addition- or subtraction-fact number sentence	○
Algebraic Thinking	WP: Determine a basic addition- or subtraction-fact number sentence for a given situation	○
Algebraic Thinking	Extend a repeating picture pattern	
Algebraic Thinking	Extend a pictorial growth pattern	
Algebraic Thinking	Determine a pattern on a 1 to 100 chart	
Algebraic Thinking	Complete a pattern on a 1 to 100 chart	
Grade 2		
Algebraic Thinking	Apply the inverse relationship between addition and subtraction with 2- and 3-digit numbers	
Algebraic Thinking	Determine a missing addend in a number sentence involving 2-digit numbers	
Algebraic Thinking	Determine a missing subtrahend in a number sentence involving 2-digit numbers	
Algebraic Thinking	Determine equivalent addition expressions involving 2-digit numbers	
Algebraic Thinking	WP: Determine a missing addend or a missing subtrahend involving 2-digit numbers	
Algebraic Thinking	WP: Use an open sentence to represent a given situation	
Algebraic Thinking	Determine an addition or subtraction number pattern given a rule	
Algebraic Thinking	Determine the rule for an addition or subtraction number pattern	○
Algebraic Thinking	Extend a number pattern involving addition	○
Algebraic Thinking	Extend a number pattern involving subtraction	○
Algebraic Thinking	Extend a pattern given a table of related number pairs	
Algebraic Thinking	Determine a repeating pattern corresponding to the same pattern expressed using different elements	
Grade 3		
Algebraic Thinking	Determine the missing addend in a number sentence involving 3-digit numbers	
Algebraic Thinking	Determine the missing subtrahend in a number sentence involving 3-digit numbers	
Algebraic Thinking	Determine the missing multiplicand in a number sentence involving basic facts	
Algebraic Thinking	Determine the missing dividend or divisor in a number sentence involving basic facts	
Algebraic Thinking	Recognize equivalent multiplication or division expressions involving basic facts	
Algebraic Thinking	Determine the operation needed to make a number sentence true	
Algebraic Thinking	WP: Determine the operation needed for a given situation	
Algebraic Thinking	Extend a number pattern	

Domain: Algebra		
Skill Area	Grade-Level Skill Statement	Core Skill
Grade 3 (continued)		
Algebraic Thinking	Determine a rule for a table of related number pairs	
Algebraic Thinking	WP: Find the missing number in a table of paired values	
Grade 4		
Algebraic Thinking	Solve a 1-step addition or subtraction equation using a model	
Algebraic Thinking	Identify a missing term in a multiplication or a division number pattern	○
Algebraic Thinking	Extend a growing pictorial or nonnumeric pattern	
Algebraic Thinking	Identify a missing figure in a growing pictorial or nonnumeric pattern	○
Algebraic Thinking	Identify a missing figure in a repeating pictorial or nonnumeric pattern	○
Algebraic Thinking	Generate a table of paired numbers based on a rule	○
Algebraic Thinking	Determine a rule that relates two variables	○
Algebraic Thinking	Extend a number pattern in a table of related pairs	
Algebra	Extend a number pattern in a table of related pairs	
Grade 5		
Evaluate and Use Variable Expressions	Use a variable expression with one operation to represent a verbal expression	
Evaluate and Use Variable Expressions	Use a verbal expression to represent a variable expression with one operation	
Evaluate and Use Variable Expressions	WP: Use a variable expression with one operation to represent a situation	
Evaluate and Use Variable Expressions	Evaluate a 1-variable expression, involving one operation, using whole number substitution	
Evaluate and Use Variable Expressions	Evaluate a 2-variable expression, involving one operation, using whole number substitution	
Evaluate and Use Variable Expressions	WP: Evaluate a 1-variable expression with one operation using a whole number value	
Evaluate and Use Variable Expressions	WP: Evaluate a 2-variable expression with one operation using whole number values	
Algebraic Thinking	WP: Extend a pattern to solve a problem	
Evaluate and Use Variable Expressions	Generate a table of paired numbers based on a variable expression with one operation	
Evaluate and Use Variable Expressions	Generate a table of paired numbers based on a variable expression with two operations	
Relations and Functions	Determine the variable expression with one operation for a table of paired numbers	○
Evaluate and Use Variable Expressions	WP: Generate a table of paired numbers based on a variable expression with one operation	○
Relations and Functions	WP: Determine the variable expression with one operation for a table of paired numbers	○
Relations and Functions	Use a first quadrant graph to represent the values from a table generated in context	○
Grade 6		
Evaluate and Use Variable Expressions	Use a variable expression with two operations to represent a verbal expression	
Evaluate and Use Variable Expressions	Use a verbal expression to represent a variable expression with two operations	
Evaluate and Use Variable Expressions	WP: Use a variable expression with two operations to represent a situation	
Linear Equations and Inequalities	WP: Use a 2-variable equation to represent a situation involving a direct proportion	○
Linear Equations and Inequalities	WP: Use a 2-variable linear equation to represent a situation	○
Evaluate and Use Variable Expressions	Evaluate a 1-variable expression, with two or three operations, using whole number substitution	
Evaluate and Use Variable Expressions	Evaluate a 2-variable expression, with two or three operations, using whole number substitution	○
Evaluate and Use Variable Expressions	WP: Evaluate a 1- or 2-variable expression or formula using whole numbers	○

Domain: Algebra		
Skill Area	Grade-Level Skill Statement	Core Skill
Grade 6 (continued)		
Linear Equations and Inequalities	Solve a 1-step equation involving whole numbers	○
Evaluate and Use Variable Expressions	WP: Generate a table of paired numbers based on a variable expression with two operations	
Linear Equations and Inequalities	Use a 2-variable equation to construct an input-output table	○
Linear Equations and Inequalities	Use a 2-variable equation to represent a relationship expressed in a table	○
Relations and Functions	Use a first quadrant graph to represent the values in an input-output table	
Relations and Functions	Use a graph to determine the entries in an input-output table	
Relations and Functions	Convert between Fahrenheit and Celsius temperature given a formula	
Grade 7		
Evaluate and Use Variable Expressions	Evaluate a rational expression involving variables with two or more terms in the numerator or denominator	
Evaluate and Use Variable Expressions	Evaluate a 1-variable expression, with two or three operations, using integer substitution	
Evaluate and Use Variable Expressions	Evaluate a 2-variable expression, with two or three operations, using integer substitution	○
Evaluate and Use Variable Expressions	Evaluate an algebraic expression involving whole number exponents	
Evaluate and Use Variable Expressions	WP: Evaluate a variable expression	
Evaluate and Use Variable Expressions	WP: Evaluate a variable expression involving exponents	
Evaluate and Use Variable Expressions	Answer a question involving algebraic terminology	
Relations and Functions	Use a variable expression with two operations to represent a table of paired numbers	
Evaluate and Use Variable Expressions	WP: Use a 2-variable expression to represent a situation	
Linear Equations and Inequalities	Solve a 1-step linear equation involving integers	○
Linear Equations and Inequalities	Solve a 2-step linear equation involving integers	○
Linear Equations and Inequalities	WP: Use a 1-variable 1-step equation to represent a situation	○
Linear Equations and Inequalities	Determine the graph of an inequality on a number line	
Linear Equations and Inequalities	Determine some solutions to a 1-variable linear inequality	
Linear Equations and Inequalities	Solve a 1-step linear inequality	
Linear Equations and Inequalities	Determine the graph of the solution set of a 1-step linear inequality	
Linear Equations and Inequalities	WP: Use a 1-variable linear inequality to represent a situation	
Relations and Functions	Use a table to represent a linear function	
Relations and Functions	Use a graph to represent the ordered pairs in a function table	
Relations and Functions	Determine the graph of a 1-operation linear function	○
Grade 8		
Evaluate and Use Variable Expressions	Evaluate a 2-variable expression with two or three operations substituting fractions or decimals	
Evaluate and Use Variable Expressions	Evaluate an algebraic expression involving negative integer exponents	
Algebra of Polynomials	Simplify an algebraic expression by combining like terms	○
Powers, Roots, and Radicals	Determine an equivalent form of a variable expression involving exponents	
Algebra of Polynomials	Multiply two monomial algebraic expressions	○
Algebra of Polynomials	Use the distributive property to simplify an algebraic expression	
Linear Equations and Inequalities	Solve a 1-step equation involving rational numbers	○

Domain: Algebra

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 8 (continued)		
Linear Equations and Inequalities	Solve a 2-step equation involving rational numbers	○
Linear Equations and Inequalities	WP: Use a 1-variable equation with rational coefficients to represent a situation involving two operations	○
Linear Equations and Inequalities	WP: Use a 2-variable equation with rational coefficients to represent a situation	○
Linear Equations and Inequalities	WP: Solve a problem involving a 1-variable, 2-step equation	○
Relations and Functions	Determine the graph of a line for a given table of values	
Relations and Functions	Determine the table of values that represents a linear equation with rational coefficients in two variables	○
Relations and Functions	Determine a linear equation in two variables that represents a table of values	○
Relations and Functions	Determine the graph of a 2-operation linear function	○
Relations and Functions	Determine the slope of a line given its graph or a graph of a line with a given slope	○
Relations and Functions	Determine the x- or y-intercept of a line given its graph	○
Relations and Functions	WP: Interpret the meaning of the slope of a graphed line	○
Relations and Functions	WP: Interpret the meaning of the y-intercept of a graphed line	○
Relations and Functions	WP: Determine a linear graph that can represent a situation	
Relations and Functions	WP: Determine a graph that can represent a situation involving a varying rate of change	
Linear Equations and Inequalities	Solve a 2-step linear inequality in one variable	○
Linear Equations and Inequalities	WP: Use a 2-step linear inequality in one variable to represent a situation	
Linear Equations and Inequalities	WP: Solve a problem involving a 2-step linear inequality in one variable	○
Linear Equations and Inequalities	Determine the graph of the solutions to a 2-step linear inequality in one variable	○
Algebra 1		
Relations and Functions	Determine the independent or dependent variable in a given situation	
Relations and Functions	Determine if a relation is a function	
Relations and Functions	Determine the domain or range of a function	
Relations and Functions	WP: Determine a reasonable domain or range for a function in a given situation	○
Relations and Functions	Evaluate a function written in function notation for a given value	○
Relations and Functions	Determine if a function is linear or nonlinear	
Relations and Functions	Determine whether a graph or a table represents a linear or nonlinear function	
Linear Equations and Inequalities	Solve a 1-variable linear equation that requires simplification and has the variable on one side	
Linear Equations and Inequalities	Solve a 1-variable linear equation with the variable on both sides	○
Linear Equations and Inequalities	WP: Determine a linear equation that can be used to solve a percent problem	
Quadratic and Nonlinear Equations and Inequalities	Determine if a table or an equation represents a direct variation, an inverse variation, or neither	
Quadratic and Nonlinear Equations and Inequalities	WP: Determine an equation representing a direct variation or an inverse variation	
Quadratic and Nonlinear Equations and Inequalities	WP: Solve a direct- or inverse-variation problem	
Quadratic and Nonlinear Equations and Inequalities	Solve a 1-variable absolute value equation	
Linear Equations and Inequalities	Solve a 1-variable linear inequality with the variable on one side	

Domain: Algebra

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra 1 (continued)		
Linear Equations and Inequalities	Solve a 1-variable linear inequality with the variable on both sides	○
Linear Equations and Inequalities	Solve a 1-variable compound inequality	
Quadratic and Nonlinear Equations and Inequalities	Rewrite an equation to solve for a specified variable	○
Linear Equations and Inequalities	Determine the slope-intercept form or the standard form of a linear equation	○
Linear Equations and Inequalities	Determine the slope of a line given two points on the line	○
Linear Equations and Inequalities	Determine the slope of a line given an equation of the line	○
Linear Equations and Inequalities	Determine the x- or y-intercept of a line given an equation	○
Linear Equations and Inequalities	Determine the graph of a line using given information	○
Linear Equations and Inequalities	Determine the graph of a linear equation given in slope-intercept, point-slope, or standard form	○
Linear Equations and Inequalities	Determine an equation of a line given the slope and y-intercept of the line	○
Linear Equations and Inequalities	Determine an equation that represents a graphed line	○
Linear Equations and Inequalities	Determine an equation for a line given the slope of the line and a point on the line that is not the y-intercept	○
Linear Equations and Inequalities	Determine an equation of a line given two points on the line	○
Linear Equations and Inequalities	Determine if two lines are perpendicular or parallel given the equations of the lines	
Linear Equations and Inequalities	Determine an equation for a line that goes through a given point and is parallel or perpendicular to a given line	
Quadratic and Nonlinear Equations and Inequalities	Determine the graph of a 2-variable absolute value equation	
Linear Equations and Inequalities	Solve a 2-variable linear inequality for the dependent variable	
Linear Equations and Inequalities	Determine if an ordered pair is a solution to a 2-variable linear inequality	
Linear Equations and Inequalities	Determine the graph of a 2-variable linear inequality	
Linear Equations and Inequalities	Determine a 2-variable linear inequality represented by a graph	
Linear Equations and Inequalities	Determine the graph of the solutions to a problem that can be described by a 2-variable linear inequality	
Quadratic and Nonlinear Equations and Inequalities	Solve a 1-variable absolute value inequality	○
Quadratic and Nonlinear Equations and Inequalities	Determine the graph of a 1-variable absolute value inequality	
Systems of Equations and Inequalities	Solve a system of linear equations in two variables by graphing	
Systems of Equations and Inequalities	Solve a system of linear equations in two variables by substitution	
Systems of Equations and Inequalities	Solve a system of linear equations in two variables by elimination	
Systems of Equations and Inequalities	Determine the number of solutions to a system of linear equations	
Systems of Equations and Inequalities	Solve a system of linear equations in two variables using any method	○
Systems of Equations and Inequalities	WP: Determine a system of linear equations that represents a given situation	○
Systems of Equations and Inequalities	WP: Solve a mixture problem that can be represented by a system of linear equations	
Systems of Equations and Inequalities	WP: Solve a motion problem that can be represented by a system of linear equations	
Systems of Equations and Inequalities	Solve a number problem that can be represented by a linear system of equations	
Systems of Equations and Inequalities	Determine if a given ordered pair is a solution to a system of linear inequalities	
Systems of Equations and Inequalities	Determine the graph of the solution set of a system of linear inequalities in two variables	
Systems of Equations and Inequalities	WP: Determine a system of linear inequalities that represents a given situation	
Systems of Equations and Inequalities	WP: Determine possible solutions to a problem that can be represented by a system of linear inequalities	

Domain: Algebra

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra 1 (continued)		
Powers, Roots, and Radicals	Apply the product of powers property to a monomial algebraic expression	○
Powers, Roots, and Radicals	Apply the power of a power property to a monomial algebraic expression	○
Powers, Roots, and Radicals	Apply the quotient of powers property to monomial algebraic expressions	○
Powers, Roots, and Radicals	Apply the power of a quotient property to monomial algebraic expressions	○
Powers, Roots, and Radicals	Apply properties of exponents to monomial algebraic expressions	
Evaluate and Use Variable Expressions	Apply terminology related to polynomials	
Algebra of Polynomials	Simplify a polynomial expression by combining like terms	
Algebra of Polynomials	Add polynomial expressions	○
Algebra of Polynomials	Subtract polynomial expressions	○
Algebra of Polynomials	Multiply a polynomial by a monomial	
Algebra of Polynomials	Multiply two binomials of the form $(x \pm a)(x \pm b)$	
Algebra of Polynomials	Multiply two binomials of the form $(ax \pm b)(cx \pm d)$	○
Algebra of Polynomials	Multiply two binomials of the form $(ax \pm by)(cx \pm dy)$	
Algebra of Polynomials	Square a binomial	
Algebra of Polynomials	Multiply two nonlinear binomials	
Algebra of Polynomials	Multiply a trinomial by a binomial	
Algebra of Polynomials	Factor the GCF from a polynomial expression	○
Algebra of Polynomials	Factor trinomials that result in factors of the form $(x \pm a)(x \pm b)$	
Algebra of Polynomials	Factor trinomials that result in factors of the form $(ax \pm b)(cx \pm d)$	○
Algebra of Polynomials	Factor trinomials that result in factors of the form $(ax \pm by)(cx \pm dy)$	
Algebra of Polynomials	Factor the difference of two squares	
Algebra of Polynomials	Factor a perfect-square trinomial	
Algebra of Polynomials	Factor a polynomial that has a GCF and two linear binomial factors	
Relations and Functions	Determine the graph of a given quadratic function	○
Relations and Functions	WP: Answer a question using the graph of a quadratic function	○
Relations and Functions	Solve a quadratic equation by graphing the associated quadratic function	
Quadratic and Nonlinear Equations and Inequalities	Solve a quadratic equation by taking the square root	
Quadratic and Nonlinear Equations and Inequalities	Determine the solution(s) of an equation given in factored form	
Quadratic and Nonlinear Equations and Inequalities	Solve a quadratic equation by factoring	○
Quadratic and Nonlinear Equations and Inequalities	Solve a quadratic equation using the quadratic formula	○
Quadratic and Nonlinear Equations and Inequalities	Use the discriminant to determine the number of real solutions	
Quadratic and Nonlinear Equations and Inequalities	WP: Use a given quadratic equation to solve a problem	
Relations and Functions	Determine the graph of an exponential function	
Relations and Functions	WP: Evaluate an exponential growth or an exponential decay function	
Relations and Functions	Solve a problem involving exponential growth or exponential decay	
Powers, Roots, and Radicals	Simplify a monomial algebraic radical expression	○
Powers, Roots, and Radicals	Rationalize the denominator of an algebraic radical expression	
Powers, Roots, and Radicals	Add or subtract algebraic radical expressions	
Powers, Roots, and Radicals	Multiply monomial algebraic radical expressions	
Powers, Roots, and Radicals	Divide monomial algebraic radical expressions	

Domain: Algebra

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra 1 (continued)		
Quadratic and Nonlinear Equations and Inequalities	Solve a radical equation that leads to a linear equation	○
Quadratic and Nonlinear Equations and Inequalities	Solve a radical equation that leads to a quadratic equation	○
Relations and Functions	Determine the graph of a radical function	
Relations and Functions	WP: Solve a problem involving a radical function	
Algebra of Polynomials	Determine the excluded values of a rational algebraic expression	
Algebra of Polynomials	Simplify a rational expression involving polynomial terms	○
Algebra of Polynomials	Multiply rational expressions	○
Algebra of Polynomials	Divide rational expressions	
Algebra of Polynomials	Divide a polynomial expression by a monomial	○
Algebra of Polynomials	Divide a polynomial expression by a binomial	
Algebra of Polynomials	Determine the LCD of two rational expressions	
Algebra of Polynomials	Add or subtract two rational expressions with like denominators	
Algebra of Polynomials	Add or subtract two rational expressions with unlike monomial denominators	
Algebra of Polynomials	Add or subtract two rational expressions with unlike polynomial denominators	○
Quadratic and Nonlinear Equations and Inequalities	Solve a proportion that generates a linear or quadratic equation	
Quadratic and Nonlinear Equations and Inequalities	Solve a rational equation involving terms with monomial denominators	○
Quadratic and Nonlinear Equations and Inequalities	Solve a rational equation involving terms with polynomial denominators	○
Quadratic and Nonlinear Equations and Inequalities	Determine the graph of a rational function	
Quadratic and Nonlinear Equations and Inequalities	WP: Solve a problem involving a rational equation	

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Library: Early Numeracy		
Geometry: 2-Dimensional Shapes and Attributes	Identify two pictures that are the same	
Geometry: 2-Dimensional Shapes and Attributes	Identify the picture that is different	
Geometry: 2-Dimensional Shapes and Attributes	Identify the picture that does not belong	
Measurement	Compare the sizes of two objects	
Measurement	Order objects according to size	
Measurement	Compare the weights of two objects	
Measurement	Compare the volumes of two objects	
Measurement	Compare sizes, weights, and volumes	
Measurement	Compare the distances between a starting point and two different objects	
Measurement	Compare the temperatures of two objects	
Geometry: 2-Dimensional Shapes and Attributes	Compose a new shape out of two other shapes	
Geometry: 2-Dimensional Shapes and Attributes	Decompose a shape into two new shapes	
Grade 1		
Money	Determine the value of a collection of like coins	
Money	Determine the value of a collection of mixed coins	
Measurement	Compare objects using the vocabulary of measurement	○
Measurement	Compare and order objects by attributes of height or length	○
Measurement	Apply the vocabulary of position or direction	
Measurement	Select the appropriate measurement tool for length, weight, temperature, time, or capacity	
Measurement	Estimate length in nonstandard units	
Time	Know the approximate time it takes to complete a task	
Time	Tell time to the hour	○
Time	Tell time to the half hour	○
Time	Order events by time	
Time	Order the months of the year	
Time	Determine the day of the week from a date on a calendar	
Geometry: 2-Dimensional Shapes and Attributes	Identify a circle, a triangle, a square, or a rectangle	○
Geometry: 2-Dimensional Shapes and Attributes	Determine the common attributes in a set of geometric shapes	○
Geometry: 2-Dimensional Shapes and Attributes	Determine the group in which a geometric shape belongs	
Geometry: 2-Dimensional Shapes and Attributes	Determine the rule used to sort geometric shapes	
Transformations	Identify a line of symmetry	○
Grade 2		
Money	Determine the value of a collection of bills and coins	
Money	Translate between a dollar sign and a cent sign	○
Money	Convert money amounts in words to amounts in symbols	○
Money	Determine cent amounts that total a dollar	○
Money	WP: Add or subtract a collection of bills or coins	
Money	Add money values using cents or dollars with regrouping	
Money	Subtract money values using cents or dollars with one regrouping	
Measurement	Measure length in inches	○

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 2 (continued)		
Measurement	Measure length in centimeters	○
Time	Tell time to the quarter hour	○
Time	Tell time to 5-minute intervals	○
Time	WP: Calculate elapsed time	
Measurement	Read a thermometer in degrees Celsius	
Measurement	Read a thermometer in degrees Fahrenheit	
Perimeter, Circumference, and Area	Relate area to the number of square units	
Geometry: 2-Dimensional Shapes and Attributes	Identify figures that are the same size and shape	
Geometry: 2-Dimensional Shapes and Attributes	Identify a parallelogram, a trapezoid, a pentagon, a hexagon, or an octagon	
Geometry: 2-Dimensional Shapes and Attributes	Decompose a plane shape composed of three or more simpler shapes	
Geometry: 3-Dimensional Shapes and Attributes	Name a 3-dimensional geometric shape	
Transformations	Identify symmetry in a 2-dimensional shape	
Coordinate Geometry	Follow directions on a simple map	
Grade 3		
Money	Add two money amounts less than \$1 in decimal notation	
Money	Subtract two money amounts less than \$1 in decimal notation	
Money	Add or subtract cent amounts to or from whole dollar amounts	
Money	Add dollars and cents to cents	
Money	Add dollars and cents to dollars	
Money	Subtract cents from dollars and cents	
Money	Subtract dollars from dollars and cents	
Money	Determine money amounts that total \$10	○
Money	WP: Determine the amount of change from whole dollar amounts	○
Money	WP: Add or subtract money amounts less than \$1	
Measurement	Measure length to the nearest half inch or quarter inch	
Measurement	Convert between inches, feet, and yards	
Measurement	Convert between centimeters and meters	
Measurement	Add or subtract compound units of length in inches and feet with no conversion	
Measurement	WP: Add or subtract compound units of length in inches and feet with no conversion	
Measurement	Add or subtract compound units of length in inches and feet with conversion	
Measurement	WP: Add or subtract compound units of length in inches and feet with conversion	
Time	Tell time to the minute	○
Time	Convert hours to minutes or minutes to seconds	
Time	Calculate elapsed time within an hour, given two clocks, without regrouping	
Time	Calculate elapsed time within an hour, given two clocks, with regrouping	
Time	WP: Calculate elapsed time within an hour given two clocks	
Time	WP: Calculate elapsed time within an hour	
Time	WP: Determine the end time given the start time and the elapsed time within an hour	
Time	WP: Determine the start time given the end time on a clock and the elapsed time within an hour	
Time	WP: Determine the start time given the end time and the elapsed time within an hour	
Time	Determine a date using a calendar	

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 3 (continued)		
Measurement	Read a thermometer in degrees Fahrenheit or Celsius	
Measurement	WP: Determine temperature change given a picture of thermometers	
Perimeter, Circumference, and Area	Determine a method for finding the perimeter of a shape given the side lengths	
Perimeter, Circumference, and Area	WP: Determine the perimeter of a rectangular shape given a grid with a reference unit	
Perimeter, Circumference, and Area	WP: Determine the perimeter of a shape given a model showing all side lengths	
Perimeter, Circumference, and Area	Determine the area of a shape composed of rectangles given a picture on a grid	
Perimeter, Circumference, and Area	WP: Determine the area of a rectangular shape given a picture on a grid	
Perimeter, Circumference, and Area	Estimate the area of a shape composed of rectangles given a reference square	
Angles, Segments, and Lines	Identify parallel, perpendicular, and intersecting lines	
Angles, Segments, and Lines	Classify an angle as equal to 90° , less than 90° , or greater than 90°	
Angles, Segments, and Lines	Classify an angle in a shape as equal to 90° , less than 90° , or greater than 90°	
Geometry: 2-Dimensional Shapes and Attributes	Determine attributes of a triangle or a quadrilateral from a model	
Geometry: 2-Dimensional Shapes and Attributes	Relate a model of a triangle or a quadrilateral to a list of attributes	
Geometry: 3-Dimensional Shapes and Attributes	Identify a picture of a 3-dimensional shape	
Geometry: 3-Dimensional Shapes and Attributes	Name a 3-dimensional shape from a picture	
Geometry: 3-Dimensional Shapes and Attributes	Decompose a solid object into simpler parts	
Congruence and Similarity	Identify congruent shapes	
Transformations	Identify mirror images	
Coordinate Geometry	Determine the directions to a position on a map	
Coordinate Geometry	Determine a location using map coordinates	
Coordinate Geometry	Determine the map coordinates for a location	
Grade 4		
Money	WP: Add or subtract money amounts greater than \$1	
Money	WP: Solve a money problem involving 2 steps	
Money	WP: Multiply a money amount by a 1-digit number	
Money	WP: Divide a money amount by a 1-digit number	
Measurement	Measure length to the nearest eighth of an inch	
Measurement	Measure length to the nearest millimeter	
Measurement	Convert between customary units of capacity using whole numbers	
Measurement	Convert between customary units of weight using whole numbers	
Measurement	Convert between metric units of capacity using whole numbers	
Measurement	Convert between metric units of mass using whole numbers	
Measurement	Convert between millimeters and centimeters or meters using whole numbers	
Measurement	WP: Add or subtract compound units of length requiring customary unit conversion using whole numbers	
Time	Calculate elapsed time exceeding an hour without regrouping	
Time	Calculate elapsed time exceeding an hour with regrouping	○
Time	WP: Calculate elapsed time exceeding an hour without regrouping hours	
Time	WP: Calculate elapsed time exceeding an hour with regrouping hours	○
Time	WP: Determine the end time given the start time and the elapsed time exceeding an hour	
Time	WP: Determine the start time given the end time and the elapsed time exceeding an hour	
Time	Read a timetable to answer questions	

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 4 (continued)		
Time	WP: Add time intervals involving hours and minutes	
Time	Solve an elapsed-time problem using a calendar	
Perimeter, Circumference, and Area	Determine the perimeter of a rectangle given a picture showing length and width	○
Perimeter, Circumference, and Area	WP: Determine the perimeter of a rectangle given a picture showing length and width	○
Perimeter, Circumference, and Area	WP: Determine the perimeter of a square or rectangle	
Perimeter, Circumference, and Area	Determine the missing side length of a rectangle given a side length and the perimeter	○
Perimeter, Circumference, and Area	Determine the area of a polygon on a grid	○
Perimeter, Circumference, and Area	Determine the area of a rectangle given a picture showing the length and width	
Perimeter, Circumference, and Area	Determine the area of a rectangle given the length and width	○
Perimeter, Circumference, and Area	WP: Determine the area of a rectangle	○
Perimeter, Circumference, and Area	Determine the missing side length of a rectangle given a side length and the area	○
Perimeter, Circumference, and Area	Estimate the area of an irregular polygon on a grid	
Surface Area and Volume	Determine the volume of a rectangular prism given a diagram showing unit cubes	
Angles, Segments, and Lines	Classify an angle given a picture	○
Angles, Segments, and Lines	Classify an angle given its measure	○
Angles, Segments, and Lines	Associate degrees with a turn on a circle	
Geometry: 2-Dimensional Shapes and Attributes	Identify a shape that has parallel or perpendicular sides	
Geometry: 2-Dimensional Shapes and Attributes	Classify a triangle by its sides	
Geometry: 2-Dimensional Shapes and Attributes	Classify a quadrilateral	
Geometry: 2-Dimensional Shapes and Attributes	Relate a polygon to attributes or characteristics	
Congruence and Similarity	Identify similar shapes	
Transformations	Determine lines of symmetry	○
Transformations	Determine the result of a flip, a turn, or a slide	○
Transformations	Determine the result of a quarter or a half turn	
Coordinate Geometry	Determine a path or location on a grid using compass directions	
Coordinate Geometry	Identify the location of an ordered pair in the first quadrant using compass directions	
Coordinate Geometry	Determine the ordered pair of a point in the first quadrant using compass directions	
Grade 5		
Measurement	Determine an appropriate unit of measure	
Measurement	Convert between customary units of length using fractional amounts	
Measurement	Convert between customary units of capacity using fractional amounts	
Measurement	Convert between customary units of weight using fractional amounts	
Measurement	Convert between metric units of capacity using decimal amounts	
Measurement	Convert between metric units of mass using decimal amounts	
Measurement	Convert between millimeters or centimeters and meters, or meters and kilometers using decimal amounts	
Measurement	WP: Compare customary units of length, weight, or capacity using fractional amounts	
Measurement	WP: Compare metric units of length, mass, or capacity using decimal amounts	
Time	Calculate elapsed time using a.m. and p.m.	
Time	WP: Calculate elapsed time using a.m. and p.m.	
Time	WP: Use a calendar to solve a problem	

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 5 (continued)		
Measurement	Measure an angle to the nearest 5 degrees	
Perimeter, Circumference, and Area	Determine the perimeter of a polygon	
Perimeter, Circumference, and Area	Use a formula to determine the area of a triangle	○
Perimeter, Circumference, and Area	Determine the area of a complex figure divided into basic shapes	
Perimeter, Circumference, and Area	Use a formula to determine the area of a parallelogram	
Perimeter, Circumference, and Area	WP: Determine the area of a triangle	○
Perimeter, Circumference, and Area	WP: Determine the area of a square or rectangle	○
Perimeter, Circumference, and Area	WP: Determine a missing dimension given the area and another dimension	○
Surface Area and Volume	Determine the volume of a rectangular prism given a diagram	○
Surface Area and Volume	WP: Determine the volume of a rectangular prism given a diagram	
Surface Area and Volume	Determine the volume of a rectangular prism	
Surface Area and Volume	WP: Determine the volume of a rectangular prism	○
Surface Area and Volume	Determine the volume of an object composed of rectangular prisms by counting units	
Surface Area and Volume	Answer a question by analyzing a shape made of cubes	
Surface Area and Volume	Determine the surface area of a cube or a rectangular prism given a net	
Surface Area and Volume	Determine the surface area of a rectangular prism	○
Surface Area and Volume	WP: Find the surface area of a rectangular prism	○
Geometry: 2-Dimensional Shapes and Attributes	Classify a triangle by its sides and angles	
Geometry: 3-Dimensional Shapes and Attributes	Determine the 3-dimensional shape that can be formed from a net	
Geometry: 3-Dimensional Shapes and Attributes	Determine a net of a 3-dimensional shape	
Geometry: 3-Dimensional Shapes and Attributes	Determine the number of faces, edges, and vertices in a 3-dimensional shape	
Transformations	Identify a figure that has reflectional or rotational symmetry	
Transformations	Determine the result of a reflection, a rotation, or a translation on a grid	
Transformations	Determine the transformation that generates the image of a figure on a grid	
Coordinate Geometry	Locate a point by following compass directions on a grid	
Coordinate Geometry	Use compass directions to describe a path to a point on a grid	
Coordinate Geometry	Determine the location of an ordered pair in the first quadrant	
Coordinate Geometry	Determine the ordered pair of a point in the first quadrant	
Grade 6		
Measurement	WP: Add or subtract customary measures of capacity requiring unit conversion	
Measurement	WP: Add or subtract metric measures of capacity requiring unit conversion	
Measurement	WP: Add or subtract customary measures of weight requiring unit conversion	
Measurement	WP: Add or subtract metric measures of mass requiring unit conversion	
Measurement	WP: Multiply or divide customary measures of capacity requiring unit conversion	
Measurement	WP: Multiply or divide metric measures of capacity requiring unit conversion	
Measurement	WP: Multiply or divide customary measures of weight requiring unit conversion	
Measurement	WP: Multiply or divide metric measures of mass requiring unit conversion	
Time	Determine a time in different time zones	
Angles, Segments, and Lines	Measure an angle, between two rays or in a shape, to the nearest degree	
Perimeter, Circumference, and Area	Determine the perimeter of a complex shape	
Perimeter, Circumference, and Area	Determine the area of a complex shape	○

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 6 (continued)		
Perimeter, Circumference, and Area	WP: Determine the perimeter or the area of a complex shape	○
Polygons and Circles	Answer a question about the parts and relationships in a circle	
Perimeter, Circumference, and Area	Determine the circumference of a circle using $22/7$ for π	
Perimeter, Circumference, and Area	Determine the circumference of a circle using 3.14 for π	
Perimeter, Circumference, and Area	WP: Determine the circumference of a circle	
Surface Area and Volume	Determine the volume of a prism with a right triangle base	
Surface Area and Volume	Determine the surface area of a 3-dimensional shape made from cubes	
Angles, Segments, and Lines	Determine the measure of a missing angle using straight and right angle relationships	
Angles, Segments, and Lines	Identify parallel, perpendicular, or intersecting lines	
Geometry: 3-Dimensional Shapes and Attributes	Identify attributes of a 3-dimensional shape	
Geometry: 2-Dimensional Shapes and Attributes	Know the properties of a triangle or a quadrilateral	
Congruence and Similarity	Identify congruent shapes shown on a grid or within pattern block arrangements, with different orientations	
Congruence and Similarity	Determine a length given a scale	
Transformations	Use symmetry to determine a length or an angle measure	
Transformations	Determine the result of a reflection, a rotation, or a translation on the Cartesian plane	
Transformations	Determine the transformation that generates the image of a figure in the Cartesian plane	
Coordinate Geometry	Determine the location of an ordered pair in any quadrant	
Coordinate Geometry	Determine the ordered pair of a point in any quadrant	
Grade 7		
Perimeter, Circumference, and Area	Determine the circumference of a circle in terms of π	
Perimeter, Circumference, and Area	Solve a problem involving the circumference of a circle	○
Perimeter, Circumference, and Area	Determine the area of a trapezoid	
Perimeter, Circumference, and Area	Estimate the area of an irregular shape or a circle on a grid	
Perimeter, Circumference, and Area	Determine the area of a circle in terms of π	
Perimeter, Circumference, and Area	Determine the area of a circle using 3.14 for π	
Perimeter, Circumference, and Area	Determine the area of a circle using $22/7$ for π	
Perimeter, Circumference, and Area	WP: Determine the area of a circle using 3.14 for π	
Perimeter, Circumference, and Area	Solve a problem given the area of a circle	○
Surface Area and Volume	Determine the volume of a rectangular or a triangular prism	○
Surface Area and Volume	Determine the volume of a cylinder	
Surface Area and Volume	WP: Determine the volume of a cylinder	
Surface Area and Volume	WP: Solve a problem involving the volume of a geometric solid	○
Surface Area and Volume	Determine the surface area of a 3-dimensional shape given a net	
Surface Area and Volume	Determine the surface area of a triangular prism	
Surface Area and Volume	Determine the surface area of a cylinder	
Surface Area and Volume	WP: Determine the surface area of a geometric solid	○
Congruence and Similarity	Identify corresponding parts of congruent shapes	
Congruence and Similarity	Identify congruent shapes given side and angle measures	
Congruence and Similarity	Determine a missing dimension given two congruent shapes	

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 7 (continued)		
Congruence and Similarity	Determine a missing dimension given two similar shapes	○
Congruence and Similarity	WP: Solve a problem involving similar shapes	○
Congruence and Similarity	Determine the scale for a drawing or map question	
Congruence and Similarity	WP: Solve a problem involving a map or scale drawing	
Polygons and Circles	Determine the missing angle measure in a triangle given two other angle measures	
Polygons and Circles	Determine the missing angle measure in a quadrilateral given three other angle measures	
Measurement	Convert a rate from one unit to another with a change in one unit	○
Measurement	Convert a rate from one unit to another with a change in both units	○
Measurement	Determine approximate conversions between metric and customary units of length	
Measurement	Determine approximate conversions between metric and customary units of capacity	
Measurement	Determine approximate conversions between metric and customary units of weight/mass	
Angles, Segments, and Lines	Identify vertical, adjacent, complementary, or supplementary angles	
Angles, Segments, and Lines	Determine the measure of a missing angle using angle relationships	
Coordinate Geometry	Determine the location of a simple shape on the Cartesian plane given the coordinates of its vertices	
Coordinate Geometry	Determine the coordinates of a missing point determined by geometric information	
Coordinate Geometry	Determine a side length of a shape on the Cartesian plane	
Perimeter, Circumference, and Area	Determine the area of a shape on the Cartesian plane	
Transformations	Determine the coordinates of a translated, a rotated, or a reflected shape on the Cartesian plane	
Geometry: 2-Dimensional Shapes and Attributes	Visualize a 2-dimensional shape	
Geometry: 3-Dimensional Shapes and Attributes	Compare attributes of 3-dimensional shapes	
Geometry: 3-Dimensional Shapes and Attributes	Relate a 3-dimensional shape to its top and side views	
Grade 8		
Measurement	WP: Solve a problem involving mixed units	
Measurement	WP: Solve a distance-rate-time problem that involves unit conversions	
Perimeter, Circumference, and Area	Solve a problem involving perimeters or areas of two different shapes	
Perimeter, Circumference, and Area	Determine the ratio of the perimeters or areas of similar shapes	
Surface Area and Volume	Determine the volume of a pyramid or a cone	
Surface Area and Volume	WP: Determine the volume of a pyramid or a cone	
Surface Area and Volume	Determine the surface area of a pyramid or a cone	
Surface Area and Volume	WP: Determine the surface area of a pyramid or a cone	
Surface Area and Volume	Solve a problem involving the surface area or the volume of a pyramid or a cone	
Geometry: 3-Dimensional Shapes and Attributes	Solve a problem involving 3-dimensional visualization	
Geometry: 3-Dimensional Shapes and Attributes	Identify a cross section of a 3-dimensional shape	
Measurement	Determine a measure of length, weight or mass, or capacity or volume using proportional relationships	○
Angles, Segments, and Lines	Identify angle relationships formed by parallel lines cut by a transversal	
Angles, Segments, and Lines	Determine an angle measure formed by parallel lines cut by a transversal	
Congruence and Similarity	WP: Solve a problem involving scale	
Right Triangles and Trigonometry	Determine the length of the hypotenuse of a right triangle using the Pythagorean theorem	○

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 8 (continued)		
Right Triangles and Trigonometry	Determine the length of a leg of a right triangle using the Pythagorean theorem	○
Right Triangles and Trigonometry	WP: Use the Pythagorean theorem to find a length or a distance	○
Right Triangles and Trigonometry	Determine a distance on the Cartesian plane using the Pythagorean theorem	
Right Triangles and Trigonometry	Determine if a triangle is a right triangle by using the Pythagorean theorem	
Geometry		
Angles, Segments, and Lines	Identify a relationship between points, lines, and/or planes	
Angles, Segments, and Lines	Determine a length or an angle measure using the segment addition postulate or the angle addition postulate	
Angles, Segments, and Lines	Solve a problem involving a bisected angle or a bisected segment	
Coordinate Geometry	Determine the distance between two points	
Coordinate Geometry	Solve a problem involving the distance formula	○
Coordinate Geometry	Determine the midpoint of a line segment given the coordinates of the endpoints	○
Perimeter, Circumference, and Area	Determine the area of a right triangle or a rectangle given the coordinates of the vertices of the figure	○
Coordinate Geometry	Solve a problem involving the midpoint formula	
Angles, Segments, and Lines	Identify angle relationships formed by multiple lines and transversals	
Angles, Segments, and Lines	Determine the measure of an angle formed by parallel lines and one or more transversals	○
Angles, Segments, and Lines	Identify parallel lines using angle relationships	
Angles, Segments, and Lines	Determine the measure of an angle in a figure involving parallel and/or perpendicular lines	
Coordinate Geometry	Determine if lines through points with given coordinates are parallel or perpendicular	
Coordinate Geometry	Determine the coordinates of a point through which a line must pass in order to be parallel or perpendicular to a given line	
Polygons and Circles	Determine the measure of an angle using the sum of the interior angles in a triangle	
Polygons and Circles	Determine the measure of an angle using angle relationships and the sum of the interior angles in a triangle	
Congruence and Similarity	Determine a length in a triangle using a median	
Right Triangles and Trigonometry	Solve for the length of a side of a triangle using the Pythagorean theorem	
Polygons and Circles	Solve a problem using inequalities in a triangle	○
Polygons and Circles	Solve a problem involving two triangles by using the hinge theorem and other triangle inequality relationships	
Polygons and Circles	WP: Determine a length or an angle measure using triangle relationships	○
Congruence and Similarity	Determine the length of a side or the measure of an angle in congruent triangles	
Congruence and Similarity	Identify a triangle congruence postulate that justifies a congruence statement	○
Congruence and Similarity	Identify congruent triangles using triangle congruence postulates or theorems	○
Congruence and Similarity	Solve a problem involving a point on the bisector of an angle	
Polygons and Circles	Determine the measure of an angle or the sum of the angles in a polygon	○
Polygons and Circles	Determine a length or an angle measure using general properties of parallelograms	
Polygons and Circles	Determine a length or an angle measure using properties of squares, rectangles, or rhombi	

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Geometry (continued)		
Polygons and Circles	Determine a length or an angle measure using properties of kites	
Polygons and Circles	Determine a length or an angle measure using properties of trapezoids	
Polygons and Circles	Determine a length or an angle measure in a complex figure using properties of polygons	
Polygons and Circles	WP: Solve a problem using the properties of angles and/or sides of polygons	○
Congruence and Similarity	Determine the scale factor relating two similar polygons	
Congruence and Similarity	Determine the length of a side in one of two similar polygons	
Congruence and Similarity	Determine the length of a side or the measure of an angle in similar triangles	
Congruence and Similarity	Determine a length given the perimeters of similar triangles or the lengths of corresponding interior line segments	
Congruence and Similarity	Identify a triangle similarity postulate that justifies a similarity statement	○
Congruence and Similarity	Identify similar triangles using triangle similarity postulates or theorems	○
Congruence and Similarity	Determine a length in a triangle using a midsegment	
Congruence and Similarity	Determine a length using parallel lines and proportional parts	○
Congruence and Similarity	Determine a length in a triangle given the bisector of an angle and other lengths	
Congruence and Similarity	Determine a length using similar triangles formed by the altitude to the hypotenuse of a right triangle	
Congruence and Similarity	WP: Determine a length using similarity	○
Right Triangles and Trigonometry	Determine a length in a complex figure using the Pythagorean theorem	○
Right Triangles and Trigonometry	Determine a length using the properties of a 45-45-90 degree triangle or a 30-60-90 degree triangle	○
Right Triangles and Trigonometry	Solve a problem using multiple non-trigonometric right-triangle relationships	
Right Triangles and Trigonometry	WP: Determine a length using the properties of a 45-45-90 degree triangle or a 30-60-90 degree triangle	
Right Triangles and Trigonometry	WP: Solve a problem involving a complex figure using the Pythagorean theorem	
Right Triangles and Trigonometry	Determine a sine, cosine, or tangent ratio in a right triangle	
Right Triangles and Trigonometry	Determine a length using a sine, cosine, or tangent ratio in a right triangle	
Right Triangles and Trigonometry	Determine the measure of an angle using a sine, cosine, or tangent ratio in a right triangle	
Right Triangles and Trigonometry	WP: Determine a length in a right triangle using a sine, cosine, or tangent ratio	
Right Triangles and Trigonometry	WP: Determine the measure of an angle in a right triangle using a sine, cosine, or tangent ratio	
Polygons and Circles	Determine the measure of an arc or a central angle using the relationship between the arc and the central angle	○
Polygons and Circles	Solve a problem involving the length of an arc	○
Polygons and Circles	Determine the length of a line segment, the measure of an angle, or the measure of an arc using a tangent to a circle	○
Polygons and Circles	Determine a length using a line segment tangent to a circle and the radius that intersects the tangent	○
Polygons and Circles	Determine a length using two intersecting tangents to a circle	
Polygons and Circles	Determine a length or an arc measure using the properties of congruent chords	
Polygons and Circles	Determine a length using a perpendicular bisector of a chord	
Polygons and Circles	Determine the measure of an arc or an angle using the relationship between an inscribed angle and its intercepted arc	○
Polygons and Circles	Determine the measure of an arc or an angle using properties of an inscribed triangle or quadrilateral	

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Geometry (continued)		
Polygons and Circles	Determine the measure of an arc or an angle formed by intersecting chords or a chord that intersects a tangent to a circle	
Polygons and Circles	Determine the measure of an arc or an angle formed by two tangents, two secants, or a tangent and a secant that intersect outside a circle	
Polygons and Circles	Determine a length using intersecting chords, two secants that intersect outside a circle, or a tangent and a secant that intersect outside a circle	
Polygons and Circles	Solve a problem involving intersecting chords, tangents, and/or secants of a circle	
Polygons and Circles	Determine an equation of a circle	
Polygons and Circles	Determine the radius, center, or diameter of a circle given an equation	
Perimeter, Circumference, and Area	Determine the area or circumference of a circle given an equation of the circle	
Perimeter, Circumference, and Area	Determine the area of a quadrilateral	○
Perimeter, Circumference, and Area	Determine a length given the area of a quadrilateral	○
Perimeter, Circumference, and Area	WP: Solve a problem involving the area of a quadrilateral	
Perimeter, Circumference, and Area	Determine the area of a triangle using Heron's formula	
Perimeter, Circumference, and Area	Determine the area of a regular polygon	
Perimeter, Circumference, and Area	Determine a length given the area of a regular polygon	
Right Triangles and Trigonometry	Approximate the area of a right triangle using trigonometry	
Right Triangles and Trigonometry	Approximate the area of a regular polygon using trigonometry	
Perimeter, Circumference, and Area	Determine the area of a region formed by circles within a circle, a polygon within a circle, or a circle within a polygon	
Perimeter, Circumference, and Area	WP: Solve a problem involving the area of a complex shape formed by circles and polygons	
Perimeter, Circumference, and Area	Determine the area of a sector of a circle	○
Perimeter, Circumference, and Area	Determine the area of a segment of a circle	
Perimeter, Circumference, and Area	Determine the length of the radius or the diameter of a circle given the area of a sector	○
Perimeter, Circumference, and Area	WP: Determine a length or an area involving a sector of a circle	○
Perimeter, Circumference, and Area	Determine the measure of an arc or an angle given the area of a sector of a circle	○
Perimeter, Circumference, and Area	Solve a problem involving regular polygons and/or circles that have the same area or perimeter	
Surface Area and Volume	Determine a length given the surface area of a right cylinder or a right prism that has a rectangle or a right triangle as a base	○
Surface Area and Volume	Solve a problem involving the surface area of a cone or a pyramid that has a rectangle or right triangle as a base	
Surface Area and Volume	Determine a length given the surface area of a right prism or a right pyramid that has a regular polygon as its base	
Surface Area and Volume	Determine the volume of an oblique prism or an oblique cylinder	
Surface Area and Volume	Determine the volume of a right pyramid or a right cone	
Surface Area and Volume	Solve a problem involving the volume of a right pyramid or a right cone	○
Surface Area and Volume	Determine the volume of an oblique pyramid or an oblique cone	
Surface Area and Volume	Determine the surface area of a sphere	○
Surface Area and Volume	Determine the radius, diameter, or circumference of a sphere given its surface area	
Surface Area and Volume	WP: Solve a problem involving the surface area of a sphere	
Surface Area and Volume	Determine the surface area of a complex solid figure	
Surface Area and Volume	Solve a problem involving the surface area of a complex solid figure	
Surface Area and Volume	Determine the volume of a sphere or hemisphere	○

Domain: Geometry and Measurement

Skill Area	Grade-Level Skill Statement	Core Skill
Geometry (continued)		
Surface Area and Volume	WP: Determine the volume of a sphere or hemisphere	
Surface Area and Volume	Determine the volume of a complex solid figure	
Surface Area and Volume	WP: Solve a problem involving the volume of a complex solid figure	
Surface Area and Volume	Solve a problem involving the surface areas of similar solid figures	
Surface Area and Volume	Solve a problem involving the volumes of similar solid figures	
Surface Area and Volume	Solve a problem involving two solid figures that have the same surface area or volume	
Surface Area and Volume	WP: Solve a problem involving two solid figures that have the same surface area or volume	
Transformations	Relate the coordinates of a preimage or an image to a translation described using mapping notation	
Transformations	Determine the coordinates of a preimage or an image given a reflection across a horizontal line, a vertical line, the line $y = x$, or the line $y = -x$	
Transformations	Relate the coordinates of a preimage or an image to a dilation centered at the origin	
Transformations	Determine the angle of rotational symmetry of a figure	
Transformations	Determine the coordinates of the image of a figure after two transformations of the same type	
Transformations	Determine the coordinates of the image of a figure after two transformations of different types	

Domain: Data Analysis, Statistics, and Probability

Skill Area	Grade-Level Skill Statement	Core Skill
Early Numeracy		
Data Representation and Analysis	Sort objects according to one attribute	
Grade 1		
Data Representation and Analysis	Determine the group in which an object belongs	
Data Representation and Analysis	Determine the rule used to sort objects	
Data Representation and Analysis	Read a 2-category tally chart	
Data Representation and Analysis	Use a 2-category tally chart to represent groups of objects (1 symbol = 1 object)	
Data Representation and Analysis	Answer a question using information from a 2-category tally chart	
Data Representation and Analysis	Read a picture graph	
Data Representation and Analysis	Use a picture graph to represent groups of objects (1 symbol = 1 object)	
Data Representation and Analysis	Answer a question using information from a picture graph	
Data Representation and Analysis	Read a pictograph (1 symbol = 1 object)	
Data Representation and Analysis	Use a pictograph to represent groups of objects (1 symbol = 1 object)	
Data Representation and Analysis	Answer a question using information from a pictograph (1 symbol = 1 object)	
Data Representation and Analysis	Read a bar graph	
Data Representation and Analysis	Use a bar graph to represent groups of objects	
Data Representation and Analysis	Answer a question using information from a bar graph	
Grade 2		
Data Representation and Analysis	Read a multi-category tally chart	
Data Representation and Analysis	Use a tally chart to represent data	
Data Representation and Analysis	Answer a question using information from a tally chart	
Data Representation and Analysis	Read a pictograph (1 symbol = more than 1 object)	
Data Representation and Analysis	Use a pictograph to represent data (1 symbol = more than 1 object)	○
Data Representation and Analysis	Answer a question using information from a pictograph (1 symbol = more than 1 object)	○
Data Representation and Analysis	Read a bar graph with a y-axis scale by 2s	
Data Representation and Analysis	Use a bar graph with a y-axis scale by 2s to represent data	○
Data Representation and Analysis	Answer a question using information from a bar graph with a y-axis scale by 2s	○
Grade 3		
Data Representation and Analysis	Use a bar graph with a scale interval of 5 or 10 to represent data	
Data Representation and Analysis	Answer a question using information from a bar graph with a scale interval of 5 or 10	
Data Representation and Analysis	Read a line plot	
Data Representation and Analysis	Use a line plot to represent data	
Data Representation and Analysis	Answer a question using information from a line plot	
Data Representation and Analysis	Use a frequency table to represent data	
Data Representation and Analysis	Answer a question using information from a frequency table	
Data Representation and Analysis	Determine a question that can be answered from a data representation	
Data Representation and Analysis	Determine if a situation is certain or impossible	
Data Representation and Analysis	Determine which event is least likely or most likely to occur	
Grade 4		
Data Representation and Analysis	Read a line graph	○
Data Representation and Analysis	Use a line graph to represent data	○
Data Representation and Analysis	Answer a question using information from a line graph	○
Data Representation and Analysis	Answer a question using information from a circle graph	

Domain: Data Analysis, Statistics, and Probability

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 4 (continued)		
Data Representation and Analysis	Read a double-bar graph	○
Data Representation and Analysis	Use a double-bar graph to represent data	○
Data Representation and Analysis	Answer a question using information from a double-bar graph	○
Data Representation and Analysis	Answer a question using information from a table	
Combinatorics and Probability	List possible outcomes of a simple event	
Grade 5		
Data Representation and Analysis	Answer a question using information from a line graph that does not start at zero or has a broken vertical scale	
Data Representation and Analysis	WP: Extend a line graph to solve a problem	
Data Representation and Analysis	Read a double- or stacked-bar graph	
Data Representation and Analysis	Use a double- or stacked-bar graph to represent data	
Data Representation and Analysis	Answer a question using information from a double- or stacked-bar graph	
Data Representation and Analysis	Use information from a table or a chart to solve a problem	
Data Representation and Analysis	Answer a question using information from a Venn diagram	
Data Representation and Analysis	Determine the mode from a graph	
Data Representation and Analysis	Determine the range from a graph	
Data Representation and Analysis	Determine the mean of a set of whole number data, whole number results	
Data Representation and Analysis	Determine the median of an odd number of data values	○
Data Representation and Analysis	Determine the mode of a set of whole number data	
Data Representation and Analysis	Determine the range of a set of whole number data	
Combinatorics and Probability	Determine all possible outcomes of a compound event using a list	
Combinatorics and Probability	Determine all possible outcomes of a compound event using a tree diagram	
Combinatorics and Probability	Determine the probability of a single event given the total number of possible outcomes	
Grade 6		
Data Representation and Analysis	Read a double-line graph	
Data Representation and Analysis	Answer a question using information from a double-line graph	
Data Representation and Analysis	Read a stem-and-leaf plot	
Data Representation and Analysis	Use a stem-and-leaf plot to represent data	
Data Representation and Analysis	Answer a question using information from a stem-and-leaf plot	
Data Representation and Analysis	Use a frequency table to represent 2 related data sets	
Data Representation and Analysis	Answer a question using information from a frequency table representing 2 related data sets	
Data Representation and Analysis	Determine the mean of a set of whole number data	
Data Representation and Analysis	Determine the median of a set of whole number data	
Data Representation and Analysis	Determine the mode or modes of a set of whole number data	
Data Representation and Analysis	Determine the effect of a change in a data set on the mean and/or median	
Combinatorics and Probability	Determine an experimental probability given a list of results	
Combinatorics and Probability	Determine the probability of a single event	
Combinatorics and Probability	Determine the probability of the complement of a single event	
Combinatorics and Probability	Make a prediction based on an experimental probability	
Combinatorics and Probability	Make a prediction based on a theoretical probability	
Combinatorics and Probability	Compare predictions from experimental and theoretical probability	
Combinatorics and Probability	Determine the number of possible combinations of a set of objects	

Domain: Data Analysis, Statistics, and Probability

Skill Area	Grade-Level Skill Statement	Core Skill
Grade 7		
Data Representation and Analysis	Answer a question using information from a circle graph using percentage calculations	○
Data Representation and Analysis	Use a circle graph to represent percentage data	○
Data Representation and Analysis	Use a histogram to represent data	○
Data Representation and Analysis	Answer a question using information from a histogram	○
Data Representation and Analysis	Read a double stem-and-leaf plot	
Data Representation and Analysis	Answer a question using information from a double stem-and-leaf plot	
Data Representation and Analysis	Answer a question using information from a Venn diagram containing summarized data	
Data Representation and Analysis	Determine the mean of a set of data	
Data Representation and Analysis	Determine the mode(s) of a set of data	
Data Representation and Analysis	Determine the median of a set of data	
Data Representation and Analysis	WP: Use the mean of a data set to solve a problem	
Data Representation and Analysis	Use a proportion to make an estimate, related to a population, based on a sample	○
Combinatorics and Probability	Determine the probability for independent events	
Combinatorics and Probability	Determine the probability for dependent events	
Grade 8		
Data Representation and Analysis	Use a circle graph to organize data	
Data Representation and Analysis	Use a scatter plot to organize data	
Data Representation and Analysis	Determine if a scatter plot shows a positive relationship, a negative relationship, or no relationship between the variables	
Data Representation and Analysis	Approximate a trend line for a scatter plot	
Data Representation and Analysis	Answer a question using information from a scatter plot	
Data Representation and Analysis	Determine the quartiles of a data set	
Data Representation and Analysis	Read a box-and-whisker plot	
Data Representation and Analysis	Use a box-and-whisker plot to organize data	
Data Representation and Analysis	Answer a question using information from a box-and-whisker plot	
Data Representation and Analysis	Answer a question using information from two box-and-whisker plots	
Data Representation and Analysis	Answer a question using information from a Venn diagram with three circles	
Data Representation and Analysis	Use a Venn diagram to organize summarized data	
Data Representation and Analysis	Analyze the effect that changing elements in a data set has on the mean, the median, or the range	
Data Representation and Analysis	Compare the medians, the modes, or the ranges of the data in a double stem-and-leaf plot	
Data Representation and Analysis	Determine the median of the data in a frequency table or a bar graph	
Data Representation and Analysis	Determine the mean of the data in a frequency table or a bar graph	
Data Representation and Analysis	Determine if a sample is likely to be representative of the larger population	
Data Representation and Analysis	Determine if a question is likely to produce a biased survey result	
Combinatorics and Probability	Determine the number of permutations possible in a given situation	
Combinatorics and Probability	Determine the number of combinations possible in a given situation	
Combinatorics and Probability	Determine the probability of three or more independent events	
Combinatorics and Probability	Determine the probability of three or more dependent events	
Combinatorics and Probability	Determine the probability of an event consisting of mutually exclusive events	
Combinatorics and Probability	Make a prediction involving the probability of compound events	

Domain: Data Analysis, Statistics, and Probability

Skill Area	Grade-Level Skill Statement	Core Skill
Geometry		
Combinatorics and Probability	Determine a probability using an area model	

Early Numeracy

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Whole Numbers: Place Value	Recognize numbers 0-20	
Whole Numbers: Counting, Comparing, and Ordering	Count 1-20	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 3 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 5 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 7 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 9 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 10 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count the number of any one type of object in a group of up to 10 mixed objects	
Whole Numbers: Counting, Comparing, and Ordering	Recognize that there are 0 objects	
Whole Numbers: Counting, Comparing, and Ordering	Compare sets of up to 5 objects	
Whole Numbers: Counting, Comparing, and Ordering	Complete a sequence of numbers between 0 and 5 in ascending order	
Whole Numbers: Counting, Comparing, and Ordering	Count on or count back with numbers 1 to 5	
Whole Numbers: Counting, Comparing, and Ordering	Compare sets of up to 10 objects using "more" or "fewer"	
Whole Numbers: Counting, Comparing, and Ordering	Identify two sets with equal numbers of up to 10 objects	
Whole Numbers: Counting, Comparing, and Ordering	Determine the difference in number between two sets of objects	
Whole Numbers: Counting, Comparing, and Ordering	Complete a sequence of numbers between 0 and 10 in ascending order	
Whole Numbers: Counting, Comparing, and Ordering	Count on or count back with numbers 1 to 10	
Whole Numbers: Counting, Comparing, and Ordering	Recognize ordinal numbers 1st - 10th	
Whole Numbers: Counting, Comparing, and Ordering	Identify the object in a given ordinal position up to "tenth"	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 15 objects	
Whole Numbers: Counting, Comparing, and Ordering	Count on or count back with numbers 1 to 15	
Whole Numbers: Counting, Comparing, and Ordering	Count up to 20 objects	
Whole Numbers: Counting, Comparing, and Ordering	Complete a sequence of numbers between 0 and 20 in ascending order	
Whole Numbers: Counting, Comparing, and Ordering	Count on or count back with numbers 1 to 20	
Whole Numbers: Counting, Comparing, and Ordering	Compare sets of up to 20 objects using "more" or "fewer"	
Whole Numbers: Addition and Subtraction	Compose an equivalent number out of two numbers by using pictures	
Whole Numbers: Addition and Subtraction	Decompose a number into two numbers by using pictures	
Whole Numbers: Addition and Subtraction	Add 1 to a set	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 5 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 7 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 9 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 10 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 12 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 15 using pictures	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 20 using pictures	
Whole Numbers: Addition and Subtraction	Subtract 1 from a set	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 5 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 7 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 9 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 10 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 12 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 15 using pictures	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 20 using pictures	

Early Numeracy		
Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 5 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 7 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 9 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 10 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 12 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 15 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 20 in horizontal format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 15 in vertical format	
Whole Numbers: Addition and Subtraction	Add numbers with a sum up to 20 in vertical format	
Whole Numbers: Addition and Subtraction	Use turn-around facts to find the sum of two numbers	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 3 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 5 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 7 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 9 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 10 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 12 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 15 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 20 in horizontal format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 15 in vertical format	
Whole Numbers: Addition and Subtraction	Subtract numbers with a minuend up to 20 in vertical format	
Algebra		
Algebraic Thinking	Complete a picture pattern	
Algebraic Thinking	Determine the missing addend in an addition sentence using pictures	
Geometry and Measurement		
Geometry: 2-Dimensional Shapes and Attributes	Identify two pictures that are the same	
Geometry: 2-Dimensional Shapes and Attributes	Identify the picture that is different	
Geometry: 2-Dimensional Shapes and Attributes	Identify the picture that does not belong	
Measurement	Compare the sizes of two objects	
Measurement	Order objects according to size	
Measurement	Compare the weights of two objects	
Measurement	Compare the volumes of two objects	
Measurement	Compare sizes, weights, and volumes	
Measurement	Compare the distances between a starting point and two different objects	
Measurement	Compare the temperatures of two objects	
Geometry: 2-Dimensional Shapes and Attributes	Compose a new shape out of two other shapes	
Geometry: 2-Dimensional Shapes and Attributes	Decompose a shape into two new shapes	
Geometry: 2-Dimensional Shapes and Attributes	Decompose a shape into two new shapes	
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Sort objects according to one attribute	

Grade 1

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Whole Numbers: Place Value	Read a whole number to 30	
Whole Numbers: Place Value	Read a whole number from 31 to 100	
Whole Numbers: Place Value	Determine the word form of a whole number to 30	
Whole Numbers: Place Value	Determine the word form of a whole number from 31 to 100	
Whole Numbers: Counting, Comparing, and Ordering	Count objects to 20	○
Whole Numbers: Counting, Comparing, and Ordering	Count on by ones from a number less than 100	○
Whole Numbers: Counting, Comparing, and Ordering	Count back by ones from a number less than 20	○
Whole Numbers: Counting, Comparing, and Ordering	Count back by ones from a number between 20 and 100	
Whole Numbers: Counting, Comparing, and Ordering	Identify a number to 20 represented by a point on a number line	○
Whole Numbers: Counting, Comparing, and Ordering	Locate a number to 20 on a number line	○
Whole Numbers: Counting, Comparing, and Ordering	Determine one more than or one less than a given number	○
Whole Numbers: Counting, Comparing, and Ordering	Determine ten more than or ten less than a given number	○
Whole Numbers: Counting, Comparing, and Ordering	Count by 2s to 50 starting from a multiple of 2	○
Whole Numbers: Counting, Comparing, and Ordering	Count by 5s or 10s to 100 starting from a multiple of 5 or 10, respectively	○
Whole Numbers: Counting, Comparing, and Ordering	Identify odd and even numbers less than 100	○
Whole Numbers: Counting, Comparing, and Ordering	Answer a question involving an ordinal number up to "tenth"	
Whole Numbers: Counting, Comparing, and Ordering	Count objects grouped in tens and ones	○
Whole Numbers: Place Value	Identify the number of 10's in 10, 20, 30, 40, 50, 60, 70, 80, 90	
Whole Numbers: Place Value	Model a number to 100 using tens and ones	
Whole Numbers: Place Value	Recognize a number from a model of tens and ones to 100	
Whole Numbers: Place Value	Represent a 2-digit number as tens and ones	○
Whole Numbers: Place Value	Determine the 2-digit number represented as tens and ones	○
Whole Numbers: Place Value	Determine the value of a digit in a 2-digit number	○
Whole Numbers: Place Value	Recognize equivalent forms of a 2-digit number using tens and ones	
Whole Numbers: Counting, Comparing, and Ordering	Compare sets of objects using words	
Whole Numbers: Counting, Comparing, and Ordering	Compare whole numbers to 100 using words	○
Whole Numbers: Counting, Comparing, and Ordering	Order whole numbers to 100 in ascending order	○
Whole Numbers: Counting, Comparing, and Ordering	Order whole numbers to 100 in descending order	
Whole Numbers: Addition and Subtraction	Determine equivalent forms of a number, up to 10	○
Whole Numbers: Addition and Subtraction	Relate a picture model to a basic addition fact	
Whole Numbers: Addition and Subtraction	Determine the basic addition fact shown by a picture model	
Whole Numbers: Addition and Subtraction	Relate a number-line model to a basic addition fact	
Whole Numbers: Addition and Subtraction	Determine the basic addition fact shown by a number-line model	
Whole Numbers: Addition and Subtraction	Relate a picture model to a basic subtraction fact	
Whole Numbers: Addition and Subtraction	Determine the basic subtraction fact shown by a picture model	
Whole Numbers: Addition and Subtraction	Determine the basic subtraction fact shown by a number-line model	
Whole Numbers: Addition and Subtraction	Relate a number-line model to a basic subtraction fact	
Whole Numbers: Addition and Subtraction	Apply the relationship between addition and counting on	
Whole Numbers: Addition and Subtraction	Apply the relationship between subtraction and counting back	

Grade 1		
Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Whole Numbers: Addition and Subtraction	Know basic addition facts to 10 plus 10	○
Whole Numbers: Addition and Subtraction	Know basic subtraction facts to 20 minus 10	○
Whole Numbers: Addition and Subtraction	Add three 1-digit numbers	
Whole Numbers: Addition and Subtraction	WP: Use basic addition or subtraction facts to solve problems	○
Whole Numbers: Addition and Subtraction	Complete an addition and subtraction fact family	
Whole Numbers: Addition and Subtraction	Add multiples of 10, sums to 90	
Whole Numbers: Addition and Subtraction	Subtract multiples of 10 up to 90	
Whole Numbers: Addition and Subtraction	Add zero to any number less than 100	
Whole Numbers: Addition and Subtraction	Subtract zero from any number less than 100	
Whole Numbers: Addition and Subtraction	Add a 2-digit and a 1-digit number without regrouping	○
Whole Numbers: Addition and Subtraction	Add two 2-digit numbers without regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 1-digit number from a 2-digit number without regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 2-digit number from a 2-digit number without regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract a 1- and 2-digit number without regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract two 2-digit numbers without regrouping	○
Fraction Concepts and Operations	Identify a shape divided into equal parts	
Algebra		
Algebraic Thinking	Determine the missing portion in a partially screened (hidden) collection of up to 10 objects	○
Algebraic Thinking	Determine equivalent addition or subtraction expressions involving words or symbols	
Algebraic Thinking	Apply the inverse relationship between addition facts and subtraction facts	
Algebraic Thinking	Determine a missing addend in a basic addition-fact number sentence	○
Algebraic Thinking	Determine a missing subtrahend in a basic subtraction-fact number sentence	○
Algebraic Thinking	Determine equivalent addition or subtraction expressions involving 1-digit numbers	
Algebraic Thinking	Determine a missing addend in an addition sentence with three 1-digit numbers	
Algebraic Thinking	WP: Determine a missing addend or subtrahend in a basic addition- or subtraction-fact number sentence	○
Algebraic Thinking	WP: Determine a basic addition- or subtraction-fact number sentence for a given situation	○
Algebraic Thinking	Extend a repeating picture pattern	
Algebraic Thinking	Extend a pictorial growth pattern	
Algebraic Thinking	Determine a pattern on a 1 to 100 chart	
Algebraic Thinking	Complete a pattern on a 1 to 100 chart	
Geometry and Measurement		
Money	Determine the value of a collection of like coins	
Money	Determine the value of a collection of mixed coins	
Measurement	Compare objects using the vocabulary of measurement	○
Measurement	Compare and order objects by attributes of height or length	○
Measurement	Apply the vocabulary of position or direction	
Measurement	Select the appropriate measurement tool for length, weight, temperature, time, or capacity	
Measurement	Estimate length in nonstandard units	

Grade 1		
Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Time	Know the approximate time it takes to complete a task	
Time	Tell time to the hour	○
Time	Tell time to the half hour	○
Time	Order events by time	
Time	Order the months of the year	
Time	Determine the day of the week from a date on a calendar	
Geometry: 2-Dimensional Shapes and Attributes	Identify a circle, a triangle, a square, or a rectangle	○
Geometry: 2-Dimensional Shapes and Attributes	Determine the common attributes in a set of geometric shapes	○
Geometry: 2-Dimensional Shapes and Attributes	Determine the group in which a geometric shape belongs	
Geometry: 2-Dimensional Shapes and Attributes	Determine the rule used to sort geometric shapes	
Transformations	Identify a line of symmetry	○
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Determine the group in which an object belongs	
Data Representation and Analysis	Determine the rule used to sort objects	
Data Representation and Analysis	Read a 2-category tally chart	
Data Representation and Analysis	Use a 2-category tally chart to represent groups of objects (1 symbol = 1 object)	
Data Representation and Analysis	Answer a question using information from a 2-category tally chart	
Data Representation and Analysis	Read a picture graph	
Data Representation and Analysis	Use a picture graph to represent groups of objects (1 symbol = 1 object)	
Data Representation and Analysis	Answer a question using information from a picture graph	
Data Representation and Analysis	Read a pictograph (1 symbol = 1 object)	
Data Representation and Analysis	Use a pictograph to represent groups of objects (1 symbol = 1 object)	
Data Representation and Analysis	Answer a question using information from a pictograph (1 symbol = 1 object)	
Data Representation and Analysis	Read a bar graph	
Data Representation and Analysis	Use a bar graph to represent groups of objects	
Data Representation and Analysis	Answer a question using information from a bar graph	

Grade 2

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Whole Numbers: Place Value	Read a whole number to 1,000	○
Whole Numbers: Place Value	Determine the word form of a whole number to 1,000	○
Whole Numbers: Counting, Comparing, and Ordering	Complete a skip pattern starting from a multiple of 2, 5, or 10	○
Whole Numbers: Counting, Comparing, and Ordering	Complete a skip pattern of 2, 5, or 10 starting from any number	○
Whole Numbers: Counting, Comparing, and Ordering	Count on by 100s from any number	○
Whole Numbers: Counting, Comparing, and Ordering	Identify odd and even numbers between 100 and 1,000	
Whole Numbers: Counting, Comparing, and Ordering	Solve problems involving the concept of odd and even numbers	
Whole Numbers: Counting, Comparing, and Ordering	Answer a question using an ordinal number up to "twentieth"	
Whole Numbers: Place Value	Determine the value of a digit in a 3-digit number	
Whole Numbers: Place Value	Determine which digit is in a specified place in a 3-digit whole number	
Whole Numbers: Place Value	Determine the result of changing a digit in a 3-digit whole number	
Whole Numbers: Place Value	Model a number using hundreds, tens, and ones to 1,000	
Whole Numbers: Place Value	Recognize a number from a model of hundreds, tens, and ones to 1,000	
Whole Numbers: Place Value	Represent a 3-digit number as hundreds, tens, and ones	○
Whole Numbers: Place Value	Determine the 3-digit number represented as hundreds, tens, and ones	○
Whole Numbers: Place Value	Recognize equivalent forms of a 3-digit number using hundreds, tens, and ones	○
Whole Numbers: Counting, Comparing, and Ordering	Compare whole numbers to 1,000 using words	
Whole Numbers: Counting, Comparing, and Ordering	Compare whole numbers to 1,000 using the symbols $<$, $>$, and $=$	○
Whole Numbers: Counting, Comparing, and Ordering	Order whole numbers to 1,000 in ascending order	○
Whole Numbers: Counting, Comparing, and Ordering	Order whole numbers to 1,000 in descending order	○
Whole Numbers: Addition and Subtraction	Determine a number pair that totals 100	○
Whole Numbers: Addition and Subtraction	Determine a number pair that totals 1,000	
Whole Numbers: Addition and Subtraction	Add two 3-digit numbers without regrouping	
Whole Numbers: Addition and Subtraction	Add two 2-digit numbers with regrouping, given a model	
Whole Numbers: Addition and Subtraction	Add a 2-digit number to a 1-digit number with regrouping	
Whole Numbers: Addition and Subtraction	Add two 2-digit numbers with regrouping	○
Whole Numbers: Addition and Subtraction	Add three 2-digit numbers with one regrouping, sum less than 100	
Whole Numbers: Addition and Subtraction	Add 2- and 3-digit numbers with no more than one regrouping	○
Whole Numbers: Addition and Subtraction	Add two 3-digit numbers with one regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 3-digit number from a 3-digit number without regrouping	
Whole Numbers: Addition and Subtraction	Subtract a 1- or 2-digit number from a 2-digit number with one regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 1- or 2-digit number from a 3-digit number with one regrouping	○
Whole Numbers: Addition and Subtraction	Subtract a 3-digit number from a 3-digit number with one regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract numbers without regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract up to 2-digit numbers with one regrouping	
Whole Numbers: Addition and Subtraction	Estimate the sum of two 2-digit numbers	
Whole Numbers: Addition and Subtraction	Estimate the difference of two 2-digit numbers	
Whole Numbers: Multiplication and Division	Determine the sum of equal groups using pictures	
Whole Numbers: Multiplication and Division	Use a repeated addition sentence to represent the sum of equal groups	

Grade 2		
Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Whole Numbers: Multiplication and Division	Use a multiplication sentence to represent the sum of equal groups	
Whole Numbers: Multiplication and Division	Represent repeated addition as multiplication	
Whole Numbers: Multiplication and Division	Relate a multiplication sentence to an array model	
Whole Numbers: Multiplication and Division	Know multiplication tables for 2, 5, and 10	
Whole Numbers: Multiplication and Division	WP: Multiply a 1-digit number by 2, 5, or 10	
Whole Numbers: Multiplication and Division	Recognize the number of equal groups using pictures	
Whole Numbers: Multiplication and Division	Divide objects into equal groups using pictures	
Whole Numbers: Multiplication and Division	Determine the remainder when dividing objects into equal groups	
Whole Numbers: Multiplication and Division	Determine the number of equal groups of objects excluding the remainder	
Whole Numbers: Multiplication and Division	WP: Divide objects into equal groups by sharing	○
Fraction Concepts and Operations	Identify a unit fraction as part of a whole	
Fraction Concepts and Operations	Identify a unit fraction as part of a set of objects	
Fraction Concepts and Operations	Identify a fraction as part of a set of objects	
Fraction Concepts and Operations	Identify a fraction as part of a whole	
Fraction Concepts and Operations	Relate a fraction equal to a whole to a pictorial model	
Fraction Concepts and Operations	Compare unit fractions using pictorial models	
Fraction Concepts and Operations	Order unit fractions using pictorial models	
Algebra		
Algebraic Thinking	Apply the inverse relationship between addition and subtraction with 2- and 3-digit numbers	
Algebraic Thinking	Determine a missing addend in a number sentence involving 2-digit numbers	
Algebraic Thinking	Determine a missing subtrahend in a number sentence involving 2-digit numbers	
Algebraic Thinking	Determine equivalent addition expressions involving 2-digit numbers	
Algebraic Thinking	WP: Determine a missing addend or a missing subtrahend involving 2-digit numbers	
Algebraic Thinking	WP: Use an open sentence to represent a given situation	
Algebraic Thinking	Determine an addition or subtraction number pattern given a rule	
Algebraic Thinking	Determine the rule for an addition or subtraction number pattern	○
Algebraic Thinking	Extend a number pattern involving addition	○
Algebraic Thinking	Extend a number pattern involving subtraction	○
Algebraic Thinking	Extend a pattern given a table of related number pairs	
Algebraic Thinking	Determine a repeating pattern corresponding to the same pattern expressed using different elements	
Geometry and Measurement		
Money	Determine the value of a collection of bills and coins	
Money	Translate between a dollar sign and a cent sign	○
Money	Convert money amounts in words to amounts in symbols	○
Money	Determine cent amounts that total a dollar	○
Money	WP: Add or subtract a collection of bills or coins	
Money	Add money values using cents or dollars with regrouping	
Money	Subtract money values using cents or dollars with one regrouping	
Measurement	Measure length in inches	○
Measurement	Measure length in centimeters	○

Grade 2		
Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Time	Tell time to the quarter hour	○
Time	Tell time to 5-minute intervals	○
Time	WP: Calculate elapsed time	
Measurement	Read a thermometer in degrees Celsius	
Measurement	Read a thermometer in degrees Fahrenheit	
Perimeter, Circumference, and Area	Relate area to the number of square units	
Geometry: 2-Dimensional Shapes and Attributes	Identify figures that are the same size and shape	
Geometry: 2-Dimensional Shapes and Attributes	Identify a parallelogram, a trapezoid, a pentagon, a hexagon, or an octagon	
Geometry: 2-Dimensional Shapes and Attributes	Decompose a plane shape composed of three or more simpler shapes	
Geometry: 3-Dimensional Shapes and Attributes	Name a 3-dimensional geometric shape	
Transformations	Identify symmetry in a 2-dimensional shape	
Coordinate Geometry	Follow directions on a simple map	
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Read a multi-category tally chart	
Data Representation and Analysis	Use a tally chart to represent data	
Data Representation and Analysis	Answer a question using information from a tally chart	
Data Representation and Analysis	Read a pictograph (1 symbol = more than 1 object)	
Data Representation and Analysis	Use a pictograph to represent data (1 symbol = more than 1 object)	○
Data Representation and Analysis	Answer a question using information from a pictograph (1 symbol = more than 1 object)	○
Data Representation and Analysis	Read a bar graph with a y-axis scale by 2s	
Data Representation and Analysis	Use a bar graph with a y-axis scale by 2s to represent data	○
Data Representation and Analysis	Answer a question using information from a bar graph with a y-axis scale by 2s	○

Grade 3

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Whole Numbers: Place Value	Read a 4- or 5-digit whole number	○
Whole Numbers: Place Value	Determine the word form of a 4- or 5-digit whole number	○
Whole Numbers: Place Value	Determine the value of a digit in a 4- or 5-digit whole number	
Whole Numbers: Place Value	Determine which digit is in a specified place in a 4- or 5-digit whole number	
Whole Numbers: Place Value	Represent a 4-digit whole number as thousands, hundreds, tens, and ones	○
Whole Numbers: Place Value	Determine the 4-digit whole number represented in thousands, hundreds, tens, and ones	○
Whole Numbers: Place Value	Represent a 4- or 5-digit whole number in expanded form	○
Whole Numbers: Place Value	Determine the 4- or 5-digit whole number represented in expanded form	○
Whole Numbers: Place Value	Determine an equivalent form of a 4-digit whole number using thousands, hundreds, tens, and ones	○
Whole Numbers: Place Value	Determine the result of changing a digit in a 4- or 5-digit whole number	
Whole Numbers: Counting, Comparing, and Ordering	Compare 4- or 5-digit whole numbers using the symbols $<$, $>$, and $=$	
Whole Numbers: Counting, Comparing, and Ordering	Order 4- or 5-digit whole numbers in ascending or descending order	
Whole Numbers: Addition and Subtraction	Add 3- and 4-digit whole numbers with regrouping	○
Whole Numbers: Addition and Subtraction	Add three 2- to 3-digit whole numbers	
Whole Numbers: Addition and Subtraction	Subtract 3- and 4-digit whole numbers with regrouping	○
Whole Numbers: Addition and Subtraction	WP: Add or subtract 3- and 4-digit whole numbers with regrouping	○
Whole Numbers: Place Value	Round a 2- to 4-digit whole number to its greatest place	
Whole Numbers: Addition and Subtraction	Estimate a sum or difference of whole numbers to 10,000 by rounding	
Whole Numbers: Addition and Subtraction	Estimate a sum or difference of two 3- or 4-digit whole numbers using front-end estimation	
Whole Numbers: Addition and Subtraction	Estimate a sum or difference of 2- to 4-digit whole numbers using any method	○
Whole Numbers: Addition and Subtraction	Estimate a sum of three 2- to 4-digit numbers using any method	
Whole Numbers: Addition and Subtraction	WP: Estimate a sum or difference of two 3- or 4-digit whole numbers using any method	○
Whole Numbers: Multiplication and Division	Use a multiplication sentence to represent an area or an array model	○
Whole Numbers: Multiplication and Division	Use a division sentence to represent objects divided into equal groups	○
Whole Numbers: Multiplication and Division	Know basic multiplication facts to 10×10	○
Whole Numbers: Multiplication and Division	Know basic multiplication facts for 11 and 12	
Whole Numbers: Multiplication and Division	Know basic division facts to $100 \div 10$	○
Whole Numbers: Multiplication and Division	Know basic division facts for 11 and 12	
Whole Numbers: Multiplication and Division	WP: Multiply using basic facts to 10×10	○
Whole Numbers: Multiplication and Division	WP: Divide using basic facts to $100 \div 10$	○
Whole Numbers: Multiplication and Division	Complete a multiplication and division fact family	
Whole Numbers: Multiplication and Division	Multiply a 1-digit whole number by a multiple of 10 to 100	
Whole Numbers: Multiplication and Division	Multiply a 2-digit whole number by a 1-digit number	
Fraction Concepts and Operations	Determine a pictorial model of a fraction of a whole	○
Fraction Concepts and Operations	Determine a pictorial model of a fraction of a set of objects	○

Grade 3

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Fraction Concepts and Operations	Identify a fraction represented by a point on a number line	○
Fraction Concepts and Operations	Locate a fraction on a number line	○
Fraction Concepts and Operations	Compare fractions using models	○
Fraction Concepts and Operations	Order fractions using models	○
Fraction Concepts and Operations	Identify equivalent fractions using models	○
Fraction Concepts and Operations	Compare fractions with like denominators	
Fraction Concepts and Operations	Compare fractions with like numerators	
Fraction Concepts and Operations	WP: Compare equal unit fractions of different-sized wholes	
Fraction Concepts and Operations	Determine fraction pairs that total 1	
Fraction Concepts and Operations	Estimate fractions of a whole	
Whole Numbers: Multiplication and Division	WP: Determine a multiplication or division sentence for a given situation	○
Algebra		
Algebraic Thinking	Determine the missing addend in a number sentence involving 3-digit numbers	
Algebraic Thinking	Determine the missing subtrahend in a number sentence involving 3-digit numbers	
Algebraic Thinking	Determine the missing multiplicand in a number sentence involving basic facts	
Algebraic Thinking	Determine the missing dividend or divisor in a number sentence involving basic facts	
Algebraic Thinking	Recognize equivalent multiplication or division expressions involving basic facts	
Algebraic Thinking	Determine the operation needed to make a number sentence true	
Algebraic Thinking	WP: Determine the operation needed for a given situation	○
Algebraic Thinking	Extend a number pattern	
Algebraic Thinking	Determine a rule for a table of related number pairs	
Algebraic Thinking	WP: Find the missing number in a table of paired values	
Geometry and Measurement		
Money	Add two money amounts less than \$1 in decimal notation	
Money	Subtract two money amounts less than \$1 in decimal notation	
Money	Add or subtract cent amounts to or from whole dollar amounts	
Money	Add dollars and cents to cents	
Money	Add dollars and cents to dollars	
Money	Subtract cents from dollars and cents	
Money	Subtract dollars from dollars and cents	
Money	Determine money amounts that total \$10	○
Money	WP: Determine the amount of change from whole dollar amounts	○
Money	WP: Add or subtract money amounts less than \$1	
Measurement	Measure length to the nearest half inch or quarter inch	
Measurement	Convert between inches, feet, and yards	
Measurement	Convert between centimeters and meters	
Measurement	Add or subtract compound units of length in inches and feet with no conversion	
Measurement	WP: Add or subtract compound units of length in inches and feet with no conversion	
Measurement	Add or subtract compound units of length in inches and feet with conversion	
Measurement	WP: Add or subtract compound units of length in inches and feet with conversion	
Time	Tell time to the minute	○

Grade 3

Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Time	Convert hours to minutes or minutes to seconds	
Time	Calculate elapsed time within an hour, given two clocks, without regrouping	
Time	Calculate elapsed time within an hour, given two clocks, with regrouping	
Time	WP: Calculate elapsed time within an hour given two clocks	
Time	WP: Calculate elapsed time within an hour	
Time	WP: Determine the end time given the start time and the elapsed time within an hour	
Time	WP: Determine the start time given the end time on a clock and the elapsed time within an hour	
Time	WP: Determine the start time given the end time and the elapsed time within an hour	
Time	Determine a date using a calendar	
Measurement	Read a thermometer in degrees Fahrenheit or Celsius	
Measurement	WP: Determine temperature change given a picture of thermometers	
Perimeter, Circumference, and Area	Determine a method for finding the perimeter of a shape given the side lengths	
Perimeter, Circumference, and Area	WP: Determine the perimeter of a rectangular shape given a grid with a reference unit	
Perimeter, Circumference, and Area	WP: Determine the perimeter of a shape given a model showing all side lengths	
Perimeter, Circumference, and Area	Determine the area of a shape composed of rectangles given a picture on a grid	
Perimeter, Circumference, and Area	WP: Determine the area of a rectangular shape given a picture on a grid	
Perimeter, Circumference, and Area	Estimate the area of a shape composed of rectangles given a reference square	
Angles, Segments, and Lines	Identify parallel, perpendicular, and intersecting lines	
Angles, Segments, and Lines	Classify an angle as equal to 90° , less than 90° , or greater than 90°	
Angles, Segments, and Lines	Classify an angle in a shape as equal to 90° , less than 90° , or greater than 90°	
Geometry: 2-Dimensional Shapes and Attributes	Determine attributes of a triangle or a quadrilateral from a model	
Geometry: 2-Dimensional Shapes and Attributes	Relate a model of a triangle or a quadrilateral to a list of attributes	
Geometry: 3-Dimensional Shapes and Attributes	Identify a picture of a 3-dimensional shape	
Geometry: 3-Dimensional Shapes and Attributes	Name a 3-dimensional shape from a picture	
Geometry: 3-Dimensional Shapes and Attributes	Decompose a solid object into simpler parts	
Congruence and Similarity	Identify congruent shapes	
Transformations	Identify mirror images	
Coordinate Geometry	Determine the directions to a position on a map	
Coordinate Geometry	Determine a location using map coordinates	
Coordinate Geometry	Determine the map coordinates for a location	
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Use a bar graph with a scale interval of 5 or 10 to represent data	
Data Representation and Analysis	Answer a question using information from a bar graph with a scale interval of 5 or 10	
Data Representation and Analysis	Read a line plot	
Data Representation and Analysis	Use a line plot to represent data	
Data Representation and Analysis	Answer a question using information from a line plot	
Data Representation and Analysis	Use a frequency table to represent data	
Data Representation and Analysis	Answer a question using information from a frequency table	
Data Representation and Analysis	Determine a question that can be answered from a data representation	
Data Representation and Analysis	Determine if a situation is certain or impossible	
Data Representation and Analysis	Determine which event is least likely or most likely to occur	

Grade 4

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Whole Numbers: Place Value	Read a 6-digit whole number	
Whole Numbers: Place Value	Determine the word form of a 6-digit whole number	
Whole Numbers: Place Value	Determine the value of a digit in a 6-digit whole number	
Whole Numbers: Place Value	Determine which digit is in a specified place in a 6-digit whole number	
Whole Numbers: Place Value	Determine the whole number represented in expanded form written in powers of ten	
Whole Numbers: Place Value	Represent a 6-digit whole number in expanded form using powers of ten	
Whole Numbers: Place Value	Convert between proper expanded form and improper expanded form up to a 5-digit whole number	
Whole Numbers: Place Value	Convert between standard form and improper expanded form up to a 5-digit whole number	
Whole Numbers: Addition and Subtraction	Add up to 4-digit whole numbers in expanded form	
Whole Numbers: Addition and Subtraction	Add a 5-digit or greater whole number and a 3-digit or greater whole number	
Whole Numbers: Addition and Subtraction	Add three multi-digit whole numbers	
Whole Numbers: Addition and Subtraction	Subtract a smaller number from a 3- or 4-digit whole number in expanded form	
Whole Numbers: Addition and Subtraction	Subtract a 3-digit or greater whole number from a 5-digit or greater whole number	
Whole Numbers: Addition and Subtraction	WP: Add a 5-digit or greater whole number and a 3-digit or greater whole number	
Whole Numbers: Addition and Subtraction	WP: Add three multi-digit whole numbers	
Whole Numbers: Addition and Subtraction	WP: Subtract a 3-digit or greater whole number from a 5-digit or greater whole number	
Whole Numbers: Place Value	Round a 4- to 6-digit whole number to a specified place	○
Whole Numbers: Addition and Subtraction	WP: Estimate the sum or difference of two whole numbers, all values less than 1,000,000	
Whole Numbers: Addition and Subtraction	WP: Solve a 2-step problem involving addition and/or subtraction of multi-digit whole numbers	
Whole Numbers: Multiplication and Division	Multiply a 1- or 2-digit whole number by a multiple of 10, 100, or 1,000	○
Whole Numbers: Multiplication and Division	Apply the distributive property to the multiplication of a 2-digit number by a 1- or 2-digit number	
Whole Numbers: Multiplication and Division	Apply the distributive property to multiply a multi-digit number by a 1-digit number	○
Whole Numbers: Multiplication and Division	Multiply a 3- or 4-digit whole number by a 1-digit whole number	○
Whole Numbers: Multiplication and Division	Multiply a 2-digit whole number by a 2-digit whole number	○
Whole Numbers: Multiplication and Division	Multiply a 3-digit whole number by a 2-digit whole number	
Whole Numbers: Multiplication and Division	Multiply three 1- and 2-digit whole numbers	
Whole Numbers: Multiplication and Division	WP: Multiply a multi-digit whole number by a 1-digit whole number	○
Whole Numbers: Multiplication and Division	WP: Multiply a 2-digit whole number by a 2-digit whole number	○
Whole Numbers: Multiplication and Division	WP: Multiply a 3-digit whole number by a 2-digit whole number	
Whole Numbers: Multiplication and Division	Estimate a product of whole numbers by rounding	
Whole Numbers: Multiplication and Division	Estimate a product of whole numbers using any method	○
Whole Numbers: Multiplication and Division	WP: Estimate a product of two whole numbers using any method	○
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by 10 or 100 with no remainder	
Whole Numbers: Multiplication and Division	Divide a 2-digit whole number by a 1-digit whole number with no remainder in the quotient	

Grade 4

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Whole Numbers: Multiplication and Division	Divide a 3-digit whole number by a 1-digit whole number with no remainder in the quotient	
Whole Numbers: Multiplication and Division	Divide a 2-digit whole number by a 1-digit whole number with a remainder in the quotient	
Whole Numbers: Multiplication and Division	Divide a 3-digit whole number by a 1-digit whole number with a remainder in the quotient	○
Whole Numbers: Multiplication and Division	WP: Divide a 2-digit whole number by a 1-digit whole number with no remainder in the quotient	
Whole Numbers: Multiplication and Division	WP: Divide a 3-digit whole number by a 1-digit whole number with no remainder in the quotient	○
Whole Numbers: Multiplication and Division	WP: Divide a 2-digit whole number by a 1-digit whole number with a remainder in the quotient	
Whole Numbers: Multiplication and Division	WP: Divide a 3-digit whole number by a 1-digit whole number with a remainder in the quotient	○
Whole Numbers: Multiplication and Division	WP: Solve a 2-step whole number problem using more than 1 operation	
Fraction Concepts and Operations	Identify a mixed number represented by a model	
Fraction Concepts and Operations	Identify a mixed number represented by a point on a number line	
Fraction Concepts and Operations	Locate a mixed number on a number line	
Fraction Concepts and Operations	WP: Use a mixed number to represent an amount in a sharing situation	
Fraction Concepts and Operations	Identify an improper fraction represented by a model of a mixed number	
Fraction Concepts and Operations	Identify an improper fraction represented by a point on a number line	
Fraction Concepts and Operations	Locate an improper fraction on a number line	
Fraction Concepts and Operations	Simplify a fraction	
Fraction Concepts and Operations	Determine a set of equivalent fractions	
Fraction Concepts and Operations	Compare fractions on a number line	
Fraction Concepts and Operations	Order fractions on a number line	
Fraction Concepts and Operations	Add fractions with like denominators no greater than 10 using models	
Fraction Concepts and Operations	Add fractions with like denominators no greater than 10	○
Fraction Concepts and Operations	Add fractions with like denominators no greater than 10 and simplify the sum	
Fraction Concepts and Operations	WP: Add fractions with like denominators no greater than 10 and simplify the sum	
Fraction Concepts and Operations	Subtract fractions with like denominators no greater than 10 using models	
Fraction Concepts and Operations	Subtract fractions with like denominators no greater than 10	○
Fraction Concepts and Operations	Subtract fractions with like denominators no greater than 10 and simplify the difference	
Fraction Concepts and Operations	WP: Subtract fractions with like denominators no greater than 10 and simplify the difference	
Decimal Concepts and Operations	Read a decimal number through the hundredths place	○
Decimal Concepts and Operations	Determine the word form of a decimal number through the hundredths place	
Decimal Concepts and Operations	Determine the decimal number from a pictorial model of tenths or hundredths	○
Decimal Concepts and Operations	Identify a pictorial model of tenths or hundredths of a decimal number	○
Decimal Concepts and Operations	Identify a decimal number to tenths represented by a point on a number line	○
Decimal Concepts and Operations	Locate a decimal number to tenths on a number line	○
Decimal Concepts and Operations	Determine the decimal number equivalent to a fraction with a denominator of 10 or 100	
Decimal Concepts and Operations	Determine a fraction equivalent to a decimal, using a denominator of 10 or 100	

Grade 4

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Decimal Concepts and Operations	Determine the decimal number equivalent to a fraction model	○
Decimal Concepts and Operations	Determine the fraction equivalent to a decimal number model	○
Decimal Concepts and Operations	Compare decimal numbers through the hundredths place	○
Decimal Concepts and Operations	Order decimal numbers through the hundredths place	○
Decimal Concepts and Operations	Determine decimal number pairs that total 1 or 10	
Decimal Concepts and Operations	Add two decimal numbers through hundredths	
Decimal Concepts and Operations	Subtract two decimal numbers through hundredths	
Decimal Concepts and Operations	WP: Add or subtract decimal numbers of the same place through hundredths	
Decimal Concepts and Operations	Round a decimal number to a specified place through hundredths	○
Decimal Concepts and Operations	Estimate a decimal number sum or difference by rounding to whole numbers	
Evaluate Numerical Expressions	Evaluate a numeric expression involving two operations	
Algebra		
Algebraic Thinking	Solve a 1-step addition or subtraction equation using a model	
Algebraic Thinking	Identify a missing term in a multiplication or a division number pattern	○
Algebraic Thinking	Extend a growing pictorial or nonnumeric pattern	
Algebraic Thinking	Identify a missing figure in a growing pictorial or nonnumeric pattern	○
Algebraic Thinking	Identify a missing figure in a repeating pictorial or nonnumeric pattern	○
Algebraic Thinking	Generate a table of paired numbers based on a rule	○
Algebraic Thinking	Determine a rule that relates two variables	○
Algebraic Thinking	Extend a number pattern in a table of related pairs	
Geometry and Measurement		
Money	WP: Add or subtract money amounts greater than \$1	
Money	WP: Solve a money problem involving 2 steps	
Money	WP: Multiply a money amount by a 1-digit number	
Money	WP: Divide a money amount by a 1-digit number	
Measurement	Measure length to the nearest eighth of an inch	
Measurement	Measure length to the nearest millimeter	
Measurement	Convert between customary units of capacity using whole numbers	
Measurement	Convert between customary units of weight using whole numbers	
Measurement	Convert between metric units of capacity using whole numbers	
Measurement	Convert between metric units of mass using whole numbers	
Measurement	Convert between millimeters and centimeters or meters using whole numbers	
Measurement	WP: Add or subtract compound units of length requiring customary unit conversion using whole numbers	
Time	Calculate elapsed time exceeding an hour without regrouping	
Time	Calculate elapsed time exceeding an hour with regrouping	○
Time	WP: Calculate elapsed time exceeding an hour without regrouping hours	
Time	WP: Calculate elapsed time exceeding an hour with regrouping hours	○
Time	WP: Determine the end time given the start time and the elapsed time exceeding an hour	
Time	WP: Determine the start time given the end time and the elapsed time exceeding an hour	

Grade 4		
Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Time	Read a timetable to answer questions	
Time	WP: Add time intervals involving hours and minutes	
Time	Solve an elapsed-time problem using a calendar	
Perimeter, Circumference, and Area	Determine the perimeter of a rectangle given a picture showing length and width	○
Perimeter, Circumference, and Area	WP: Determine the perimeter of a rectangle given a picture showing length and width	○
Perimeter, Circumference, and Area	WP: Determine the perimeter of a square or rectangle	
Perimeter, Circumference, and Area	Determine the missing side length of a rectangle given a side length and the perimeter	○
Perimeter, Circumference, and Area	Determine the area of a polygon on a grid	○
Perimeter, Circumference, and Area	Determine the area of a rectangle given a picture showing the length and width	
Perimeter, Circumference, and Area	Determine the area of a rectangle given the length and width	○
Perimeter, Circumference, and Area	WP: Determine the area of a rectangle	○
Perimeter, Circumference, and Area	Determine the missing side length of a rectangle given a side length and the area	○
Perimeter, Circumference, and Area	Estimate the area of an irregular polygon on a grid	
Surface Area and Volume	Determine the volume of a rectangular prism given a diagram showing unit cubes	
Angles, Segments, and Lines	Classify an angle given a picture	○
Angles, Segments, and Lines	Classify an angle given its measure	○
Angles, Segments, and Lines	Associate degrees with a turn on a circle	
Geometry: 2-Dimensional Shapes and Attributes	Identify a shape that has parallel or perpendicular sides	
Geometry: 2-Dimensional Shapes and Attributes	Classify a triangle by its sides	
Geometry: 2-Dimensional Shapes and Attributes	Classify a quadrilateral	
Geometry: 2-Dimensional Shapes and Attributes	Relate a polygon to attributes or characteristics	
Congruence and Similarity	Identify similar shapes	
Transformations	Determine lines of symmetry	○
Transformations	Determine the result of a flip, a turn, or a slide	○
Transformations	Determine the result of a quarter or a half turn	
Coordinate Geometry	Determine a path or location on a grid using compass directions	
Coordinate Geometry	Identify the location of an ordered pair in the first quadrant using compass directions	
Coordinate Geometry	Determine the ordered pair of a point in the first quadrant using compass directions	
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Read a line graph	○
Data Representation and Analysis	Use a line graph to represent data	○
Data Representation and Analysis	Answer a question using information from a line graph	○
Data Representation and Analysis	Answer a question using information from a circle graph	
Data Representation and Analysis	Read a double-bar graph	○
Data Representation and Analysis	Use a double-bar graph to represent data	○
Data Representation and Analysis	Answer a question using information from a double-bar graph	○
Data Representation and Analysis	Answer a question using information from a table	
Combinatorics and Probability	List possible outcomes of a simple event	

Grade 5

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Whole Numbers: Multiplication and Division	Determine if a number to 50 is prime or composite	
Whole Numbers: Multiplication and Division	Determine a complete list of whole number factor pairs for a number to 50	
Whole Numbers: Multiplication and Division	Determine all the factors of a whole number to 50	
Whole Numbers: Multiplication and Division	Determine the prime factorization of a number to 50	
Whole Numbers: Multiplication and Division	Determine the common factors for two whole numbers to 50	
Whole Numbers: Multiplication and Division	Determine the greatest common factor of two whole numbers to 50	
Whole Numbers: Multiplication and Division	Determine the multiple(s) of a number	
Whole Numbers: Multiplication and Division	Determine common multiples for two whole numbers	
Whole Numbers: Multiplication and Division	Determine the least common multiple of two whole numbers	
Whole Numbers: Multiplication and Division	Apply divisibility rules for 2, 5, or 10	
Whole Numbers: Multiplication and Division	Multiply a 3- or 4-digit whole number by a 3-digit whole number	
Whole Numbers: Multiplication and Division	WP: Multiply a 3- or 4-digit whole number by a 3-digit whole number	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by multiples of 100 or 1,000	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 1-digit number, with no remainder and at least one zero in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 1-digit number, with a remainder and at least one zero in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 1-digit number and express the quotient as a mixed number	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 1-digit number and express the quotient as a decimal	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number, with no remainder and no zeros in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number, with a remainder and no zeros in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number, with no remainder and at least one zero in the quotient	
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number, with a remainder and at least one zero in the quotient	○
Whole Numbers: Multiplication and Division	Divide a multi-digit whole number by a 2-digit whole number and express the quotient as a mixed number	○
Whole Numbers: Multiplication and Division	WP: Divide a whole number, with no remainder	○
Whole Numbers: Multiplication and Division	WP: Divide a whole number and interpret the remainder	○
Whole Numbers: Multiplication and Division	WP: Solve a 2-step problem involving whole numbers	○
Whole Numbers: Place Value	Know the effects of rounding	
Whole Numbers: Multiplication and Division	Estimate a quotient using compatible numbers	
Whole Numbers: Multiplication and Division	Estimate a quotient using any method	○
Whole Numbers: Multiplication and Division	WP: Estimate a quotient using any method	○
Fraction Concepts and Operations	Relate a sharing situation to a fraction	
Fraction Concepts and Operations	Determine equivalent fractions not in simplest form	○
Fraction Concepts and Operations	Determine the simplest form of a fraction	
Fraction Concepts and Operations	Compare fractions with unlike denominators	○
Fraction Concepts and Operations	Order fractions with unlike denominators in ascending or descending order	○

Grade 5

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Fraction Concepts and Operations	Add fractions with like denominators greater than 10 and simplify the sum	
Fraction Concepts and Operations	Add fractions with unlike denominators using a model and do not simplify the sum	
Fraction Concepts and Operations	Add fractions with unlike denominators and do not simplify the sum	
Fraction Concepts and Operations	Add fractions with unlike denominators that have factors in common and simplify the sum	○
Fraction Concepts and Operations	Add fractions with unlike denominators that have no factors in common	○
Fraction Concepts and Operations	Subtract fractions with like denominators greater than 10 and simplify the difference	
Fraction Concepts and Operations	Subtract fractions with unlike denominators using a model and do not simplify the difference	
Fraction Concepts and Operations	Subtract fractions with unlike denominators and do not simplify the difference	
Fraction Concepts and Operations	Subtract fractions with unlike denominators that have factors in common and simplify the difference	○
Fraction Concepts and Operations	Subtract fractions with unlike denominators that have no factors in common	○
Fraction Concepts and Operations	WP: Add or subtract fractions with like denominators and simplify the sum or difference	○
Fraction Concepts and Operations	WP: Add or subtract fractions with unlike denominators that have no factors in common	○
Fraction Concepts and Operations	Convert a mixed number to an improper fraction	○
Fraction Concepts and Operations	Convert an improper fraction to a mixed number	○
Fraction Concepts and Operations	Add mixed numbers with like denominators and simplify the sum	
Fraction Concepts and Operations	Add mixed numbers with unlike denominators and simplify the sum	
Fraction Concepts and Operations	Subtract mixed numbers with like denominators and simplify the difference	
Fraction Concepts and Operations	Subtract mixed numbers with unlike denominators and simplify the difference	
Fraction Concepts and Operations	WP: Add or subtract mixed numbers with like denominators and simplify the sum or difference	○
Fraction Concepts and Operations	WP: Add or subtract mixed numbers with unlike denominators that have no factors in common	
Fraction Concepts and Operations	Round a fraction to a benchmark number of 0, $\frac{1}{2}$, or 1	
Fraction Concepts and Operations	Estimate a fraction sum using benchmark numbers 0, $\frac{1}{2}$, and 1	
Fraction Concepts and Operations	Estimate a fraction difference using benchmark numbers 0, $\frac{1}{2}$, and 1	
Fraction Concepts and Operations	WP: Estimate a fraction sum or difference using benchmark numbers 0, $\frac{1}{2}$, and 1	
Fraction Concepts and Operations	Multiply a whole number by a unit fraction using a model	
Fraction Concepts and Operations	Multiply a whole number by a unit fraction	
Fraction Concepts and Operations	Multiply a proper fraction by a whole number using a model	
Fraction Concepts and Operations	Multiply a proper fraction by a whole number	
Fraction Concepts and Operations	Divide a whole number by a unit fraction using a model	
Fraction Concepts and Operations	Divide a whole number by a unit fraction	
Fraction Concepts and Operations	Divide a unit fraction by a whole number	
Fraction Concepts and Operations	Divide a whole number by a fraction, with a whole number quotient using a model	
Fraction Concepts and Operations	Divide a whole number by a fraction, with a whole number quotient	
Fraction Concepts and Operations	WP: Multiply or divide a whole number by a unit fraction	
Decimal Concepts and Operations	Determine the value of a digit in a decimal number to thousandths	
Decimal Concepts and Operations	Determine a decimal number represented in expanded form	
Decimal Concepts and Operations	Represent a decimal number in expanded form	
Decimal Concepts and Operations	Compare decimal numbers to thousandths represented in expanded form	

Grade 5		
Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Decimal Concepts and Operations	Compare decimal numbers of differing places to thousandths	○
Decimal Concepts and Operations	Order decimal numbers of differing places to thousandths in ascending or descending order	○
Decimal Concepts and Operations	Add two decimal numbers of differing places to thousandths	○
Decimal Concepts and Operations	Add three or more decimal numbers	
Decimal Concepts and Operations	Add decimal numbers and whole numbers	○
Decimal Concepts and Operations	Subtract two decimal numbers of differing places to thousandths	○
Decimal Concepts and Operations	Subtract a decimal number from a whole number or a whole number from a decimal number	
Decimal Concepts and Operations	WP: Add or subtract decimal numbers through thousandths	○
Decimal Concepts and Operations	WP: Add or subtract a decimal number through thousandths and a whole number	○
Decimal Concepts and Operations	Round a decimal number to a specified decimal place to thousandths	
Decimal Concepts and Operations	Estimate the sum of two decimal numbers through thousandths and less than 1 by rounding to a specified place	○
Decimal Concepts and Operations	Estimate the difference of two decimal numbers through thousandths and less than 1 by rounding to a specified place	○
Decimal Concepts and Operations	WP: Estimate the sum or difference of two decimal numbers through thousandths using any method	○
Decimal Concepts and Operations	Multiply a decimal number through thousandths by 10, 100, or 1,000	○
Decimal Concepts and Operations	WP: Multiply a decimal through thousandths by 10, 100, or 1,000	
Whole Numbers: Multiplication and Division	Multiply a money amount by a 2- or 3-digit whole number	
Whole Numbers: Multiplication and Division	WP: Multiply a money amount by a 2-digit whole number	
Decimal Concepts and Operations	Convert a decimal number through thousandths to a simplified fraction	
Decimal Concepts and Operations	Convert a fraction with a denominator that is a factor of 10, 100, or 1,000 to decimal notation	
Percents, Ratios, and Proportions	Determine a model of a percent on a 100 grid	
Percents, Ratios, and Proportions	Determine the percent represented by a model on a 100 grid	
Percents, Ratios, and Proportions	Relate an equivalent fraction and percent given a grid	
Percents, Ratios, and Proportions	Relate an equivalent decimal and percent given a grid	
Evaluate Numerical Expressions	Evaluate a numerical expression involving three operations, with no parentheses, using order of operations	
Evaluate Numerical Expressions	Evaluate a numerical expression involving three operations, with parentheses, using order of operations	
Algebra		
Evaluate and Use Variable Expressions	Use a variable expression with one operation to represent a verbal expression	
Evaluate and Use Variable Expressions	Use a verbal expression to represent a variable expression with one operation	
Evaluate and Use Variable Expressions	WP: Use a variable expression with one operation to represent a situation	
Evaluate and Use Variable Expressions	Evaluate a 1-variable expression, involving one operation, using whole number substitution	
Evaluate and Use Variable Expressions	Evaluate a 2-variable expression, involving one operation, using whole number substitution	
Evaluate and Use Variable Expressions	WP: Evaluate a 1-variable expression with one operation using a whole number value	
Evaluate and Use Variable Expressions	WP: Evaluate a 2-variable expression with one operation using whole number values	
Algebraic Thinking	WP: Extend a pattern to solve a problem	
Evaluate and Use Variable Expressions	Generate a table of paired numbers based on a variable expression with one operation	

Grade 5		
Skill Area	Grade-Level Skill Statement	Core Skill
Algebra (continued)		
Evaluate and Use Variable Expressions	Generate a table of paired numbers based on a variable expression with two operations	
Relations and Functions	Determine the variable expression with one operation for a table of paired numbers	○
Evaluate and Use Variable Expressions	WP: Generate a table of paired numbers based on a variable expression with one operation	○
Relations and Functions	WP: Determine the variable expression with one operation for a table of paired numbers	○
Relations and Functions	Use a first quadrant graph to represent the values from a table generated in context	○
Geometry and Measurement		
Measurement	Determine an appropriate unit of measure	
Measurement	Convert between customary units of length using fractional amounts	
Measurement	Convert between customary units of capacity using fractional amounts	
Measurement	Convert between customary units of weight using fractional amounts	
Measurement	Convert between metric units of capacity using decimal amounts	
Measurement	Convert between metric units of mass using decimal amounts	
Measurement	Convert between millimeters or centimeters and meters, or meters and kilometers using decimal amounts	
Measurement	WP: Compare customary units of length, weight, or capacity using fractional amounts	
Measurement	WP: Compare metric units of length, mass, or capacity using decimal amounts	
Time	Calculate elapsed time using a.m. and p.m.	
Time	WP: Calculate elapsed time using a.m. and p.m.	
Time	WP: Use a calendar to solve a problem	
Measurement	Measure an angle to the nearest 5 degrees	
Perimeter, Circumference, and Area	Determine the perimeter of a polygon	
Perimeter, Circumference, and Area	Use a formula to determine the area of a triangle	○
Perimeter, Circumference, and Area	Determine the area of a complex figure divided into basic shapes	
Perimeter, Circumference, and Area	Use a formula to determine the area of a parallelogram	
Perimeter, Circumference, and Area	WP: Determine the area of a triangle	○
Perimeter, Circumference, and Area	WP: Determine the area of a square or rectangle	○
Perimeter, Circumference, and Area	WP: Determine a missing dimension given the area and another dimension	○
Surface Area and Volume	Determine the volume of a rectangular prism given a diagram	○
Surface Area and Volume	WP: Determine the volume of a rectangular prism given a diagram	
Surface Area and Volume	Determine the volume of a rectangular prism	
Surface Area and Volume	WP: Determine the volume of a rectangular prism	○
Surface Area and Volume	Determine the volume of an object composed of rectangular prisms by counting units	
Surface Area and Volume	Answer a question by analyzing a shape made of cubes	
Surface Area and Volume	Determine the surface area of a cube or a rectangular prism given a net	
Surface Area and Volume	Determine the surface area of a rectangular prism	○
Surface Area and Volume	WP: Find the surface area of a rectangular prism	○
Geometry: 2-Dimensional Shapes and Attributes	Classify a triangle by its sides and angles	
Geometry: 3-Dimensional Shapes and Attributes	Determine the 3-dimensional shape that can be formed from a net	
Geometry: 3-Dimensional Shapes and Attributes	Determine a net of a 3-dimensional shape	

Grade 5

Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Geometry: 3-Dimensional Shapes and Attributes	Determine the number of faces, edges, and vertices in a 3-dimensional shape	
Transformations	Identify a figure that has reflectional or rotational symmetry	
Transformations	Determine the result of a reflection, a rotation, or a translation on a grid	
Transformations	Determine the transformation that generates the image of a figure on a grid	
Coordinate Geometry	Locate a point by following compass directions on a grid	
Coordinate Geometry	Use compass directions to describe a path to a point on a grid	
Coordinate Geometry	Determine the location of an ordered pair in the first quadrant	
Coordinate Geometry	Determine the ordered pair of a point in the first quadrant	
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Answer a question using information from a line graph that does not start at zero or has a broken vertical scale	
Data Representation and Analysis	WP: Extend a line graph to solve a problem	
Data Representation and Analysis	Read a double- or stacked-bar graph	
Data Representation and Analysis	Use a double- or stacked-bar graph to represent data	
Data Representation and Analysis	Answer a question using information from a double- or stacked-bar graph	
Data Representation and Analysis	Use information from a table or a chart to solve a problem	
Data Representation and Analysis	Answer a question using information from a Venn diagram	
Data Representation and Analysis	Determine the mode from a graph	
Data Representation and Analysis	Determine the range from a graph	
Data Representation and Analysis	Determine the mean of a set of whole number data, whole number results	
Data Representation and Analysis	Determine the median of an odd number of data values	○
Data Representation and Analysis	Determine the mode of a set of whole number data	
Data Representation and Analysis	Determine the range of a set of whole number data	
Combinatorics and Probability	Determine all possible outcomes of a compound event using a list	
Combinatorics and Probability	Determine all possible outcomes of a compound event using a tree diagram	
Combinatorics and Probability	Determine the probability of a single event given the total number of possible outcomes	

Grade 6

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Whole Numbers: Multiplication and Division	Determine the prime factorization of a number between 50 and 200	
Whole Numbers: Multiplication and Division	Determine the greatest common factor of three numbers to 100	
Whole Numbers: Multiplication and Division	Determine the least common multiple of three numbers	
Whole Numbers: Multiplication and Division	WP: Determine the least common multiple of two or more numbers	
Whole Numbers: Multiplication and Division	Apply divisibility rules for 3, 4, 6, and 9	
Whole Numbers: Multiplication and Division	Find the product of three identical factors	
Powers, Roots, and Radicals	Determine the square of a whole number to 15	
Powers, Roots, and Radicals	Determine the cube of a whole number to 15	
Decimal Concepts and Operations	Divide a whole number by a 1-digit whole number resulting in a decimal quotient through thousandths	○
Decimal Concepts and Operations	Divide a whole number by a 2-digit whole number resulting in a decimal quotient through thousandths	○
Decimal Concepts and Operations	WP: Divide a whole number by a 1- or 2-digit whole number resulting in a decimal quotient	○
Whole Numbers: Multiplication and Division	WP: Solve a multi-step problem involving whole numbers	○
Fraction Concepts and Operations	Add fractions with unlike denominators and simplify the sum	
Fraction Concepts and Operations	Subtract fractions with unlike denominators and simplify the difference	
Fraction Concepts and Operations	Subtract a fraction from a whole number	
Fraction Concepts and Operations	WP: Add or subtract fractions with unlike denominators and simplify the sum or difference	
Fraction Concepts and Operations	Add mixed numbers with unlike denominators or a mixed number and a fraction with unlike denominators and simplify the sum	
Fraction Concepts and Operations	Subtract a mixed number from a whole number	
Fraction Concepts and Operations	Subtract mixed numbers with unlike denominators or a mixed number and a fraction and simplify the difference	
Fraction Concepts and Operations	Add and subtract three unlike-denominator fractions, mixed numbers, or fractions and mixed numbers, and simplify the answer	
Fraction Concepts and Operations	WP: Add or subtract mixed numbers with unlike denominators or a mixed number and a fraction with unlike denominators and simplify the sum or difference	
Fraction Concepts and Operations	Multiply a fraction by a fraction	○
Fraction Concepts and Operations	Multiply a mixed number by a whole number	○
Fraction Concepts and Operations	Multiply a mixed number by a fraction	○
Fraction Concepts and Operations	Multiply a mixed number by a mixed number	○
Fraction Concepts and Operations	Determine the reciprocal of a whole number, a proper fraction, or an improper fraction	
Fraction Concepts and Operations	Determine the reciprocal of a mixed number	
Fraction Concepts and Operations	Divide a fraction by a whole number resulting in a fractional quotient	○
Fraction Concepts and Operations	Divide a fraction by a fraction	○
Fraction Concepts and Operations	Divide a whole number by a fraction resulting in a fractional quotient	○
Fraction Concepts and Operations	Divide a mixed number by a fraction	
Fraction Concepts and Operations	Divide a mixed number by a mixed number	
Fraction Concepts and Operations	WP: Multiply or divide a fraction by a fraction	○
Fraction Concepts and Operations	WP: Multiply or divide two mixed numbers or a mixed number and a fraction	○
Fraction Concepts and Operations	WP: Solve a 2-step problem involving fractions	○

Grade 6

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Decimal Concepts and Operations	Represent a decimal number in expanded form using powers of ten	○
Decimal Concepts and Operations	Determine the decimal number represented in expanded form using powers of ten	○
Decimal Concepts and Operations	Determine the power of ten that relates a decimal number and a whole number	
Decimal Concepts and Operations	Determine the power of ten that relates two decimal numbers	
Decimal Concepts and Operations	Add three decimal numbers	
Decimal Concepts and Operations	Add and subtract three decimal numbers	
Decimal Concepts and Operations	WP: Add and subtract three decimal numbers	
Decimal Concepts and Operations	Multiply a decimal number through thousandths by a whole number	○
Decimal Concepts and Operations	WP: Multiply a decimal number through thousandths by a whole number	○
Whole Numbers: Multiplication and Division	WP: Multiply a money expression by a decimal number	
Decimal Concepts and Operations	Multiply a decimal number greater than one, in tenths, by a decimal number in tenths	
Decimal Concepts and Operations	Multiply decimal numbers to thousandths using basic facts	
Decimal Concepts and Operations	Multiply decimal numbers less than one in hundredths or thousandths	○
Decimal Concepts and Operations	Multiply a decimal number greater than one by a decimal number to thousandths that has only 1 nonzero digit	
Decimal Concepts and Operations	Multiply decimal numbers greater than one where the product has 2 or 3 decimal places	○
Decimal Concepts and Operations	WP: Multiply two decimal numbers to thousandths	○
Decimal Concepts and Operations	WP: Estimate the product of two decimals	○
Decimal Concepts and Operations	Divide a decimal number by 10, 100, or 1,000	○
Decimal Concepts and Operations	Relate division by a whole number power of ten to multiplication by the related decimal fraction power of ten	
Decimal Concepts and Operations	Divide a decimal number through thousandths by a 1- or 2-digit whole number where the quotient has 2-5 decimal places	○
Decimal Concepts and Operations	WP: Divide a decimal number through thousandths by a 1- or 2-digit whole number	○
Decimal Concepts and Operations	Divide a whole number or a decimal number by 0.1, 0.01, or 0.001	
Decimal Concepts and Operations	Relate division by a decimal fraction power of ten to multiplication by the related whole number power of ten	
Decimal Concepts and Operations	Locate the decimal point in the quotient of a whole number, or a decimal number, divided by a decimal number	
Decimal Concepts and Operations	Divide a 1- to 3-digit whole number by a decimal number to tenths where the quotient is a whole number	○
Decimal Concepts and Operations	Divide a 1- to 3-digit whole number by a decimal number to tenths where the quotient is a decimal number to thousandths	○
Decimal Concepts and Operations	Divide a 2- or 3-digit whole number by a decimal number to hundredths or thousandths, rounded quotient if needed	○
Decimal Concepts and Operations	Divide a decimal number by a decimal number through thousandths, rounded quotient if needed	○
Decimal Concepts and Operations	WP: Divide a whole number by a decimal number through thousandths, rounded quotient if needed	○
Decimal Concepts and Operations	WP: Divide a decimal through thousandths by a decimal through thousandths, rounded quotient if needed	○
Decimal Concepts and Operations	WP: Estimate the quotient of two decimals	○
Decimal Concepts and Operations	WP: Solve a 2-step problem involving decimals	○
Decimal Concepts and Operations	Convert a mixed number to a decimal number	

Grade 6

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Decimal Concepts and Operations	Convert a decimal number to a mixed number	
Decimal Concepts and Operations	Convert a fraction to a repeating decimal number	
Percents, Ratios, and Proportions	Determine the approximate percent of a region shaded	
Percents, Ratios, and Proportions	Convert a decimal number to a percentage	
Percents, Ratios, and Proportions	Convert a percentage to a decimal number	
Percents, Ratios, and Proportions	Convert a fraction to a percentage	
Percents, Ratios, and Proportions	Convert a percentage to a fraction	
Decimal Concepts and Operations	Compare numbers in decimal and fractional forms	○
Decimal Concepts and Operations	Order numbers in decimal and fractional forms	○
Percents, Ratios, and Proportions	Determine a percent where a ratio, not in 100ths, is given in words	○
Percents, Ratios, and Proportions	Calculate a percent of a whole number where the answer is a whole number	
Percents, Ratios, and Proportions	WP: Calculate the percent of a whole number where the answer is a whole number	
Percents, Ratios, and Proportions	WP: Determine a ratio using whole numbers less than 50	
Percents, Ratios, and Proportions	Determine if ratios, using whole numbers less than 50, are equivalent	○
Percents, Ratios, and Proportions	WP: Determine a part given a ratio and the whole where the whole is less than 50	○
Percents, Ratios, and Proportions	WP: Determine a part given a ratio and another part where the whole is less than 50	
Percents, Ratios, and Proportions	WP: Determine the whole given a ratio and a part where the whole is less than 50	○
Percents, Ratios, and Proportions	WP: Determine a unit rate with a whole number value	○
Percents, Ratios, and Proportions	WP: Use a unit rate, with a whole number or whole cent value, to solve a problem	○
Evaluate Numerical Expressions	Evaluate a numerical expression of four or more operations, with parentheses, using order of operations	○
Integers	Identify or locate an integer on a number line	
Integers	Compare two negative integers or a negative integer and a positive integer	
Integers	Order negative integers or a mix of positive and negative integers	
Evaluate Numerical Expressions	Determine which property of addition or multiplication justifies a step in the simplification of an expression	
Percents, Ratios, and Proportions	Solve a proportion	
Integers	Determine a temperature change given a picture of thermometers	
Algebra		
Evaluate and Use Variable Expressions	Use a variable expression with two operations to represent a verbal expression	
Evaluate and Use Variable Expressions	Use a verbal expression to represent a variable expression with two operations	
Evaluate and Use Variable Expressions	WP: Use a variable expression with two operations to represent a situation	
Linear Equations and Inequalities	WP: Use a 2-variable equation to represent a situation involving a direct proportion	○
Linear Equations and Inequalities	WP: Use a 2-variable linear equation to represent a situation	○
Evaluate and Use Variable Expressions	Evaluate a 1-variable expression, with two or three operations, using whole number substitution	
Evaluate and Use Variable Expressions	Evaluate a 2-variable expression, with two or three operations, using whole number substitution	○
Evaluate and Use Variable Expressions	WP: Evaluate a 1- or 2-variable expression or formula using whole numbers	○
Linear Equations and Inequalities	Solve a 1-step equation involving whole numbers	○
Evaluate and Use Variable Expressions	WP: Generate a table of paired numbers based on a variable expression with two operations	
Linear Equations and Inequalities	Use a 2-variable equation to construct an input-output table	○

Grade 6

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra (continued)		
Linear Equations and Inequalities	Use a 2-variable equation to represent a relationship expressed in a table	○
Relations and Functions	Use a first quadrant graph to represent the values in an input-output table	
Relations and Functions	Use a graph to determine the entries in an input-output table	
Relations and Functions	Convert between Fahrenheit and Celsius temperature given a formula	
Geometry and Measurement		
Measurement	WP: Add or subtract customary measures of capacity requiring unit conversion	
Measurement	WP: Add or subtract metric measures of capacity requiring unit conversion	
Measurement	WP: Add or subtract customary measures of weight requiring unit conversion	
Measurement	WP: Add or subtract metric measures of mass requiring unit conversion	
Measurement	WP: Multiply or divide customary measures of capacity requiring unit conversion	
Measurement	WP: Multiply or divide metric measures of capacity requiring unit conversion	
Measurement	WP: Multiply or divide customary measures of weight requiring unit conversion	
Measurement	WP: Multiply or divide metric measures of mass requiring unit conversion	
Time	Determine a time in different time zones	
Angles, Segments, and Lines	Measure an angle, between two rays or in a shape, to the nearest degree	
Perimeter, Circumference, and Area	Determine the perimeter of a complex shape	
Perimeter, Circumference, and Area	Determine the area of a complex shape	○
Perimeter, Circumference, and Area	WP: Determine the perimeter or the area of a complex shape	○
Polygons and Circles	Answer a question about the parts and relationships in a circle	
Perimeter, Circumference, and Area	Determine the circumference of a circle using $22/7$ for pi	
Perimeter, Circumference, and Area	Determine the circumference of a circle using 3.14 for pi	
Perimeter, Circumference, and Area	WP: Determine the circumference of a circle	
Surface Area and Volume	Determine the volume of a prism with a right triangle base	
Surface Area and Volume	Determine the surface area of a 3-dimensional shape made from cubes	
Angles, Segments, and Lines	Determine the measure of a missing angle using straight and right angle relationships	
Angles, Segments, and Lines	Identify parallel, perpendicular, or intersecting lines	
Geometry: 3-Dimensional Shapes and Attributes	Identify attributes of a 3-dimensional shape	
Geometry: 2-Dimensional Shapes and Attributes	Know the properties of a triangle or a quadrilateral	
Congruence and Similarity	Identify congruent shapes shown on a grid or within pattern block arrangements, with different orientations	
Congruence and Similarity	Determine a length given a scale	
Transformations	Use symmetry to determine a length or an angle measure	
Transformations	Determine the result of a reflection, a rotation, or a translation on the Cartesian plane	
Transformations	Determine the transformation that generates the image of a figure in the Cartesian plane	
Coordinate Geometry	Determine the location of an ordered pair in any quadrant	
Coordinate Geometry	Determine the ordered pair of a point in any quadrant	
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Read a double-line graph	
Data Representation and Analysis	Answer a question using information from a double-line graph	
Data Representation and Analysis	Read a stem-and-leaf plot	
Data Representation and Analysis	Use a stem-and-leaf plot to represent data	

Grade 6

Skill Area	Grade-Level Skill Statement	Core Skill
Data Analysis, Statistics, and Probability (continued)		
Data Representation and Analysis	Answer a question using information from a stem-and-leaf plot	
Data Representation and Analysis	Use a frequency table to represent 2 related data sets	
Data Representation and Analysis	Answer a question using information from a frequency table representing 2 related data sets	
Data Representation and Analysis	Determine the mean of a set of whole number data	
Data Representation and Analysis	Determine the median of a set of whole number data	
Data Representation and Analysis	Determine the mode or modes of a set of whole number data	
Data Representation and Analysis	Determine the effect of a change in a data set on the mean and/or median	
Combinatorics and Probability	Determine an experimental probability given a list of results	
Combinatorics and Probability	Determine the probability of a single event	
Combinatorics and Probability	Determine the probability of the complement of a single event	
Combinatorics and Probability	Make a prediction based on an experimental probability	
Combinatorics and Probability	Make a prediction based on a theoretical probability	
Combinatorics and Probability	Compare predictions from experimental and theoretical probability	
Combinatorics and Probability	Determine the number of possible combinations of a set of objects	

Grade 7

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Powers, Roots, and Radicals	Determine the exponential notation that represents a repeated multiplication	
Powers, Roots, and Radicals	Determine the repeated multiplication that is represented by a number raised to a power	
Powers, Roots, and Radicals	Determine the whole number that can be squared to make a given number	
Powers, Roots, and Radicals	Evaluate the positive square root of a perfect square	
Powers, Roots, and Radicals	Evaluate a whole number power of a whole number	
Powers, Roots, and Radicals	Determine an exponential form of a whole number	
Powers, Roots, and Radicals	Determine the prime factorization of a number using exponents	
Powers, Roots, and Radicals	Convert a whole number greater than 10 to scientific notation	
Powers, Roots, and Radicals	Convert a whole number greater than 10 from scientific notation to standard form	
Evaluate Numerical Expressions	Evaluate an expression containing the fraction bar as the division sign	
Evaluate Numerical Expressions	Evaluate a numerical expression, with parentheses and exponents, using order of operations	
Percents, Ratios, and Proportions	Convert a decimal number to a percentage greater than 100%	
Percents, Ratios, and Proportions	Convert a percentage to a decimal number greater than 1	
Percents, Ratios, and Proportions	Convert a decimal number in thousandths to a percentage	
Percents, Ratios, and Proportions	Convert a percentage to a decimal number in thousandths	
Percents, Ratios, and Proportions	Convert a mixed number to a percentage	
Percents, Ratios, and Proportions	Convert a percentage to a mixed number	
Percents, Ratios, and Proportions	Determine a percent of a whole number using less than 100%	
Percents, Ratios, and Proportions	Determine a percent of a whole number using more than 100%	
Percents, Ratios, and Proportions	Determine the percent a whole number is of another whole number, with a result less than 100%	
Percents, Ratios, and Proportions	Determine a whole number given a part and a percentage less than 100%	
Percents, Ratios, and Proportions	WP: Determine a percent of a whole number using less than 100%	○
Percents, Ratios, and Proportions	WP: Determine the percent a whole number is of another whole number, with a result less than 100%	○
Percents, Ratios, and Proportions	WP: Determine a whole number given a part and a percentage	○
Percents, Ratios, and Proportions	WP: Determine the percent of decrease applied to a number	○
Percents, Ratios, and Proportions	WP: Determine the percent of increase applied to a number	○
Percents, Ratios, and Proportions	WP: Determine the result of applying a percent of decrease to a value	○
Percents, Ratios, and Proportions	WP: Determine the result of applying a percent of increase to a value	○
Percents, Ratios, and Proportions	WP: Answer a question involving a fraction and a percent	○
Decimal Concepts and Operations	WP: Answer a question involving a fraction and a decimal	
Decimal Concepts and Operations	WP: Solve a multi-step problem involving decimal numbers	○
Fraction Concepts and Operations	WP: Solve a multi-step problem involving fractions or mixed numbers	○
Integers	Evaluate the absolute value of an integer	
Integers	Determine the opposite of an integer	
Integers	Add integers using a number line	
Integers	Add integers using a model	

Grade 7		
Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations (continued)		
Integers	Add integers	○
Integers	Subtract integers using a number line	
Integers	Subtract integers	○
Integers	WP: Add and subtract using integers	○
Integers	Multiply integers	○
Integers	Divide integers	○
Integers	WP: Multiply or divide integers	○
Percents, Ratios, and Proportions	WP: Determine the ratio of two whole numbers, at least one of which is larger than 50	
Percents, Ratios, and Proportions	Determine ratios equivalent to a given ratio of two whole numbers, at least one of which is larger than 50	
Percents, Ratios, and Proportions	WP: Determine a part, given part to whole ratio and the whole, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine a part, given part to part ratio and the whole, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine a part, given part to whole ratio and a part, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine a part, given part to part ratio and a part, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine the whole, given part to whole ratio and a part, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine the whole, given part to part ratio and a part, where the whole is greater than 50	○
Percents, Ratios, and Proportions	WP: Determine a unit rate	○
Percents, Ratios, and Proportions	WP: Use a unit rate to solve a problem	○
Fraction Concepts and Operations	Estimate the product of a fraction and a whole number	
Fraction Concepts and Operations	Estimate the quotient of a whole number divided by a fraction	
Fraction Concepts and Operations	WP: Estimate the result of dividing or multiplying a whole number by a fraction	
Decimal Concepts and Operations	Identify a positive or negative rational number represented by a point on a number line	
Decimal Concepts and Operations	Locate a positive or negative rational number on a number line	
Decimal Concepts and Operations	Compare rational numbers (positive and negative)	
Decimal Concepts and Operations	Order rational numbers (positive and negative)	
Percents, Ratios, and Proportions	Solve a proportion involving decimals	○
Percents, Ratios, and Proportions	WP: Solve a proportion	○
Percents, Ratios, and Proportions	WP: Use direct variation to solve a problem	
Decimal Concepts and Operations	Compare rational numbers (positive and negative)	
Decimal Concepts and Operations	Order rational numbers (positive and negative)	
Algebra		
Evaluate and Use Variable Expressions	Evaluate a rational expression involving variables with two or more terms in the numerator or denominator	
Evaluate and Use Variable Expressions	Evaluate a 1-variable expression, with two or three operations, using integer substitution	
Evaluate and Use Variable Expressions	Evaluate a 2-variable expression, with two or three operations, using integer substitution	○
Evaluate and Use Variable Expressions	Evaluate an algebraic expression involving whole number exponents	

Grade 7

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra (continued)		
Evaluate and Use Variable Expressions	WP: Evaluate a variable expression	
Evaluate and Use Variable Expressions	WP: Evaluate a variable expression involving exponents	
Evaluate and Use Variable Expressions	Answer a question involving algebraic terminology	
Relations and Functions	Use a variable expression with two operations to represent a table of paired numbers	
Evaluate and Use Variable Expressions	WP: Use a 2-variable expression to represent a situation	
Linear Equations and Inequalities	Solve a 1-step linear equation involving integers	○
Linear Equations and Inequalities	Solve a 2-step linear equation involving integers	○
Linear Equations and Inequalities	WP: Use a 1-variable 1-step equation to represent a situation	○
Linear Equations and Inequalities	Determine the graph of an inequality on a number line	
Linear Equations and Inequalities	Determine some solutions to a 1-variable linear inequality	
Linear Equations and Inequalities	Solve a 1-step linear inequality	
Linear Equations and Inequalities	Determine the graph of the solution set of a 1-step linear inequality	
Linear Equations and Inequalities	WP: Use a 1-variable linear inequality to represent a situation	
Relations and Functions	Use a table to represent a linear function	
Relations and Functions	Use a graph to represent the ordered pairs in a function table	
Relations and Functions	Determine the graph of a 1-operation linear function	○
Geometry and Measurement		
Perimeter, Circumference, and Area	Determine the circumference of a circle in terms of pi	
Perimeter, Circumference, and Area	Solve a problem involving the circumference of a circle	○
Perimeter, Circumference, and Area	Determine the area of a trapezoid	
Perimeter, Circumference, and Area	Estimate the area of an irregular shape or a circle on a grid	
Perimeter, Circumference, and Area	Determine the area of a circle in terms of pi	
Perimeter, Circumference, and Area	Determine the area of a circle using 3.14 for pi	
Perimeter, Circumference, and Area	Determine the area of a circle using $\frac{22}{7}$ for pi	
Perimeter, Circumference, and Area	WP: Determine the area of a circle using 3.14 for pi	
Perimeter, Circumference, and Area	Solve a problem given the area of a circle	○
Surface Area and Volume	Determine the volume of a rectangular or a triangular prism	○
Surface Area and Volume	Determine the volume of a cylinder	
Surface Area and Volume	WP: Determine the volume of a cylinder	
Surface Area and Volume	WP: Solve a problem involving the volume of a geometric solid	○
Surface Area and Volume	Determine the surface area of a 3-dimensional shape given a net	
Surface Area and Volume	Determine the surface area of a triangular prism	
Surface Area and Volume	Determine the surface area of a cylinder	
Surface Area and Volume	WP: Determine the surface area of a geometric solid	○
Congruence and Similarity	Identify corresponding parts of congruent shapes	
Congruence and Similarity	Identify congruent shapes given side and angle measures	
Congruence and Similarity	Determine a missing dimension given two congruent shapes	
Congruence and Similarity	Determine a missing dimension given two similar shapes	○
Congruence and Similarity	WP: Solve a problem involving similar shapes	○
Congruence and Similarity	Determine the scale for a drawing or map question	
Congruence and Similarity	WP: Solve a problem involving a map or scale drawing	

Grade 7		
Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Polygons and Circles	Determine the missing angle measure in a triangle given two other angle measures	
Polygons and Circles	Determine the missing angle measure in a quadrilateral given three other angle measures	
Measurement	Convert a rate from one unit to another with a change in one unit	○
Measurement	Convert a rate from one unit to another with a change in both units	○
Measurement	Determine approximate conversions between metric and customary units of length	
Measurement	Determine approximate conversions between metric and customary units of capacity	
Measurement	Determine approximate conversions between metric and customary units of weight/mass	
Angles, Segments, and Lines	Identify vertical, adjacent, complementary, or supplementary angles	
Angles, Segments, and Lines	Determine the measure of a missing angle using angle relationships	
Coordinate Geometry	Determine the location of a simple shape on the Cartesian plane given the coordinates of its vertices	
Coordinate Geometry	Determine the coordinates of a missing point determined by geometric information	
Coordinate Geometry	Determine a side length of a shape on the Cartesian plane	
Perimeter, Circumference, and Area	Determine the area of a shape on the Cartesian plane	
Transformations	Determine the coordinates of a translated, a rotated, or a reflected shape on the Cartesian plane	
Geometry: 2-Dimensional Shapes and Attributes	Visualize a 2-dimensional shape	
Geometry: 3-Dimensional Shapes and Attributes	Compare attributes of 3-dimensional shapes	
Geometry: 3-Dimensional Shapes and Attributes	Relate a 3-dimensional shape to its top and side views	
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Answer a question using information from a circle graph using percentage calculations	○
Data Representation and Analysis	Use a circle graph to represent percentage data	○
Data Representation and Analysis	Use a histogram to represent data	○
Data Representation and Analysis	Answer a question using information from a histogram	○
Data Representation and Analysis	Read a double stem-and-leaf plot	
Data Representation and Analysis	Answer a question using information from a double stem-and-leaf plot	
Data Representation and Analysis	Answer a question using information from a Venn diagram containing summarized data	
Data Representation and Analysis	Determine the mean of a set of data	
Data Representation and Analysis	Determine the mode(s) of a set of data	
Data Representation and Analysis	Determine the median of a set of data	
Data Representation and Analysis	WP: Use the mean of a data set to solve a problem	
Data Representation and Analysis	Use a proportion to make an estimate, related to a population, based on a sample	○
Combinatorics and Probability	Determine the probability for independent events	
Combinatorics and Probability	Determine the probability for dependent events	

Grade 8

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Powers, Roots, and Radicals	Evaluate an integer raised to a whole number power	○
Powers, Roots, and Radicals	Evaluate a zero or negative power of an integer	
Powers, Roots, and Radicals	Evaluate a numerical expression involving integer exponents and/or integer bases	○
Powers, Roots, and Radicals	Convert a number less than 1 to scientific notation	○
Powers, Roots, and Radicals	Convert a number less than 1 from scientific notation to standard form	○
Fraction Concepts and Operations	Add or subtract signed fractions or mixed numbers	
Fraction Concepts and Operations	Multiply or divide signed fractions or mixed numbers	
Decimal Concepts and Operations	Add or subtract signed decimals	
Decimal Concepts and Operations	Multiply or divide signed decimals	
Evaluate Numerical Expressions	Evaluate a numerical expression involving nested parentheses	
Powers, Roots, and Radicals	Determine the square of a fraction or a decimal	
Powers, Roots, and Radicals	Determine the square root of a perfect-square fraction or decimal	○
Powers, Roots, and Radicals	Determine both square roots of a perfect square	
Powers, Roots, and Radicals	Determine the two closest integers to a given square root	○
Powers, Roots, and Radicals	Approximate the location of a square root on a number line	○
Powers, Roots, and Radicals	Determine the square root of a whole number to the nearest tenth	
Decimal Concepts and Operations	Convert a repeating decimal to a fraction or a mixed number	
Powers, Roots, and Radicals	Identify rational or irrational numbers	
Powers, Roots, and Radicals	Compare rational numbers and/or irrational numbers in various forms	
Powers, Roots, and Radicals	Order rational numbers and irrational numbers	
Percents, Ratios, and Proportions	Determine a percent of a number given a percent that is not a whole percent	○
Percents, Ratios, and Proportions	Determine the percent one number is of another number	○
Percents, Ratios, and Proportions	Determine a number given a part and a decimal percentage or a percentage more than 100%	○
Percents, Ratios, and Proportions	WP: Determine a given percent of a number	○
Percents, Ratios, and Proportions	WP: Determine the percent one number is of another number	○
Percents, Ratios, and Proportions	WP: Determine a number given a part and a decimal percentage or a percentage more than 100%	○
Percents, Ratios, and Proportions	Solve a problem involving simple interest	
Percents, Ratios, and Proportions	Solve a problem involving annually compounded interest	
Percents, Ratios, and Proportions	WP: Find the result of two consecutive percentage changes applied to a given number	
Percents, Ratios, and Proportions	WP: Estimate a given percent of a number	○
Algebra		
Evaluate and Use Variable Expressions	Evaluate a 2-variable expression with two or three operations substituting fractions or decimals	
Evaluate and Use Variable Expressions	Evaluate an algebraic expression involving negative integer exponents	
Algebra of Polynomials	Simplify an algebraic expression by combining like terms	○
Powers, Roots, and Radicals	Determine an equivalent form of a variable expression involving exponents	
Algebra of Polynomials	Multiply two monomial algebraic expressions	○
Algebra of Polynomials	Use the distributive property to simplify an algebraic expression	
Linear Equations and Inequalities	Solve a 1-step equation involving rational numbers	○

Grade 8		
Skill Area	Grade-Level Skill Statement	Core Skill
Algebra (continued)		
Linear Equations and Inequalities	Solve a 2-step equation involving rational numbers	○
Linear Equations and Inequalities	WP: Use a 1-variable equation with rational coefficients to represent a situation involving two operations	○
Linear Equations and Inequalities	WP: Use a 2-variable equation with rational coefficients to represent a situation	○
Linear Equations and Inequalities	WP: Solve a problem involving a 1-variable, 2-step equation	○
Relations and Functions	Determine the graph of a line for a given table of values	
Relations and Functions	Determine the table of values that represents a linear equation with rational coefficients in two variables	○
Relations and Functions	Determine a linear equation in two variables that represents a table of values	○
Relations and Functions	Determine the graph of a 2-operation linear function	○
Relations and Functions	Determine the slope of a line given its graph or a graph of a line with a given slope	○
Relations and Functions	Determine the x- or y-intercept of a line given its graph	○
Relations and Functions	WP: Interpret the meaning of the slope of a graphed line	○
Relations and Functions	WP: Interpret the meaning of the y-intercept of a graphed line	○
Relations and Functions	WP: Determine a linear graph that can represent a situation	
Relations and Functions	WP: Determine a graph that can represent a situation involving a varying rate of change	
Linear Equations and Inequalities	Solve a 2-step linear inequality in one variable	○
Linear Equations and Inequalities	WP: Use a 2-step linear inequality in one variable to represent a situation	
Linear Equations and Inequalities	WP: Solve a problem involving a 2-step linear inequality in one variable	○
Linear Equations and Inequalities	Determine the graph of the solutions to a 2-step linear inequality in one variable	○
Geometry and Measurement		
Measurement	WP: Solve a problem involving mixed units	
Measurement	WP: Solve a distance-rate-time problem that involves unit conversions	
Perimeter, Circumference, and Area	Solve a problem involving perimeters or areas of two different shapes	
Perimeter, Circumference, and Area	Determine the ratio of the perimeters or areas of similar shapes	
Surface Area and Volume	Determine the volume of a pyramid or a cone	
Surface Area and Volume	WP: Determine the volume of a pyramid or a cone	
Surface Area and Volume	Determine the surface area of a pyramid or a cone	
Surface Area and Volume	WP: Determine the surface area of a pyramid or a cone	
Surface Area and Volume	Solve a problem involving the surface area or the volume of a pyramid or a cone	
Geometry: 3-Dimensional Shapes and Attributes	Solve a problem involving 3-dimensional visualization	
Geometry: 3-Dimensional Shapes and Attributes	Identify a cross section of a 3-dimensional shape	
Measurement	Determine a measure of length, weight or mass, or capacity or volume using proportional relationships	○
Angles, Segments, and Lines	Identify angle relationships formed by parallel lines cut by a transversal	
Angles, Segments, and Lines	Determine an angle measure formed by parallel lines cut by a transversal	
Congruence and Similarity	WP: Solve a problem involving scale	
Right Triangles and Trigonometry	Determine the length of the hypotenuse of a right triangle using the Pythagorean theorem	○
Right Triangles and Trigonometry	Determine the length of a leg of a right triangle using the Pythagorean theorem	○
Right Triangles and Trigonometry	WP: Use the Pythagorean theorem to find a length or a distance	○

Grade 8

Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Right Triangles and Trigonometry	Determine a distance on the Cartesian plane using the Pythagorean theorem	
Right Triangles and Trigonometry	Determine if a triangle is a right triangle by using the Pythagorean theorem	
Data Analysis, Statistics, and Probability		
Data Representation and Analysis	Use a circle graph to organize data	
Data Representation and Analysis	Use a scatter plot to organize data	
Data Representation and Analysis	Determine if a scatter plot shows a positive relationship, a negative relationship, or no relationship between the variables	
Data Representation and Analysis	Approximate a trend line for a scatter plot	
Data Representation and Analysis	Answer a question using information from a scatter plot	
Data Representation and Analysis	Determine the quartiles of a data set	
Data Representation and Analysis	Read a box-and-whisker plot	
Data Representation and Analysis	Use a box-and-whisker plot to organize data	
Data Representation and Analysis	Answer a question using information from a box-and-whisker plot	
Data Representation and Analysis	Answer a question using information from two box-and-whisker plots	
Data Representation and Analysis	Answer a question using information from a Venn diagram with three circles	
Data Representation and Analysis	Use a Venn diagram to organize summarized data	
Data Representation and Analysis	Analyze the effect that changing elements in a data set has on the mean, the median, or the range	
Data Representation and Analysis	Compare the medians, the modes, or the ranges of the data in a double stem-and-leaf plot	
Data Representation and Analysis	Determine the median of the data in a frequency table or a bar graph	
Data Representation and Analysis	Determine the mean of the data in a frequency table or a bar graph	
Data Representation and Analysis	Determine if a sample is likely to be representative of the larger population	
Data Representation and Analysis	Determine if a question is likely to produce a biased survey result	
Combinatorics and Probability	Determine the number of permutations possible in a given situation	
Combinatorics and Probability	Determine the number of combinations possible in a given situation	
Combinatorics and Probability	Determine the probability of three or more independent events	
Combinatorics and Probability	Determine the probability of three or more dependent events	
Combinatorics and Probability	Determine the probability of an event consisting of mutually exclusive events	
Combinatorics and Probability	Make a prediction involving the probability of compound events	

Algebra 1

Skill Area	Grade-Level Skill Statement	Core Skill
Numbers and Operations		
Evaluate Numerical Expressions	Evaluate a numerical expression involving multiple forms of rational numbers	
Evaluate Numerical Expressions	Simplify a complex fraction	
Evaluate Numerical Expressions	Evaluate a multi-step numerical expression involving absolute value	
Powers, Roots, and Radicals	Evaluate a fraction raised to an integer power	
Evaluate Numerical Expressions	Evaluate a numerical expression involving one or more exponents and multiple forms of rational numbers	○
Powers, Roots, and Radicals	Compare expressions involving unlike forms of real numbers	
Powers, Roots, and Radicals	Apply the product of powers property to a monomial numerical expression	
Powers, Roots, and Radicals	Apply the power of a power property to a monomial numerical expression	
Powers, Roots, and Radicals	Apply the power of a product property to a monomial algebraic expression	○
Powers, Roots, and Radicals	Apply the quotient of powers property to monomial numerical expressions	
Powers, Roots, and Radicals	Compare monomial numerical expressions using the properties of powers	
Powers, Roots, and Radicals	Simplify a monomial numerical expression involving the square root of a whole number	○
Powers, Roots, and Radicals	Multiply monomial numerical expressions involving radicals	
Powers, Roots, and Radicals	Divide monomial numerical expressions involving radicals	
Powers, Roots, and Radicals	Add and/or subtract numerical radical expressions	
Powers, Roots, and Radicals	Multiply a binomial numerical radical expression by a numerical radical expression	
Powers, Roots, and Radicals	Rationalize the denominator of a numerical radical expression	
Algebra		
Relations and Functions	Determine the independent or dependent variable in a given situation	
Relations and Functions	Determine if a relation is a function	
Relations and Functions	Determine the domain or range of a function	
Relations and Functions	WP: Determine a reasonable domain or range for a function in a given situation	○
Relations and Functions	Evaluate a function written in function notation for a given value	○
Relations and Functions	Determine if a function is linear or nonlinear	
Relations and Functions	Determine whether a graph or a table represents a linear or nonlinear function	
Linear Equations and Inequalities	Solve a 1-variable linear equation that requires simplification and has the variable on one side	
Linear Equations and Inequalities	Solve a 1-variable linear equation with the variable on both sides	○
Linear Equations and Inequalities	WP: Determine a linear equation that can be used to solve a percent problem	
Quadratic and Nonlinear Equations and Inequalities	Determine if a table or an equation represents a direct variation, an inverse variation, or neither	
Quadratic and Nonlinear Equations and Inequalities	WP: Determine an equation representing a direct variation or an inverse variation	
Quadratic and Nonlinear Equations and Inequalities	WP: Solve a direct- or inverse-variation problem	
Quadratic and Nonlinear Equations and Inequalities	Solve a 1-variable absolute value equation	
Linear Equations and Inequalities	Solve a 1-variable linear inequality with the variable on one side	
Linear Equations and Inequalities	Solve a 1-variable linear inequality with the variable on both sides	○
Linear Equations and Inequalities	Solve a 1-variable compound inequality	
Quadratic and Nonlinear Equations and Inequalities	Rewrite an equation to solve for a specified variable	○
Linear Equations and Inequalities	Determine the slope-intercept form or the standard form of a linear equation	○
Linear Equations and Inequalities	Determine the slope of a line given two points on the line	○

Algebra 1

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra (continued)		
Linear Equations and Inequalities	Determine the slope of a line given an equation of the line	○
Linear Equations and Inequalities	Determine the x- or y-intercept of a line given an equation	○
Linear Equations and Inequalities	Determine the graph of a line using given information	○
Linear Equations and Inequalities	Determine the graph of a linear equation given in slope-intercept, point-slope, or standard form	○
Linear Equations and Inequalities	Determine an equation of a line given the slope and y-intercept of the line	○
Linear Equations and Inequalities	Determine an equation that represents a graphed line	○
Linear Equations and Inequalities	Determine an equation for a line given the slope of the line and a point on the line that is not the y-intercept	○
Linear Equations and Inequalities	Determine an equation of a line given two points on the line	○
Linear Equations and Inequalities	Determine if two lines are perpendicular or parallel given the equations of the lines	
Linear Equations and Inequalities	Determine an equation for a line that goes through a given point and is parallel or perpendicular to a given line	
Quadratic and Nonlinear Equations and Inequalities	Determine the graph of a 2-variable absolute value equation	
Linear Equations and Inequalities	Solve a 2-variable linear inequality for the dependent variable	
Linear Equations and Inequalities	Determine if an ordered pair is a solution to a 2-variable linear inequality	
Linear Equations and Inequalities	Determine the graph of a 2-variable linear inequality	
Linear Equations and Inequalities	Determine a 2-variable linear inequality represented by a graph	
Linear Equations and Inequalities	Determine the graph of the solutions to a problem that can be described by a 2-variable linear inequality	
Quadratic and Nonlinear Equations and Inequalities	Solve a 1-variable absolute value inequality	○
Quadratic and Nonlinear Equations and Inequalities	Determine the graph of a 1-variable absolute value inequality	
Systems of Equations and Inequalities	Solve a system of linear equations in two variables by graphing	
Systems of Equations and Inequalities	Solve a system of linear equations in two variables by substitution	
Systems of Equations and Inequalities	Solve a system of linear equations in two variables by elimination	
Systems of Equations and Inequalities	Determine the number of solutions to a system of linear equations	
Systems of Equations and Inequalities	Solve a system of linear equations in two variables using any method	○
Systems of Equations and Inequalities	WP: Determine a system of linear equations that represents a given situation	○
Systems of Equations and Inequalities	WP: Solve a mixture problem that can be represented by a system of linear equations	
Systems of Equations and Inequalities	WP: Solve a motion problem that can be represented by a system of linear equations	
Systems of Equations and Inequalities	Solve a number problem that can be represented by a linear system of equations	
Systems of Equations and Inequalities	Determine if a given ordered pair is a solution to a system of linear inequalities	
Systems of Equations and Inequalities	Determine the graph of the solution set of a system of linear inequalities in two variables	
Systems of Equations and Inequalities	WP: Determine a system of linear inequalities that represents a given situation	
Systems of Equations and Inequalities	WP: Determine possible solutions to a problem that can be represented by a system of linear inequalities	
Powers, Roots, and Radicals	Apply the product of powers property to a monomial algebraic expression	○
Powers, Roots, and Radicals	Apply the power of a power property to a monomial algebraic expression	○
Powers, Roots, and Radicals	Apply the quotient of powers property to monomial algebraic expressions	○
Powers, Roots, and Radicals	Apply the power of a quotient property to monomial algebraic expressions	○
Powers, Roots, and Radicals	Apply properties of exponents to monomial algebraic expressions	
Evaluate and Use Variable Expressions	Apply terminology related to polynomials	

Algebra 1

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra (continued)		
Algebra of Polynomials	Simplify a polynomial expression by combining like terms	
Algebra of Polynomials	Add polynomial expressions	○
Algebra of Polynomials	Subtract polynomial expressions	○
Algebra of Polynomials	Multiply a polynomial by a monomial	
Algebra of Polynomials	Multiply two binomials of the form $(x \pm a)(x \pm b)$	
Algebra of Polynomials	Multiply two binomials of the form $(ax \pm b)(cx \pm d)$	○
Algebra of Polynomials	Multiply two binomials of the form $(ax \pm by)(cx \pm dy)$	
Algebra of Polynomials	Square a binomial	
Algebra of Polynomials	Multiply two nonlinear binomials	
Algebra of Polynomials	Multiply a trinomial by a binomial	
Algebra of Polynomials	Factor the GCF from a polynomial expression	○
Algebra of Polynomials	Factor trinomials that result in factors of the form $(x \pm a)(x \pm b)$	
Algebra of Polynomials	Factor trinomials that result in factors of the form $(ax \pm b)(cx \pm d)$	○
Algebra of Polynomials	Factor trinomials that result in factors of the form $(ax \pm by)(cx \pm dy)$	
Algebra of Polynomials	Factor the difference of two squares	
Algebra of Polynomials	Factor a perfect-square trinomial	
Algebra of Polynomials	Factor a polynomial that has a GCF and two linear binomial factors	
Relations and Functions	Determine the graph of a given quadratic function	○
Relations and Functions	WP: Answer a question using the graph of a quadratic function	○
Relations and Functions	Solve a quadratic equation by graphing the associated quadratic function	
Quadratic and Nonlinear Equations and Inequalities	Solve a quadratic equation by taking the square root	
Quadratic and Nonlinear Equations and Inequalities	Determine the solution(s) of an equation given in factored form	
Quadratic and Nonlinear Equations and Inequalities	Solve a quadratic equation by factoring	○
Quadratic and Nonlinear Equations and Inequalities	Solve a quadratic equation using the quadratic formula	○
Quadratic and Nonlinear Equations and Inequalities	Use the discriminant to determine the number of real solutions	
Quadratic and Nonlinear Equations and Inequalities	WP: Use a given quadratic equation to solve a problem	
Relations and Functions	Determine the graph of an exponential function	
Relations and Functions	WP: Evaluate an exponential growth or an exponential decay function	
Relations and Functions	Solve a problem involving exponential growth or exponential decay	
Powers, Roots, and Radicals	Simplify a monomial algebraic radical expression	○
Powers, Roots, and Radicals	Rationalize the denominator of an algebraic radical expression	
Powers, Roots, and Radicals	Add or subtract algebraic radical expressions	
Powers, Roots, and Radicals	Multiply monomial algebraic radical expressions	
Powers, Roots, and Radicals	Divide monomial algebraic radical expressions	
Quadratic and Nonlinear Equations and Inequalities	Solve a radical equation that leads to a linear equation	○
Quadratic and Nonlinear Equations and Inequalities	Solve a radical equation that leads to a quadratic equation	○
Relations and Functions	Determine the graph of a radical function	
Relations and Functions	WP: Solve a problem involving a radical function	
Algebra of Polynomials	Determine the excluded values of a rational algebraic expression	
Algebra of Polynomials	Simplify a rational expression involving polynomial terms	○
Algebra of Polynomials	Multiply rational expressions	○

Algebra 1

Skill Area	Grade-Level Skill Statement	Core Skill
Algebra (continued)		
Algebra of Polynomials	Divide rational expressions	
Algebra of Polynomials	Divide a polynomial expression by a monomial	○
Algebra of Polynomials	Divide a polynomial expression by a binomial	
Algebra of Polynomials	Determine the LCD of two rational expressions	
Algebra of Polynomials	Add or subtract two rational expressions with like denominators	
Algebra of Polynomials	Add or subtract two rational expressions with unlike monomial denominators	
Algebra of Polynomials	Add or subtract two rational expressions with unlike polynomial denominators	○
Quadratic and Nonlinear Equations and Inequalities	Solve a proportion that generates a linear or quadratic equation	
Quadratic and Nonlinear Equations and Inequalities	Solve a rational equation involving terms with monomial denominators	○
Quadratic and Nonlinear Equations and Inequalities	Solve a rational equation involving terms with polynomial denominators	○
Quadratic and Nonlinear Equations and Inequalities	Determine the graph of a rational function	
Quadratic and Nonlinear Equations and Inequalities	WP: Solve a problem involving a rational equation	

Geometry

Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement		
Angles, Segments, and Lines	Identify a relationship between points, lines, and/or planes	
Angles, Segments, and Lines	Determine a length or an angle measure using the segment addition postulate or the angle addition postulate	
Angles, Segments, and Lines	Solve a problem involving a bisected angle or a bisected segment	
Coordinate Geometry	Determine the distance between two points	
Coordinate Geometry	Solve a problem involving the distance formula	○
Coordinate Geometry	Determine the midpoint of a line segment given the coordinates of the endpoints	○
Perimeter, Circumference, and Area	Determine the area of a right triangle or a rectangle given the coordinates of the vertices of the figure	○
Coordinate Geometry	Solve a problem involving the midpoint formula	
Angles, Segments, and Lines	Identify angle relationships formed by multiple lines and transversals	
Angles, Segments, and Lines	Determine the measure of an angle formed by parallel lines and one or more transversals	○
Angles, Segments, and Lines	Identify parallel lines using angle relationships	
Angles, Segments, and Lines	Determine the measure of an angle in a figure involving parallel and/or perpendicular lines	
Coordinate Geometry	Determine if lines through points with given coordinates are parallel or perpendicular	
Coordinate Geometry	Determine the coordinates of a point through which a line must pass in order to be parallel or perpendicular to a given line	
Polygons and Circles	Determine the measure of an angle using the sum of the interior angles in a triangle	
Polygons and Circles	Determine the measure of an angle using angle relationships and the sum of the interior angles in a triangle	
Congruence and Similarity	Determine a length in a triangle using a median	
Right Triangles and Trigonometry	Solve for the length of a side of a triangle using the Pythagorean theorem	
Polygons and Circles	Solve a problem using inequalities in a triangle	○
Polygons and Circles	Solve a problem involving two triangles by using the hinge theorem and other triangle inequality relationships	
Polygons and Circles	WP: Determine a length or an angle measure using triangle relationships	○
Congruence and Similarity	Determine the length of a side or the measure of an angle in congruent triangles	
Congruence and Similarity	Identify a triangle congruence postulate that justifies a congruence statement	○
Congruence and Similarity	Identify congruent triangles using triangle congruence postulates or theorems	○
Congruence and Similarity	Solve a problem involving a point on the bisector of an angle	
Polygons and Circles	Determine the measure of an angle or the sum of the angles in a polygon	○
Polygons and Circles	Determine a length or an angle measure using general properties of parallelograms	
Polygons and Circles	Determine a length or an angle measure using properties of squares, rectangles, or rhombi	
Polygons and Circles	Determine a length or an angle measure using properties of kites	
Polygons and Circles	Determine a length or an angle measure using properties of trapezoids	
Polygons and Circles	Determine a length or an angle measure in a complex figure using properties of polygons	
Polygons and Circles	WP: Solve a problem using the properties of angles and/or sides of polygons	○
Congruence and Similarity	Determine the scale factor relating two similar polygons	
Congruence and Similarity	Determine the length of a side in one of two similar polygons	
Congruence and Similarity	Determine the length of a side or the measure of an angle in similar triangles	

Geometry		
Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Congruence and Similarity	Determine a length given the perimeters of similar triangles or the lengths of corresponding interior line segments	
Congruence and Similarity	Identify a triangle similarity postulate that justifies a similarity statement	○
Congruence and Similarity	Identify similar triangles using triangle similarity postulates or theorems	○
Congruence and Similarity	Determine a length in a triangle using a midsegment	
Congruence and Similarity	Determine a length using parallel lines and proportional parts	○
Congruence and Similarity	Determine a length in a triangle given the bisector of an angle and other lengths	
Congruence and Similarity	Determine a length using similar triangles formed by the altitude to the hypotenuse of a right triangle	
Congruence and Similarity	WP: Determine a length using similarity	○
Right Triangles and Trigonometry	Determine a length in a complex figure using the Pythagorean theorem	○
Right Triangles and Trigonometry	Determine a length using the properties of a 45-45-90 degree triangle or a 30-60-90 degree triangle	○
Right Triangles and Trigonometry	Solve a problem using multiple non-trigonometric right-triangle relationships	
Right Triangles and Trigonometry	WP: Determine a length using the properties of a 45-45-90 degree triangle or a 30-60-90 degree triangle	
Right Triangles and Trigonometry	WP: Solve a problem involving a complex figure using the Pythagorean theorem	
Right Triangles and Trigonometry	Determine a sine, cosine, or tangent ratio in a right triangle	
Right Triangles and Trigonometry	Determine a length using a sine, cosine, or tangent ratio in a right triangle	
Right Triangles and Trigonometry	Determine the measure of an angle using a sine, cosine, or tangent ratio in a right triangle	
Right Triangles and Trigonometry	WP: Determine a length in a right triangle using a sine, cosine, or tangent ratio	
Right Triangles and Trigonometry	WP: Determine the measure of an angle in a right triangle using a sine, cosine, or tangent ratio	
Polygons and Circles	Determine the measure of an arc or a central angle using the relationship between the arc and the central angle	○
Polygons and Circles	Solve a problem involving the length of an arc	○
Polygons and Circles	Determine the length of a line segment, the measure of an angle, or the measure of an arc using a tangent to a circle	○
Polygons and Circles	Determine a length using a line segment tangent to a circle and the radius that intersects the tangent	○
Polygons and Circles	Determine a length using two intersecting tangents to a circle	
Polygons and Circles	Determine a length or an arc measure using the properties of congruent chords	
Polygons and Circles	Determine a length using a perpendicular bisector of a chord	
Polygons and Circles	Determine the measure of an arc or an angle using the relationship between an inscribed angle and its intercepted arc	○
Polygons and Circles	Determine the measure of an arc or an angle using properties of an inscribed triangle or quadrilateral	
Polygons and Circles	Determine the measure of an arc or an angle formed by intersecting chords or a chord that intersects a tangent to a circle	
Polygons and Circles	Determine the measure of an arc or an angle formed by two tangents, two secants, or a tangent and a secant that intersect outside a circle	
Polygons and Circles	Determine a length using intersecting chords, two secants that intersect outside a circle, or a tangent and a secant that intersect outside a circle	
Polygons and Circles	Solve a problem involving intersecting chords, tangents, and/or secants of a circle	
Polygons and Circles	Determine an equation of a circle	
Polygons and Circles	Determine the radius, center, or diameter of a circle given an equation	

Geometry		
Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Perimeter, Circumference, and Area	Determine the area or circumference of a circle given an equation of the circle	
Perimeter, Circumference, and Area	Determine the area of a quadrilateral	○
Perimeter, Circumference, and Area	Determine a length given the area of a quadrilateral	○
Perimeter, Circumference, and Area	WP: Solve a problem involving the area of a quadrilateral	
Perimeter, Circumference, and Area	Determine the area of a triangle using Heron's formula	
Perimeter, Circumference, and Area	Determine the area of a regular polygon	
Perimeter, Circumference, and Area	Determine a length given the area of a regular polygon	
Right Triangles and Trigonometry	Approximate the area of a right triangle using trigonometry	
Right Triangles and Trigonometry	Approximate the area of a regular polygon using trigonometry	
Perimeter, Circumference, and Area	Determine the area of a region formed by circles within a circle, a polygon within a circle, or a circle within a polygon	
Perimeter, Circumference, and Area	WP: Solve a problem involving the area of a complex shape formed by circles and polygons	
Perimeter, Circumference, and Area	Determine the area of a sector of a circle	○
Perimeter, Circumference, and Area	Determine the area of a segment of a circle	
Perimeter, Circumference, and Area	Determine the length of the radius or the diameter of a circle given the area of a sector	○
Perimeter, Circumference, and Area	WP: Determine a length or an area involving a sector of a circle	○
Perimeter, Circumference, and Area	Determine the measure of an arc or an angle given the area of a sector of a circle	○
Perimeter, Circumference, and Area	Solve a problem involving regular polygons and/or circles that have the same area or perimeter	
Surface Area and Volume	Determine a length given the surface area of a right cylinder or a right prism that has a rectangle or a right triangle as a base	○
Surface Area and Volume	Solve a problem involving the surface area of a cone or a pyramid that has a rectangle or right triangle as a base	
Surface Area and Volume	Determine a length given the surface area of a right prism or a right pyramid that has a regular polygon as its base	
Surface Area and Volume	Determine the volume of an oblique prism or an oblique cylinder	
Surface Area and Volume	Determine the volume of a right pyramid or a right cone	
Surface Area and Volume	Solve a problem involving the volume of a right pyramid or a right cone	○
Surface Area and Volume	Determine the volume of an oblique pyramid or an oblique cone	
Surface Area and Volume	Determine the surface area of a sphere	○
Surface Area and Volume	Determine the radius, diameter, or circumference of a sphere given its surface area	
Surface Area and Volume	WP: Solve a problem involving the surface area of a sphere	
Surface Area and Volume	Determine the surface area of a complex solid figure	
Surface Area and Volume	Solve a problem involving the surface area of a complex solid figure	
Surface Area and Volume	Determine the volume of a sphere or hemisphere	○
Surface Area and Volume	WP: Determine the volume of a sphere or hemisphere	
Surface Area and Volume	Determine the volume of a complex solid figure	
Surface Area and Volume	WP: Solve a problem involving the volume of a complex solid figure	
Surface Area and Volume	Solve a problem involving the surface areas of similar solid figures	
Surface Area and Volume	Solve a problem involving the volumes of similar solid figures	
Surface Area and Volume	Solve a problem involving two solid figures that have the same surface area or volume	
Surface Area and Volume	WP: Solve a problem involving two solid figures that have the same surface area or volume	

Geometry		
Skill Area	Grade-Level Skill Statement	Core Skill
Geometry and Measurement (continued)		
Transformations	Relate the coordinates of a preimage or an image to a translation described using mapping notation	
Transformations	Determine the coordinates of a preimage or an image given a reflection across a horizontal line, a vertical line, the line $y = x$, or the line $y = -x$	
Transformations	Relate the coordinates of a preimage or an image to a dilation centered at the origin	
Transformations	Determine the angle of rotational symmetry of a figure	
Transformations	Determine the coordinates of the image of a figure after two transformations of the same type	
Transformations	Determine the coordinates of the image of a figure after two transformations of different types	
Transformations	Determine the coordinates of the image of a figure after two transformations of different types	
Data Analysis, Statistics, and Probability		
Combinatorics and Probability	Determine a probability using an area model	

About Renaissance Learning

Renaissance Learning, Inc. is a leading provider of technology-based school improvement and student assessment programs for K12 schools. Adopted by more than 72,000 schools, Renaissance Learning's tools provide daily formative assessment and periodic progress-monitoring technology to enhance core curriculum, support differentiated instruction, and personalize practice in reading, writing and math. Renaissance Learning™ products help educators make the practice component of their existing curriculum more effective by providing tools to personalize practice and easily manage the daily activities for students of all levels. As a result, teachers using Renaissance Learning products accelerate learning, get more satisfaction from teaching, and help students achieve higher test scores on state and national tests. Renaissance Learning has seven U.S. locations and subsidiaries in Canada and the United Kingdom.