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South Carolina College- and Career- Ready Standards for Mathematics, Approved 2023

2025 South Carolina College and Career Ready Mathematics Standards

DM = Dimensions Math

Kindergarten

Standard	Standard Description	DM	Chapter	Lesson
Data, Probability, and Statistical Reasoning				
Collect and organize data and communicate through multiple representations.				
K.DPSR.1.1	Sort pictures or objects into at least two categories. Count to determine how many are in each category. Limit to 20 pictures or objects.	KA	1	2–6
			2	11
K.DPSR.1.2	Answer questions about data organized in a t-chart, object graph, or picture graph.	KA	2	11
			4	11
Measurement, Geometry, and Spatial Reasoning				
Describe and compare objects in real-world situations using units of length, weight, money, and time.				
K.MGSR.1.1	Identify a penny, nickel, dime, and quarter.	KB	14	1
K.MGSR.1.2	Directly compare two objects using words including *shorter*, *longer*, *taller*, *lighter*, and *heavier*.	KA	5	1–10
Analyze, describe, and manipulate shapes to make sense of their relationships in mathematical and real-world situations.				
K.MGSR.2.1	Identify and describe the attributes of triangles, squares, rectangles, circles, cubes, and spheres to include everyday situations.	KA	4	3–12
K.MGSR.2.2	Describe relative positions of objects by appropriately using terms including *below*, *above*, *beside*, *between*, *inside*, *outside*, *in front of*, or *behind*.	KA	4	4–7

Standard	Standard Description	DM	Chapter	Lesson
Numerical Reasoning				
Represent multi-digit numbers in a variety of ways to build the foundation for place value understanding.				
K.NR.1.1	Read, write, and represent the numerals 0 to 20 and represent the written numeral with concrete models.	KA	2	6–11
			3	7–10
		KB	7	2–9
K.NR.1.2	Compose and decompose numbers from 11 to 19 into tens and ones by using concrete objects, pictorial models, or drawings to demonstrate understanding that the teen numbers are composed of one set of ten ones and a few more ones.	KB	7	1–7
Demonstrate and explain the relationship between numbers and quantities.				
K.NR.2.1	Count forward by ones and tens to 100.	KB	12	1–8
K.NR.2.2	Subitize a quantity of up to 10 objects in an organized arrangement without counting, explaining how one grouped the objects within the set to determine the total quantity.	KA	2	2
			3	2, 3, 4, 5
K.NR.2.3	Given a group of up to 20 objects, count the number of objects in that group and represent the number of objects with a written numeral. State the number of objects in a rearrangement of that group without recounting.	KA	3	1–10
		KB	7	1–11
K.NR.2.4	Given a number from 0 to 20, count out that many objects.	KA	3	1–10
		KB	7	1–11
Demonstrate the ability to compare quantities of objects and numerals representing quantities of objects.				
K.NR.3.1	Compare up to 10 objects in one set to another set of up to 10 objects using the phrases *more than, fewer than,* or *the same as.*	KA	6	1, 2, 3

Standard	Standard Description	DM	Chapter	Lesson
Patterns, Algebra, and Functional Reasoning				
Develop an understanding of the relationship between addition and subtraction to solve problems.				
K.PAFR.1.1	Add and subtract number combinations within 5.	KB	8	1–6
			9	1–8
			10	1–7
K.PAFR.1.2	Create a sum of 10 using objects and drawings when given one of two addends 0–9, to include real-world situations.	KB	8	7–11
			8	11
K.PAFR.1.3	Compose and decompose numbers up to 10 in different ways. Record using objects or drawings.	KB	8	1–14
			9	1–10
			10	4, 7, 8, 9
K.PAFR.1.4	Solve add-to/joining, take-from/separating, part-part-whole (total unknown), part-part-whole (both addends unknown) real-world situations to find sums and differences within 10.	KB	8	1–14
			9	1–12
			10	1–10
			11	1–6
Recognize, describe, extend, and create patterns.				
K.PAFR.2.1	Describe, extend, and create (to the next term) simple repeating patterns in the form of AB, AAB, ABB, and ABC.	PKA	3	1, 2, 3, 4
		KA	4	8, 9

Grade 1

Standard	Standard Description	DM	Chapter	Lesson
Data, Probability, and Statistical Reasoning				
Create and answer survey questions, collect and analyze data, and communicate through multiple representations.				
1.DPSR.1.1	Sort pictures or objects into at least three categories (not to exceed 10 items in each category).	1B	11	3
1.DPSR.1.2	Create a survey question and collect data with up to three categories. Create charts and graphs with a single unit scale to display the data. Use the graph to draw conclusions. Limit to one-step add-to, take-from, and part-part-whole questions.	1B	11	3
Measurement, Geometry, and Spatial Reasoning				
Describe, estimate, measure, and compare objects in real-world situations using units of length, weight, money, and time.				
1.MGSR.1.1	Order three objects by length from shortest to longest and longest to shortest using direct comparison.	1B	10	2
1.MGSR.1.2	Use nonstandard physical objects to estimate and then measure the length of an item as the number of same size units of length with no gaps or overlaps.	1B	10	3
1.MGSR.1.3	Use analog and digital clocks to tell and record time to the hour and half hour.	1B	18	1, 2
1.MGSR.1.4	Identify and write the values of a coin or a bill using a ¢ symbol for coin values or $ symbol for bills. Limit to penny, nickel, dime, quarter, one-dollar bill, five-dollar bill, and ten-dollar bill.	1B	19	1, 3
1.MGSR.1.5	Count a collection of like coins to determine the total value of the set. Limit to pennies, nickels, and dimes with values not to exceed a dollar.	1B	19	2

Standard	Standard Description	DM	Chapter	Lesson
Analyze, describe, and manipulate shapes to make sense of their relationships in mathematical and real-world situations.				
1.MGSR.2.1	Sort a mixed set of polygons and describe the reasoning used while sorting the polygons.	1A	8	2
1.MGSR.2.2	Identify and describe the attributes of two-dimensional shapes and three-dimensional shapes. Limit to triangle, square, rectangle, rhombus, hexagon, circle, cone, cube, cylinder, square pyramid, and sphere.	1A	8	1
1.MGSR.2.3	Identify and describe a given shape in everyday situations to include two-dimensional shapes and three-dimensional shapes.	1A	8	1
1.MGSR.2.4	Classify shapes as two-dimensional/flat or three-dimensional/solid and explain the reasoning using formal mathematical language.	1A	8	1
1.MGSR.2.5	Analyze and compare a pair of two-dimensional shapes or a pair of three-dimensional shapes of assorted sizes and orientations using formal mathematical language.	1A	8	2, 3, 4
Numerical Reasoning				
Represent multi-digit numbers in a variety of ways to build place value understanding.				
1.NR.1.1	Read, write, and represent numbers to 100 using concrete models, drawings, standard form, base ten language, and equations in expanded form.	1B	12	1, 2
			16	1, 2
1.NR.1.2	Represent and explain that whole numbers 1 through 99 are organized into groups of tens and ones, and a digit has a different value depending on its placement.	1A	5	1
		1B	12	1, 2
			16	1, 2

Standard	Standard Description	DM	Chapter	Lesson
1.NR.1.3	Compose and decompose whole numbers from 1 through 99 in more than one way using tens and ones. Explain and demonstrate each composition or decomposition with the use of concrete models, drawings, and/or equations.	1A	5	1
		1B	12	1, 2
			16	1, 2
1.NR.1.4	Apply place value reasoning to identify the number that is one more and one less, ten more, and ten less than a given number with up to two digits.	1B	12	3
			16	3
Explain the relationship between numbers and quantities.				
1.NR.2.1	Count by ones forward or backward starting at any number up to 120 making accurate decade transitions. Students count within 100, not 120, in the DM textbook. The DM Teacher's Guide has extension for counting to 120.	1B	12	1, 2
			16	1
1.NR.2.2	Skip count by fives and tens from any multiple of five to 100, identifying place value patterns in the sequence. Skip counting by fives was covered in DM K. For DM 1, a review is incorporated in telling time to the 5 minutes and counting nickels.	1B	16	3
			18	3
Demonstrate the ability to compare quantities of objects and numerals representing quantities of objects.				
1.NR.3.1	Compare representations of two numbers up to 100 using the phrases *is greater than, is less than,* or *is equal to (the same value as).*	1A	5	4
		1B	12	4
			16	4
Represent partitioned shapes in multiple ways using part-whole relationships.				
1.NR.4.1	Partition in multiple ways squares, rectangles, and circles into two or four equal-sized parts. Name the pieces as halves and fourths.	1B	15	1, 2

Standard	Standard Description	DM	Chapter	Lesson
Patterns, Algebra, and Functional Reasoning				
Understand and apply properties of operations and the relationship between addition and subtraction to solve problems.				
1.PAFR.1.1	Determine and explain if an equation within 10 is true using a variety of equation formats.	1A	3	5, 8
			4	10
			7	1, 2
1.PAFR.1.2	Compose and decompose numbers less than or equal to 20 in more than one way. Record each composition or decomposition as an equation.	1A	3	1–6
			4	1–8
			5	5, 6
			6	1–5
			7	1–4
1.PAFR.1.3	Solve add-to, take-from, and part-part-whole real-world situations to find sums and differences within 20. Situations include result or change unknown, both addends unknown, and total or one part unknown.	1A	3	1–6
			4	1–8
			5	5, 6
			6	1–5
			7	1–4
1.PAFR.1.5	Apply and explain the *Commutative Property of Addition* to find the sum (through 20) of two addends and explain that the value does not change when the order of the two numbers changes.	1A	3	4
1.PAFR.1.6	Determine an unknown number in addition and subtraction equations within 10.	1A	3	4, 8
			4	6, 10
1.PAFR.1.7	Find the sum of a two-digit number and a one-digit number or a two-digit number and a multiple of 10 (1–99) using concrete models, drawings, and strategies that reflect place value understanding, the inverse relationship of addition and subtraction, and the properties of the operations to justify the sum.	1B	13	1, 3, 4
			16	2, 3
			17	1, 2, 3
1.PAFR.1.8	Find the difference between two numbers that are multiples of 10, both in the range 10–90, and write the corresponding equation. Explain the reasoning used.	1B	16	3
			17	9

Standard	Standard Description	DM	Chapter	Lesson
1.PAFR.1.4	Add and subtract number combinations flexibly and accurately within 10.	1A	3	7, 8
			4	9, 10
Recognize, describe, extend, and create patterns.				
1.PAFR2.1	Create, describe, and extend (to the next term) a growing shape pattern.	1A	8	2, 4
1.PAFR.2.2	Create, describe, and extend (to three terms within a sequence) repeating patterns using *AB, AAB, ABB,* and *ABC* type patterns.	1A	8	2, 4

Grade 2

Standard	Standard Description	DM	Chapter	Lesson
Data, Probability, and Statistical Reasoning				
Create and answer survey questions, collect and analyze data, and communicate through multiple representations.				
2.DPSR.1.1	Create a survey question and collect data with up to four categories. Create tally charts, picture graphs, dot plots, and bar graphs with a single-unit scale to read the graph, answer questions, and draw conclusions. Limit to one-step add-to, take-from, part-part-whole, and comparison questions.	2B	14	1, 2, 3
Measurement, Geometry, and Spatial Reasoning				
Describe, estimate, measure, and compare objects in real-world situations using units of length, weight, currency, and time.				
2.MGSR.1.1	Select and use appropriate tools to estimate and measure length of an object or distance to the nearest customary unit. Limit to inches, feet, and yards. DM 2 includes centimeters and meters.	2A	4	5, 6, 7
2.MGSR.1.2	Use analog and digital clocks to tell and record time in five-minute intervals, identifying AM and PM.	1B	18	3
		2B	12	1, 3
2.MGSR.1.3	Determine the value of mixed sets of coins or bills in mathematical and real-world situations and record the value using a ¢ or $ symbol. Limit to pennies, nickels, dimes, and quarters up to a dollar; one-dollar bills, five-dollar bills, ten-dollar bills, and twenty-dollar bills up to $100, and add-to or take-from problem types.	2B	10	1–8
Analyze, describe, and manipulate shapes to make sense of their relationships in mathematical and real-world situations.				
2.MGSR.2.1	Identify and describe a given shape in everyday situations to include two-dimensional shapes and three-dimensional shapes. Limit to triangle,	2B	15	2, 3, 5

Standard	Standard Description	DM	Chapter	Lesson
	quadrilateral, pentagon, hexagon, octagon, circle, cone, cube, cylinder, rectangular prism, square pyramid, and sphere. Square pyramids are not covered in DM 2.			
2.MGSR.2.2	Classify shapes as polygons or non-polygons and defend that determination based on their attributes.	2B	15	2, 5
2.MGSR.2.3	Classify two-dimensional shapes as triangles or quadrilaterals and justify each classification.	2B	15	1, 2
Numerical Reasoning				
Represent multi-digit numbers in a variety of ways to build place value understanding.				
2.NR.1.1	Read, write, and represent numbers up to 999 using concrete models, drawings, standard form, base ten language, and equations in expanded form.	2A	1	1, 4, 5
2.NR.1.2	Represent and explain that whole numbers 1 through 999 are organized into groups of hundreds, tens, and ones, and a digit has a different value depending on its placement.	2A	1	1, 4, 5
2.NR.1.3	Compose and decompose whole numbers from 1 through 999 in more than one way using hundreds, tens, and ones. Explain and demonstrate each composition or decomposition with the use of concrete models, drawings, and equations.	2A	1	4
2.NR.1.4	Apply place value reasoning to identify the number that is 10 more, 10 less, 100 more, and 100 less than a given three-digit number through 999.	2A	1	7

Standard	Standard Description	DM	Chapter	Lesson
Explain the relationship between numbers and quantities.				
2.NR.2.1	Count forward and backward by ones, tens, and hundreds from any number within 999 and identify patterns in the sequence.	2A	1	7
Demonstrate the ability to compare quantities of objects and numerals representing quantities of objects.				
2.NR.3.1	Compare representations of whole numbers up to 999 and write a comparison statement using words and symbols. Limit to *is equal to (=), is less than (<),* and/or *is greater than (>).*	2A	1	6
2.NR.3.2	When given a two-digit number, identify which multiple of 10 the number is closest to. Rounding and number lines are covered in DM 3.	3A	1	10
Represent and compare partitioned shapes in multiple ways using part-whole relationships.				
2.NR.4.1	Partition in multiple ways squares, rectangles, and circles into two or four equal sized parts, and describe the parts using the words *halves, fourths, a half of,* and *a fourth of* (not quarters).	2B	11	1, 2
2.NR.4.2	Explain that when partitioning a square, rectangle, or circle into two or four equal parts, the parts become smaller as the number of parts increases.	2B	11	5
Patterns, Algebra, and Functional Reasoning				
Understand and apply properties of operations and the relationship between addition and subtraction to solve problems.				
2.PAFR.1.1	Use a strategy to accurately find sums and differences of two-digit numbers within 100 and justify the sum or difference.	2A	3	1–12
		2B	8	1–10
2.PAFR.1.2	Determine and explain if an equation (within 20) is true using a variety of equation formats.	1A	3	1, 4
			7	1, 2

Standard	Standard Description	DM	Chapter	Lesson
2.PAFR.1.3	Solve one-step add-to, take-from, part-part-whole, and additive comparison real-world situations through 99 with the unknown in any position.	2A	2	1–4
2.PAFR.1.4	For any number from 0 to 99, find the number that makes 100 when added to the given number.	2B	8	3
2.PAFR.1.5	Add and subtract number combinations flexibly and accurately within 20.	2A	2	1–5
2.PAFR.1.6	Apply the *Associative Property of Addition* to find the sum (through 20) of three addends and explain that the value can be found using various grouping strategies. Instruction in DM 2 includes sums to 40.	1B	13	3
2.PAFR.1.7	Determine the unknown number in addition and subtraction equations within 20, with the unknown in any position.	2A	2	1, 2, 3, 5
2.PAFR.1.8	Sort a collection of 20 or fewer objects into two groups to determine if the number of objects is even or odd.	3A	4	6
2.PAFR.1.9	Find the total number of objects arranged in equal groups or in a rectangular array and write an addition equation to express the total as a sum (up to 25) of equal addends. Instruction in DM 2 includes sums up to 50 and up to 100 if the row or column has 10 objects.	1B	14	1
		2A	6	1, 2, 3
Recognize, describe, extend, and create patterns.				
2.PAFR.2.1	Describe, extend, and create a growing shape pattern with up to three terms within a sequence.	2B	15	4
2.PAFR.2.2	Create, describe, and extend an appropriate one-step rule for number patterns using addition and subtraction within 100.	2A	1	2, 7

Grade 3

Standard	Standard Description	DM	Chapter	Lesson
Data, Probability, and Statistical Reasoning				
Collect and analyze data and communicate through multiple representations.				
3.DPSR.1.1	Collect and organize categorical and numerical data based on observations, surveys, experiments, and investigations with whole number values using tables, scaled picture graphs, scaled bar graphs, or dot plots. Use titles and labels. Limit scales to multiples of 1, 2, 5, and 10.	3A	7	1–3
3.DPSR.1.2	Solve one-step, real-world situations using whole number data represented in tables, scaled picture graphs, scaled bar graphs, or dot plots. Limit scales to multiples of 1, 2, 5, and 10. Dot plots are not covered in DM 3.	3A	7	1–3
Represent the probability of simple events and determine possible outcomes.				
3.DPSR.2.1	Identify the possible outcomes of a simple event. Probability is not covered in DM 1-6.			
Measurement, Geometry, and Spatial Reasoning				
Solve area and perimeter problems in real-world and mathematical situations.				
3.MGSR.1.1	Determine the area of squares and rectangles presented in relevant problems by covering the space with square units and counting the total number of units needed.	3B	13	1, 2
3.MGSR.1.2	Determine the perimeter of regular and irregular triangles and quadrilaterals with known side lengths.	3B	13	6
3.MGSR.1.3	Determine if a real-world situation is an example of the need for finding the area or the perimeter of a figure.	3B	13	4, 6, 8, 9

Standard	Standard Description	DM	Chapter	Lesson
Estimate and measure using units of length, liquid volume, currency, and intervals of time.				
3.MGSR.2.1	Determine the value of any collection of coins, not to exceed $5. Write the amount in the form of dollars and cents using the decimal notation. Limit to penny, nickel, dime, and quarter.	3B	15	1
3.MGSR.2.2	Use analog and digital clocks to tell and record time to 1-minute intervals, identifying AM and PM.	2B	12	1–4
		3B	14	1
3.MGSR.2.3	Solve problems involving addition and subtraction of time intervals to determine elapsed time to the nearest half hour.	3B	14	2, 4, 5
3.MGSR.2.4	Estimate and measure length/distance to the nearest half inch and nearest whole centimeter. Estimation is to the nearest inch and centimeter in DM 2 and then not visited again until DM 4, when they measure to the nearest quarter inch.	2B	4	1, 2, 5, 6
3.MGSR.2.5	Determine which unit of liquid volume is most appropriate to measure in real-world situations. Limit to fluid ounces, cups, pints, quarts, gallons, milliliters, and liters.	2B	13	1, 2
		3B	11	5
Extend geometric reasoning to attributes of polygons and/or polyhedrons.				
3.MGSR.3.1	Describe and draw right, acute, obtuse, and straight angles. Identify these angle types in two-dimensional figures including triangles and quadrilaterals.	3B	12	2, 3, 4, 6
3.MGSR.3.2	Identify, describe, and draw points, lines, line segments, rays, intersecting lines, perpendicular lines, and parallel lines. Identify these in two-dimensional figures. Distinction between lines, line segments, and rays is not used in DM, but the Teacher's Guide does provide supplemental information.	4B	16	1, 2, 3

Standard	Standard Description	DM	Chapter	Lesson
Numerical Reasoning				
Represent and compare numbers using relationships within the base ten number system.				
3.NR.1.1	Read, write, and represent whole numbers through the thousands period (0 to 999,999) on a number line and in standard, base ten language, word, and equations in expanded form. DM 3 covers numbers through 9,999.	3A	1	1
		4A	1	1, 2
3.NR.1.2	Compose and decompose 4-digit whole numbers in multiple ways using thousands, hundreds, tens, and ones.	3A	1	1, 2, 3
3.NR.1.3	Compare two whole numbers up to 999,999 based on the place value of the digits using the symbols for *is equal to* (=), *is less than* (<), or *is greater than* (>).	3A	1	4
		4A	1	4
3.NR.1.4	Round whole numbers from 0 to 1,000 to the nearest 10 or 100.	3A	1	9, 10
Represent and compare fractions in multiple ways using part-whole relationships.				
3.NR.2.1	Identify unit fractions as the quantity formed by one part when a whole is partitioned into 2, 3, 4, 6, or 8 equal-sized parts. Express each part as a unit fraction of the whole. DM 3 does not limit the equal-sized parts to only 2, 3, 4, 6, and 8.	2B	11	2
		3B	9	1
3.NR.2.2	Represent fractions from 0 to 1 using concrete, set, area, and linear models, and write them in standard form and word form. Limit denominators to 2, 3, 4, 6, and 8. DM 3 does not limit the denominators to only 2, 3, 4, 6, and 8.	3B	9	1, 2

Standard	Standard Description	DM	Chapter	Lesson
3.NR.2.3	Compose fractions between the whole numbers 0 and 5 using unit fractions. Record the composition as a mixed number or fraction greater than 1. Limit denominators to 2, 3, 4, 6, and 8. Only improper fractions are covered in DM 3.	2B	11	3
		3B	9	1, 2
		4A	6	3
3.NR.2.5	Recognize two fractions are equivalent based on the same size whole. Limit denominators to 2, 3, 4, 6, and 8, and fractions should be limited to fractions between 0 and 1.	3B	10	1
3.NR.2.6	Compare two fractions with the same numerator or same denominator based on the same size whole by reasoning about their size. Use the symbols for *is equal to* (=), *is less than* (<), or *is greater than* (>). Limit denominators to 2, 3, 4, 6, and 8, and fractions should be limited to fractions between 0 and 1.	3B	9	3, 4
Patterns, Algebra, and Functional Reasoning				
Use multiple representations to reason and solve problems involving operational properties of whole numbers.				
3.PAFR.1.1	Use a strategy to compute sums and differences up to 1,000.	2A	3	1–12
		3A	2	1-7
3.PAFR.1.2	Multiply whole numbers (factors 0–10) and divide whole numbers (divisors 1–10) using a model and write a corresponding equation. DM 2 covers this standard where one of the factors is restricted to 1–5.	2A	6	1-7
		2B	9	1-7
		3A	4	1-4
		3B	8	1, 2, 8, 9
3.PAFR.1.3	Multiply two whole numbers from 0 to 10 and divide using related facts flexibly and accurately.	2A	7	2, 5, 8, 9
		2B	9	2, 3, 6–9
		3A	4	1–10
		3B	8	1, 2, 6

Standard	Standard Description	DM	Chapter	Lesson
Use reasoning to represent and solve algebraic and numerical situations.				
3.PAFR.2.1	Determine the unknown whole number in a multiplication or division real-world situation relating three whole numbers when the unknown is a missing factor, product, dividend, divisor, or quotient.	2A	6	1–7
		3A	4	3
		3B	8	1, 2, 6, 7
3.PAFR.2.2	Solve one- and two-step real-world situations using addition and subtraction up to 1,000.	2A	3	1–12
		3A	2	1–7
3.PAFR.2.3	Identify, create, and extend numerical patters to determine the next three terms in an addition or subtraction sequence.	2A	7	2, 4
3.PAFR.2.4	Recognize that a whole number is a multiple of each of its factors 1–10.	2B	9	3, 6
		3B	8	1, 6, 7

Grade 4

Standard	Standard Description	DM	Chapter	Lesson
Data, Probability, and Statistical Reasoning				
Create questions, collect and analyze data, and communicate interpretations through multiple representations.				
4.DPSR.1.1	Collect and organize numerical and categorical data based on observations, investigations, surveys, and experiments using tables, scaled bar graphs, or dot plots. Use titles and labels. Scales to include whole numbers, halves, and fourths.	3A	7	1, 2
		4A	9	3
4.DPSR.1.2	Solve one-step, real-world situations using whole number and fractional data represented in tables, scaled picture graphs, scaled bar graphs, or dot plots. Limit to like denominators of 2, 3, 4, 5, 6, 8, and 10. DM does not limit the denominators as narrowly.	3A	7	1, 2
		4A	9	3
Represent the probability of simple events and determine possible outcomes.				
4.DPSR.2.1	Determine the possible outcomes of a simple event and record the probability as certain, possible, or impossible. Probability is not covered in DM 1-6.			
Measurement, Geometry, and Spatial Reasoning				
Solve area and perimeter problems in real-world and mathematical situations.				
4.MGSR.1.1	Apply perimeter formulas for rectangles to solve real-world situations including finding the perimeter, given the side lengths, and finding an unknown side length.	4B	11	4, 5
4.MGSR.1.2	Apply area formulas for rectangles to solve real-world situations. Use square units to label area measurements	4B	11	1, 2, 3

Standard	Standard Description	DM	Chapter	Lesson
Estimate and measure using units of length, liquid volume, weight, currency, and intervals of time.				
4.MGSR.2.1	Calculate the value of a collection of coins and bills in real-world situations to determine whether there is enough money to make a purchase. Justify based on comparison of money amounts.	2B	10	2, 3
		3B	15	1
4.MGSR.2.2	Solve real-world situations involving addition and subtraction of time intervals within 60 minutes to find elapsed time, start time, or end time.	2B	12	2, 3
4.MGSR.2.3	Measure length to the nearest quarter inch	4A	9	3
4.MGSR.2.4	Measure weight in customary units and metric units to the nearest whole unit. Limit to ounces, pounds, grams, and kilograms	3B	11	6
		4B	12	3
4.MGSR.2.5	Convert customary units of length, weight, and liquid volume from a larger unit to a smaller unit, given direct comparisons of the two measurements and/or the unit equivalencies within a single system of measurement. Limit to inches, feet, yards, ounces, pounds, fluid ounces, cups, pints, quarts, and gallons when given unit equivalencies.	4B	12	2, 3, 4
Extend geometric reasoning to attributes of polygons and/or polyhedrons.				
4.MGSR.3.1	Classify triangles according to side length (*isosceles, equilateral, scalene*) and angle measure (*acute, obtuse, right, equiangular*).	3B	12	5
		4B	16	5
4.MGSR.3.2	Classify quadrilaterals in a hierarchy based on their shared attributes.	4B	16	4
Numerical Reasoning				
Represent and compare numbers using relationships within the base ten number system.				
4.NR.1.1	Read and write whole numbers through the millions period (0 to 999,999,999) in	4A	1	1, 2
		5A	1	1

Standard	Standard Description	DM	Chapter	Lesson
	word, standard, and equations in expanded form. DM 4 Covers numbers through 999,999.			
4.NR.1.2	Estimate sums, differences, products, and quotients of multi-digit whole numbers, using rounding and place value to determine the reasonableness of real-world problem solutions. Write an equation for the estimate.	4A	1	5, 6
			2	1, 2
			4	2, 3, 6, 7
			5	2, 3
4.NR.1.3	Order whole numbers within 999,999 (no more than 3) in ascending or descending order and record the comparison(s) using symbols for *is less than* (<) and/or *is greater than* (>). DM 4 does not restrict to up to 3 numbers.	4A	1	4
Represent and compare fractions in multiple ways using part-whole relationships.				
4.NR.2.1	Represent fractions with denominators of 10 and 100 in words, models, and decimal notations.	4B	12	1, 2, 3, 4
4.NR.2.2	Compare decimal numbers to the hundredths using the benchmarks 0, 0.5, and 1.0, concrete area, and linear models. Use the symbols for *is equal to* (=), *is less than* (<), and/or *is greater than* (>).	4B	12	8
4.NR.2.3	Generate equivalent fractions, including fractions greater than 1, using multiple representations. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100. DM does not limit the denominators as narrowly.	3B	10	1, 2, 3
		4A	6	1
4.NR.2.4	Represent the composition and decomposition of fractions with the same denominator, including mixed numbers and fractions greater than 1, using multiple representations. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100.	3B	10	7, 8
		4A	6	3
			7	1

Standard	Standard Description	DM	Chapter	Lesson
4.NR.2.5	Explain and demonstrate how a mixed number is equivalent to a fraction greater than 1 and how a fraction greater than 1 is equivalent to a mixed number. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100	4A	6	3, 4, 5, 6
4.NR.2.6	Compare fractions and mixed numbers with like and unlike denominators applying benchmark fractions such as 0, ½ and 1 using the symbols for *is equal to* (=), *is less than* (<), or *is greater than* (>). Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100.	3B	10	1, 2
		4A	6	2
Patterns, Algebra, and Functional Reasoning				
Use multiple representations to reason and solve problems involving operational properties of whole numbers and decimals.				
4.PAFR.1.1	Use a strategy to accurately compute sums and differences of whole numbers up to 100,000 and justify the sum or difference.	4A	2	1 – 6
4.PAFR.1.2	Compute the product of a one-digit whole number times a multiple of 10 (from 10 to 90) and 100 (from 100 to 900) based on place value and properties of operations.	4A	1	7
			4	5
4.PAFR.1.3	Decompose numbers by the value of each digit to multiply whole numbers up to four digits by a one-digit number and two 2-digit whole numbers.	3A	5	1 – 9
		4A	4	1, 2, 3
4.PAFR.1.4	Use a strategy to divide up to a four-digit dividend by a one-digit divisor, with and without remainders. Justify the calculation	3A	6	1 – 9
		4A	5	1, 2, 3
Use multiple representations to reason and solve problems involving operational properties of fractions.				
4.PAFR.2.1	Use a strategy to accurately compute sums and differences of fractions with like denominators and justify the reasonableness of the answer. Limit	3B	10	7, 8
		4A	7	1

Standard	Standard Description	DM	Chapter	Lesson
	denominators to 2, 3, 4, 5, 6, 8, 10, 12, 25, and 100.			
4.PAFR.2.2	Use fraction and decimal equivalencies to add and subtract tenths and hundredths, to include mixed numbers and fractions greater than 1.	4B	12	1–4
			13	1–8
4.PAFR.2.3	Represent and compute the product of a whole number times a unit fraction. Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12, 25, and 100.	4B	8	1
4.PAFR.2.4	Interpret a fraction as an equal sharing division situation, where a quantity (the numerator) is divided into equal parts (the denominator) to include real-world situations.	4B	6	7
Use reasoning to represent and solve algebraic and numerical situations.				
4.PAFR.3.1	Find all factor pairs for a whole number in the range 1–50. Determine whether the whole number is prime or composite. DM 4 includes a range of 1-120.	4A	3	1, 3, 4
4.PAFR.3.2	Describe and extend a numerical pattern that follows a rule using function tables and real-world situations. This is not explicitly covered in a specific lesson in DM 4, other than increasing or decreasing by the digit in one or more places. Some problems in the workbook do include analyzing patterns.			
4.PAFR.3.3	Solve real-world situations involving multiplicative comparison situations and write equations to represent the problem using a variable for the unknown. Using letters for unknowns is covered in the TG for DM. DM textbooks use blanks or the word "unit."	3A	4	8, 9
		4A	4	1–4

Standard	Standard Description	DM	Chapter	Lesson
4.PAFR.3.4	Solve two-step, real-world situations using the four operations involving whole number answers. Represent the problem using an equation with a variable as the unknown in any position.	3A	4	8, 9
		4A	4	1–4
			5	1–6
3.PAFR.2.4	Recognize that a whole number is a multiple of each of its factors 1–10.	2B	9	3, 6
		3B	8	1, 6, 7
		4A	3	1, 3

Grade 5

Standard	Standard Description	DM	Chapter	Lesson
Data, Probability, and Statistical Reasoning				
Create questions, collect and analyze data, and communicate interpretations through multiple representations.				
5.DPSR.1.1	Describe data by determining the range and mode, including whole numbers, fractional data, and decimal data. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, and 10, and limit decimals to decimals through the thousandths place.	5B	12	3
5.DPSR.1.2	Solve two-step, real-world situations using whole number and fractional data represented in tables, line graphs, scaled bar graphs, or dot plots. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100.	4A	9	1–4
		5B	12	1, 3, 5
5.DPSR.1.3	Analyze categorical and numerical data in graphical displays to make predictions or draw conclusions. Limit displays to tables, bar graphs, dot plots, line graphs, and circle graphs with scales of whole numbers, halves, fourths, and eighths. Circle graphs are not covered in DM.	4A	9	1–4
		5B	12	1, 3, 5
Represent the probability of simple events and determine possible outcomes.				
5.DPSR.2.1	Represent the probability of a simple event as 0, a fraction, or 1. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 20, and 25. Probability is not covered in DM 1-6.			
Measurement, Geometry, and Spatial Reasoning				
Solve area, perimeter, and volume problems in real-world and mathematical situations.				
5.MGSR.1.1	Solve problems involving area and perimeter of composite figures by decomposing with rectangles	3B	13	4
		4B	11	3
		5A	7	2, 3

Standard	Standard Description	DM	Chapter	Lesson
5.MGSR.1.2	Estimate and measure the volume of a right rectangular prism with whole-number side lengths by filling it with unit cubes	5A	8	1
Convert within a given measurement system and measure length.				
5.MGSR.2.1	Given the unit equivalencies, convert within a single system of measurement from larger units to smaller units and smaller units to larger units for length, weight, liquid volume, and time. Use these conversions in solving real-world situations. Limit units to inches, feet, yards, ounces, pounds, fluid ounces, cups, pints, quarts, gallons, seconds, minutes, hours, milli-, centi-, kilo-, and base units (grams, liters, meters)	3B	11	1–8
		4B	10	1–9
		5A	7	1
5.MGSR.2.2	Estimate and measure lengths to the nearest eighth of an inch or nearest millimeter. Students do not estimate length to the nearest eighth of an inch or millimeter in DM.			
Graph on the coordinate plane.				
5.MGSR.3.1	Identify the origin, *x*-axis, and *y*-axis in the coordinate system. Write, plot, and label ordered pairs, including values in a function table, in the first quadrant of the coordinate plane	5B	12	4, 5, 6
5.MGSR.3.2	Represent mathematical and real-world situations by graphing, labeling, and interpreting points in the first quadrant of the coordinate plane.	4A	9	1, 2
		5B	12	4, 5, 6
Numerical Reasoning				
Represent and compare numbers using relationships within the base ten number system.				
5.NR.1.1	Read, write, and represent multi-digit numbers from 0 to 999 with decimals to the thousandths place. Use pictorial, word,	5B	9	1, 2, 3

Standard	Standard Description	DM	Chapter	Lesson
	standard, or expanded form with fraction or decimal notation.			
5.NR.1.2	Explain how the value of a digit in a multi-digit number changes if the digit moves one or more places to the left or right in the base ten system. Include decimals to the thousandths place.	5A	1	2, 3
		5B	9	6, 7
5.NR.1.3	Round decimal numbers up to 999 with decimals to the thousandths place to the nearest hundredth, tenth, or whole number.	5B	9	4
5.NR.1.4	Use patterns to explain the exponents when multiplying and dividing by powers of 10, not to exceed the thousandths place. Exponents are not used in DM 5. DM does use place-value concepts to explain the patterns.	5A	1	2, 3
		5B	9	6, 7
Represent and compare fractions in multiple ways.				
5.NR.2.1	Compare fractions and mixed numbers with like and unlike denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, and 100 using equivalence to create a common denominator. Use the symbols for *is less than* (<), *is more than* (>), or *is equal to* (=) to record the comparison. DM does not restrict denominators as narrowly.	4A	6	2, 8
Patterns, Algebra, and Functional Reasoning				
Use multiple representations to reason and solve problems involving operational properties of whole numbers and decimals.				
5.PAFR.1.1	Use a strategy to compute the product of a two- or three-digit factor times a two-digit factor to include real-world situations	4A	4	5, 6, 7
		5A	3	1, 2, 3
5.PAFR.1.2	Use a strategy to compute the quotient of a multi-digit whole number dividend divided by a two-digit whole number divisor, with and without remainders, to	5A	3	4–9

Standard	Standard Description	DM	Chapter	Lesson
	include real-world situations. Limit the dividend to four digits.			
5.PAFR.1.3	Use a strategy to compute sums and differences of decimal numbers to the hundredths	5B	10	1, 2
5.PAFR.1.4	Use a strategy to multiply a one-digit whole number by a decimal to the hundredths and divide a decimal to the hundredths (dividend) by a one-digit whole number (divisor). Justify the calculation.	4B	14	1–9
		5B	10	6, 7
Use multiple representations to reason and solve problems involving operational properties of fractions.				
5.PAFR.2.1	Use a strategy to compute sums and differences of fractions and mixed numbers with unlike denominators and justify the sum or difference to include real-world situations. Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100. DM does not restrict denominators as narrowly.	5A	4	2–9
5.PAFR.2.2	Use a strategy to multiply a fraction by a fraction or a fraction by a whole to include real-world situations. Limit denominators to 2, 3, 4, 5, 6, 8, 10, and 12.	5A	4	1–9
5.PAFR.2.3	Interpret and represent division of a whole number dividend by a unit fraction divisor and a unit fraction dividend by a whole number divisor and apply to real-world situations. Limit denominators to 2, 3, 4, 5, 6, 8, 10, and 12.	5A	5	1, 4
Use reasoning to represent and solve algebraic and numerical situations.				
5.PAFR.3.1	Determine the least common multiple (LCM) to find a common denominator. Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100.	5A	4	2

Standard	Standard Description	DM	Chapter	Lesson
5.PAFR.3.2	Determine the greatest common factor (GCF) of two numbers both less than or equal to 50 to simplify a fraction into its standard form.	5A	4	1
5.PAFR.3.3	Identify a rule that can describe the pattern from the data of a function table and write it as an expression	5B	12	5, 6
5.PAFR.3.4	Translate a two-step real-world situation into a numerical expression using parentheses as grouping symbols and evaluate the expression.	5A	2	1–7