DM = Dimensions Math

Pre-Kindergarten

Standard	Standard Description	DM	Chapter	Lesson
Number and Operations Sense				
Know number names and the count sequence.				
PK.NOS.A.1	Count to 20 Students only count to 10 in DM PK.	PKA	4	1–14
			6	1–13
		KB	7	1, 2
PK.NOS.A.2	Count backward from 10 by ones.	PKA	6	4
PK.NOS.A.3	Identify which number comes just after or just before a given number in the counting sequence to 10.	PKA	6	5
PK.NOS.A.4	Identify written numerals 0-10.	PKA	5	1-8
			7	1-8
Count to tell the number of objects.				
PK.NOS.B.5	Understand the relationship between numbers and quantities within 10 to count objects with one-to one correspondence and verbalizing the last number stated is the total when asked "How many?" (cardinality)	PKA	4	1–14
			6	1–13
PK.NOS.B.6	When counting objects within 10, recognize that each successive number name refers to a quantity that is one larger.	KA	3	12
PK.NOS.B.7	Represent a number within 10 by producing a set of objects with concrete materials, drawing pictures, and/or writing numerals. Correctly respond when asked "How many" after counting concrete objects.	PKA	4	1–14
			6	1–13

Standard	Standard Description	DM	Chapter	Lesson
PK.NOS.B.8	Recognize the number of objects in a set without counting (subitizing) with both unfamiliar patterns within 3 and familiar patterns within 5.	PKA	4	9, 12–13
Compare numbers.				
PK.NOS.C.9	Compare two groups of objects within 10. Identify whether the number of objects in one group is more than, equal to, or less than the number of objects in another group by using one-to-one correspondence, matching, and counting.	PKB	10	1–5
Understand addition as putting together and adding to and understand subtraction as taking apart and taking from.				
PK.NOS.C.10	Represent addition and subtraction situations (presented verbally, without the use of numerals or mathematical symbols) within quantities of 5 with objects, fingers, drawings, sounds, acting out situations, and/or verbal explanations.	PKB	11	1–4, 6
			12	1–8
PK.NOS.C.11	Decompose numbers less than or equal to 5 in more than one way by using objects, fingers, drawings and/or verbal explanations.	PKB	11	4
			12	5, 6, 7
PK.NOS.C.12	Given a quantity within 5, identify the quantity that must be added to equal 5 using objects, fingers, drawings and/or verbal explanations.	PKB	11	5
Algebraic Thinking				
Understand repeating patterns.				
PK.AT.A.1	Identify and extend a repeating pattern (ABAB, AABB, or ABCABC) using concrete objects, shapes, sounds, or movements. DM PK includes only AB, AAB, or ABB patterns.	PKA	3	3, 4

Standard	Standard Description	DM	Chapter	Lesson
Geometric Reasoning and Measurement				
Describe and compare measurable attributes.				
PK.GR.A.1	Describe a measurable attribute of an object, such as length, height, weight, and capacity using appropriate vocabulary.	PKA	2	1–5
PK.GR.A.2	Directly compare two objects with a measurable attribute in common, using words such as "more/less," "longer/shorter," "lighter/heavier," or "taller/shorter."	PKA	2	1–5
Work with two-dimensional and three-dimensional shapes.				
PK.GR.B.3	Sort two-dimensional shapes (circles, triangles, and rectangles-including a square which is a special rectangle) by like attributes and distinguish between examples and non-examples.	PKB	9	5–10
PK.GR.B.4	Match and name two-dimensional shapes (circles, triangles, and rectangles- including a square which is a special rectangle) regardless of their orientations or overall size.	PKB	9	5–10
PK.GR.B.5	Match and sort three-dimensional shapes (cubes, spheres, and cylinders) by like attributes and distinguish between examples and non-examples.	PKB	9	1, 2, 4
Reasoning with Data and Statistics				
Classify Objects into Categories to Represent Data				
PK.DS.A.1	Organize data sets by sorting objects into categories.	PKA	1	1–10
PK.DS.A.2	Analyze data sets by comparing the categories using words such as more than, less than, and equal to/same (Limit the total in any one category to maximum of 10).	PKB	10	1–5

Kindergarten

Standard	Standard Description	DM	Chapter	Lesson
Number and Operations Sense				
Know number names and the count sequence.				
K.NOS.A.1	Count to 100 by ones and by tens.	KB	12	1–8
K.NOS.A.2	Count forward from any given number within 100.	KB	12	2–8
K.NOS.A.3	Count backwards from any given number within 20.	KB	7	8
K.NOS.A.4	Write numbers from 0 to 20.	KA	2	6–11
			3	7–10
		KB	7	2–9
K.NOS.A.5	Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	KA	2	6–11
			3	7–10
		KB	7	2–9
Count to tell the number of objects.				
K.NOS.B.6	Use the relationship between numbers and quantities within 20 to count objects with one-to-one correspondence (arranged in a line, a rectangular array, a circle, or as many as 10 things in scatter configuration) and verbalize that the last number stated is the total when asked "How many?" (cardinality).	KA	2	1–11
			3	1–12
		KB	7	1–11
K.NOS.B.7	When counting objects within 20, recognize that each successive number name refers to a quantity that is one larger.	KA	3	12
		KB	7	8
K.NOS.B.8	Recognize the number of objects in a set without counting (subitizing) with both unfamiliar patterns and familiar patterns within 6. In DM K, students learn to recognize the number of objects in a familiar pattern using five-frames and ten-frames, and dice. Some activities in the TG involve random arrangements.	KA	2	2
			3	2

Standard	Standard Description	DM	Chapter	Lesson
Develop foundations for place value.				
K.NOS.C.9	Understand 10 as a group, collection, or bundle of ten ones called a "ten." a. Compose and decompose numbers from 11 to 19 into ten ones and some further ones by using objects or drawings, and equations. b. Describe a given number as one ten and the correct number of ones. In DM K, students do learn place value concepts for numbers 11 to 19, but do not write the concept as an equation, since when they learn addition equations the total is at most 10.	KB	7	1, 2, 3
K.NOS.C.10	Compare two quantities within 20 using greater than, equal to, or less than, with objects, location on number paths, and written numerals. In DM K, students formally compare numbers within 10 only.	KA	6	1–5
Represent addition and subtraction.				
K.NOS.D.11	Represent addition and subtraction situations (presented with numerals or mathematical symbols) within 10 with objects, fingers, drawings, sounds.	KB	8	1–14
			9	1–12
			10	1–12
K.NOS.D.12	Decompose numbers within 10 in more than one way, by using objects or drawings, and record each decomposition with a drawing or equation.	KB	8	1–14
			10	1–12
Algebraic Thinking				
Solve problems involving addition and subtraction.				
K.AT.A.1	Solve addition (add to and putting together) and subtraction (taking from) problems in context within 10 and represent by using objects, drawings, and/or equations.	KB	9	1–12
			10	1–12
			11	1–6

Standard	Standard Description	DM	Chapter	Lesson
Understand repeating patterns.				
K.AT.B.2	Identify, extend, and create repeating patterns (AABAAB, ABCABC, or AABBCC) using concrete objects, drawings, sounds, or movements.	KA	4	8, 9
Geometric Reasoning and Measurement				
Describe and compare measurable attributes.				
K.GR.A.1	Describe measurable attributes of an object such as length, height, weight, and capacity using appropriate vocabulary.	KA	5	1–10
K.GR.A.2	Directly compare two objects with a measurable attribute in common, using words such as "greater/less," "more/fewer," "longer/shorter," "lighter/heavier," or "taller/shorter."	KA	5	1–10
K.GR.A.3	Order up to 3 objects by a measurable attribute.	KA	5	1–10
Work with two-dimensional and three-dimensional shapes.				
K.GR.B.4	Describe the relative positions of objects using terms such as above, below, beside, in front of, behind, and next to.	KA	4	7
K.GR.B.5	Identify and describe given shapes and shapes of objects in everyday situations including two-dimensional shapes (circle, triangle, rectangle, square, hexagon) and three-dimensional shapes (cone, cube, cylinder, and sphere) regardless of their orientation or overall size.	KA	4	2–12
K.GR.B.6	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	KA	4	2
K.GR.B.7	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts and other attributes.	KA	4	4–8, 10

Standard	Standard Description	DM	Chapter	Lesson
K.GR.B.8	Draw two dimensional shapes and build or create models of three-dimensional shapes.	KA	4	1–12
K.GR.B.9	Compose simple shapes to form larger shapes.	KA	4	10
Reasoning with Data and Statistics				
Classify objects into categories to represent data.				
K.DS.A.1	Organize data by classifying objects into given categories and counting the number of objects in each category (Limit the total in any one category to maximum of 20). DM K covers this objective only to a maximum of 10 in any one category.	KA	4	11
K.DS.A.2	Analyze data sets by ordering the categories by count. Not covered in DM K.			

Grade 1

Standard	Standard Description	DM	Chapter	Lesson
Number and Operations Sense			
Extend the counting sequence.			
1.NOS.A.1	Count forward and backward within 120. a. Count forward and backwards by ones starting with any number. b. Skip count forward and backwards by tens. 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.NOS.A.1	Read, write numerals, and represent a number of objects with a written numeral within 120.	1A	1	1
			5	1
		1B	12	1, 2
			16	1
Understand place value and representations of numbers.			
1.NOS.B.3	Extend understanding of 10 as a group, collection, or bundle of ten ones, called a "ten," to compose and decompose two-digit numbers. a. Compose and decompose two-digit numbers into tens and ones using objects or drawings, and equations. b. Describe a given number as the correct number of tens and ones. c. Compose and decompose two-digit numbers in more than one way.	1A	5	1
		1B	12	1, 2
			13	1–8
			16	1, 2
			17	1–12
1.NOS.B.4	Represent whole numbers as lengths from 0 on a number line (horizontal and vertical) with equally spaced points corresponding to whole numbers. Number lines are not introduced until DM 3.			
1.NOS.B.5	Compare two numbers within 100 by reasoning about values of tens and ones digits and the location of the numbers on a number line. Record the results of	1B	12	4
			16	4

Standard	Standard Description	DM	Chapter	Lesson
	comparisons with the symbols >, =, and <. Symbols are not used until DM 2A.			
1.NOS.B.6	Estimate the location of numbers on a number line by reasoning about their relationship to benchmark numbers. Estimation is not covered in DM 1.			
Understand and apply properties of operations and the relationship between addition and subtraction.				
1.NOS.C.7	Apply the Commutative Property of Addition and Associative Property of Addition as a strategy to add.	1A	3	4
			4	7
			5	5, 6
			6	1–3
			7	1–3
		1B	13	1–8
			17	1–12
1.NOS.C.8	Use the inverse relationship between addition and subtraction to subtract.	1A	4	2, 6, 7
			5	2
Add and subtract within 20.				
1.NOS.D.9	Recall or quickly derive addition and subtraction facts within 20. a. Use the count on and count back strategies to add and subtract. b. Use the make ten strategy to add and subtract with combinations of 10. c. Use the ten more and ten less strategies to add and subtract (including those with a difference of 10). d. Use the doubles to add and subtract.	1A	3	1–6
			4	1–8
			5	5, 6
			6	1–5
			7	1–6
Use place value understanding and properties to add and subtract.				
1.NOS.E.10	Add within 100 including adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10. Understand that when adding two-digit numbers, tens are	1B	12	1, 2, 3
			13	1–6
			16	2, 3, 4
			17	1–5

Standard	Standard Description	DM	Chapter	Lesson
	added to tens, ones are added to ones, and sometimes it is necessary to compose or decompose a ten. a. Use concrete models and drawings to add. b. Use counting strategies and strategies based on place value to add. c. Use properties of operations, and/or the inverse relationship between addition and subtraction to add. d. Represent and explain the calculation by connecting the strategy used to the meaning of addition.			
1.NOS.E.11	Given a two-digit number, identify 10 more or 10 less than the given number, without having to count, and explain the reasoning used.	1B	12 16 17	3 3 2, 9
1.NOS.E.12	Subtract a multiple of 10 from another multiple of 10 within 90. a. Use concrete models or drawings to subtract. b. Use counting strategies, properties of operations, and/or the inverse relationship between addition and subtraction to subtract. c. Represent and explain the calculation by connecting the strategy used to the meaning of subtraction.	1B	12 16 17	3 3 2, 9
1.NOS.E.13	Subtract a 1-digit number from a 2-digit number (without regrouping). a. Use concrete models or drawings to subtract. b. Use counting strategies, properties of operations, and/or the inverse relationship between addition and subtraction to subtract.	1B	13 17	2 6

Standard	Standard Description	DM	Chapter	Lesson
	c. Represent and explain the calculation by connecting the strategy used to the meaning of subtraction.			
Understand equal parts of a whole.				
1.NOS.F.14	Partition circles and rectangles into equal shares (halves and fourths) recognizing that decomposing into more equal shares creates smaller shares. Determine how many equal shares are needed to make a whole.	1B	15	1, 2, 3
Algebraic Thinking				
Solve problems involving addition and subtraction.				
1.AT.A.1	Understand the meaning of the equal sign. Determine if equations involving addition and subtraction (on one or both sides of the equal sign) are true or false.	1A	3	1, 4
			7	1, 2
1.AT.A.2	Add and subtract within 20 involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions (result unknown, change unknown, start unknown) by using objects, drawings, and/or equations with a symbol for the unknown number to represent the problem.	1A	3	1–6
			4	1–8
			5	1–10
			6	1–5
			7	1–6
		1B	11	1, 2
1.AT.A.3	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.	1A	3	1–6
			4	1–8
			5	1–10
			6	1–5
			7	1–6
		1B	11	1, 2

Standard	Standard Description	DM	Chapter	Lesson
Geometric Reasoning and Measurement				
Measure lengths indirectly and by iterative length units.				
1.GR.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.	1B	10	1, 2
1.GR.A.2	Use non-standard units (with no gaps or overlaps) to measure the length of an object to the nearest whole unit.	1B	10	3
Reason with shapes and their attributes.				
1.GR.B.3	Distinguish between defining attributes versus non-defining attributes.	1A	8	1, 2
1.GR.B.4	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	1A	8	3
Work with time and money.				
1.GR.C.5	Tell time in hours, half hours, and quarter hours using a digital clock or analog clock. Estimate time intervals (1 hour, 30 minutes, 15 minutes, 1 minute) for activities.	1B	18	1–4
1.GR.C.5	Identify and know the value of coins (penny, nickel, dime, and quarter) and bills ($1, $5, $10, and $20).	1B	19	1, 2, 3
Reasoning with Data and Statistics				
Represent and interpret data.				
1.DS.A.1	Ask and answer questions by collecting, organizing and summarizing data. a. Craft a question that can be answered by collecting categorical data.	1B	11	3

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	b. Collect and organize categorical data (into up to three categories) using surveys or observations. c. Represent data by creating tally charts and picture graphs. d. Summarize the data presented in tally charts using "most," "least," "greater than," "less than," and "equal to". Only picture graphs are covered in DM 1, not tally charts.			

Grade 2

Standard	Standard Description	DM	Chapter	Lesson
Number and Operation Sense				
Understand place value.				
2.NOS.A.1	Use understanding of 100 as a bundle of ten tens, called a "hundred," and compose and decompose three-digit numbers. a. Compose and decompose three-digit numbers into hundreds, tens, and ones by using objects, drawings, and/or equations. b. Describe a given number as the correct number of hundreds, tens, and ones. c. Compose and decompose three-digit numbers in more than one way.	2A	1	4, 5
			3	1-12
2.NOS.A.2	Count forward and backward within 1000 starting with any number. a. Skip-count forward and backwards by 2s, 5s, 10s, and 100s. b. Use skip-counting to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. Lessons Include arrays with totals to 40 in DM 1B, and to 100 in DM 2A.	1B	14	1
		2A	1	4, 7
			6	1, 2, 3
			7	1, 2, 7
2.NOS.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	2A	1	4, 5
2.NOS.A.4	Compare two numbers within 1000 by reasoning about the values of the hundreds, tens, and ones digits and/or the location of the numbers on a number line. Record the results of comparisons with the symbols >, =, and <.	2A	1	6
2.NOS.A.5	Estimate quantities by reasoning about their location on a number line, their relationship to benchmark numbers and			

Standard	Standard Description	DM	Chapter	Lesson
	to assess reasonableness of sums and differences. Estimations and number lines are not covered until DM 3, and then it includes addition and subtraction within 10,000.			
Add and subtract within 20.				
2.NOS.B.6	Recall or quickly derive addition and subtraction facts within 20. a. Use counting, make ten, and ten more/less, doubling strategies to add and subtract. b. Use the use ten strategy and doubles plus one strategy to add and subtract. c. Use the inverse operation to add and subtract.	2A	2	1-5
Use representations, place value understanding, and properties of operations to add and subtract.				
2.NOS.C.7	Represent whole number sums and differences within 100 using lengths on a number line. Number lines are not used to represent addition and subtraction past sums to 10 in DM.			
2.NOS.C.8	Fluently add and subtract within 100. a. Use strategies based on counting and place value to add and subtract. b. Use properties of operations, and the inverse relationship between addition and subtraction to add and subtract. c. Determine and explain when a strategy is most efficient. Lessons in DM 2A include addition and subtraction within 1000.	1B 2A	17 3	1–12 1–10
2.NOS.C.9	Add and subtract within 1000, recognizing that when adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to	2A 2B	3 8	1–12 1–10

Standard	Standard Description	DM	Chapter	Lesson
	compose or decompose tens or hundreds. a. Use concrete models or drawings to add and subtract. b. Use strategies based on place value (counting on, partial sums, making tens, etc.) to add and subtract. c. Use properties of operations, and/or the relationship between addition and subtraction to add and subtract. d. Represent and explain the calculation by connecting the strategy used to the meaning of addition and subtraction.			
2.NOS.C.10	Mentally add and subtract 10 or 100 to a given number 100-900.	2B	1	2, 7
Understand equal parts of a whole.				
2.NOS.D.11	Partition circles and rectangles into equal shares (halves, thirds, and fourths) recognizing that equal shares do not need to have the same shape. Determine how many equal shares are needed to make a whole.	1B	15	1, 2, 3
		2B	11	1
Algebraic Thinking				
Solve problems involving addition and subtraction.				
2.AT.A.1	Use addition and subtraction within 100 to solve one-step problems in context involving an unknown in any situation or position by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. Lessons in chapter 2 of DM 2A cover sums to 20. All the lessons in chapter 3 of DM 2A include addition and subtraction within 1,000.	1B	17	1–12
		2A	2	1, 2, 3
			3	1–12
2.AT.A.2	Use addition and/or subtraction within 100 to solve two-step problems in context involving any situation or position of an unknown by using objects,	2A	2	1, 2, 5
			3	3, 5, 6, 8, 9

Standard	Standard Description	DM	Chapter	Lesson
	drawings, and equations with a symbol for the unknown number to represent the problem.			
Recognize patterns in numbers.				
2.AT.B.3	Determine whether a group of objects within 20 has an odd or even number of members. Write an equation to express an even number as a sum of two equal addends. This standard is not covered in DM 2.	3A	4	6
Geometric Reasoning and Measurement				
Measure and estimate lengths in standard units.				
2.GR.A.1	Measure the length of an object to the nearest whole by using appropriate tools.	2A	4	1, 3, 4, 5, 7
2.GR.A.2	Measure the length of an object twice, using different length units. Compare the two measurements relative to the size of the unit chosen.	2A	4	1
2.GR.A.3	Estimate lengths using units of inches, feet, centimeters, and meters.	2A	4	2, 4, 7
2.GR.A.4	Measure to determine how much longer one object is than another, expressing the difference in length in terms of a standard-length unit.	2A	4	1, 5
Reason with shapes and their attributes.				
2.GR.B.5	Identify and draw shapes (triangles, quadrilaterals, pentagons, hexagons, and cubes) having specific attributes, such as a given number of angles or a given number of equal faces.	2B	14	1
2.GR.B.6	Explain that a line of symmetry for a two-dimensional figure is a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry. Lines of symmetry are not covered in DM 2.			

Standard	Standard Description	DM	Chapter	Lesson
Work with time and money.			
2.GR.C.7	Tell and represent time to the nearest minute using multiple representations.	1B	18	3
		2B	12	1, 3
2.GR.C.8	Estimate and calculate elapsed time to the hour and half hour.	2B	12	2, 3
2.GR.C.9	Count mixed sets of coins and bills to solve problems in context (within $20.00) involving bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.	1B	19	2
		2B	10	1, 2
Reasoning with Data and Statistics			
Represent and interpret data.			
2.DS.A.1	Ask and answer questions by collecting, organizing and summarizing data. a. Craft a question that can be answered by collecting categorical and numerical data. b. Collect and organize data using surveys, making observations, or measuring. c. Represent categorical data using picture graphs and bar graphs. Represent numerical data using line plots. d. Summarize the data presented in data visualizations using "most," "least," "greater than," "less than," and "equal to" and determine what questions can be answered with a given data set. Line plots are not covered until DM 4B. DM 2B lessons include situations involving multiplication.	2B	14	1, 2, 3

Grade 3

Standard	Standard Description	DM	Chapter	Lesson
Number and Operation Sense				
Understand place value.				
3.NOS.A.1	Apply and extend place value understanding to whole numbers within 10,000. a. Read and write whole numbers using base-ten numerals, number names, and expanded form. b. Compose and decompose whole numbers. c. Estimate quantities by reasoning about their location on a number line, their relationship to benchmark numbers, and rounding to nearest 10 or 100. d. Compare two whole numbers by reasoning about the values of the digits and the location of the numbers on a number line. Record the results of comparisons with the symbols , >, =, and <.	3A	1	1–6, 9, 10
Represent and interpret problems involving multiplication and division.				
3.NOS.B.2	Represent and interpret multiplication of two factors (0-10) as equal groups or as a composed unit that can be repeated/iterated. Explain the relationship between the factors and products. DM 2 covers multiplication where one of the factors is 2, 3, 4, 5, or 10, and division by 2, 3, 4, 5, or 10. DM 3 reviews the concepts, and continues with the rest of the multiplication and division facts (as well as multiplication and division of two- and three-digit numbers by 2, 3, 4, or 5.)	2A 3A	6 4	1, 2, 3 1, 2, 4

Standard	Standard Description	DM	Chapter	Lesson
3.NOS.B.3	Represent and interpret whole-number quotients (0-10) as dividing an amount into known number of groups (partitive) or as dividing an amount into groups of known size (quotative). Explain the relationship between the quotient, divisor, and dividend. DM 2A covers division by 2, 3, 4, 5 and 10. DM 3 reviews the concepts and continues with the remainders and division by 6, 7, 8, and 9 (as well as division of two- and three-digit numbers by a one-digit number.)	2A	6	4, 5, 6
		3A	3	3
Understand properties of multiplication and the relationship between multiplication division.				
3.NOS.C.4	Identify and apply the Commutative Property of Multiplication, Associative Property of Multiplication, and Distributive Property of Multiplication as strategies to multiply.	2A	6	2
			7	1–7
		2B	9	1, 2, 5
		3A	4	1, 2
		3B	8	1, 2, 6, 7
3.NOS.C.5	Explain and use the inverse relationship between multiplication and division to determine the unknown whole number in a multiplication or division equation involving three whole numbers.	2A	6	6
		2B	7	3, 4, 7, 8, 9
		3A	4	4
		3B	8	1, 2, 6
Use place value understanding and properties of operations to perform multi-digit arithmetic.				
3.NOS.D.6	Estimate sums and differences within 1,000 using benchmark numbers and front-end estimation. Determine when an estimate is appropriate and when an exact answer is needed. DM 2A covers addition and subtraction within 1,000 but does not include estimation. DM 3A lessons all include addition and subtraction within 10,000.	3A	3	4, 5

Standard	Standard Description	DM	Chapter	Lesson
3.NOS.D.7	Fluently add and subtract within 1,000. a. Use computational strategies efficiently to add and subtract. b. Use properties of operations, and/or the inverse relationship between addition and subtraction. c. Determine and explain when a strategy is most efficient.	2A	3	1–12
		3A	3	1–7
3.NOS.D.8	Multiply one-digit whole numbers by multiples of 10 in the range 10-90 using strategies based on place value and properties of operations.	3A	5	1
Multiply and divide within 100.				
3.NOS.E.9	Recall or quickly derive multiplication and division facts within 100. a. Skip count (2s, 5s, 10s) and apply properties of operations (0s, 1s) to derive foundational facts. b. Derive unknown facts from known facts using double facts to multiply and divide. c. Use properties of operations to multiply. d. Use the inverse relationship between multiplication and division to multiply and divide. DM 2A covers multiplication facts where one of the factors is 2, 3, 4, 5, or 10 and division by 2, 3, 4, 5 and 10. DM 3 briefly reviews the concepts and continues with multiplication facts where both factors are 6, 7, 8, or 9, and division by 6, 7, 8, or 9.	2A	7	1–10
		2B	9	1–9
		3A	4	1, 3, 10
		3B	8	1, 2, 6, 7
Develop understanding of fractions as numbers. Fractions are not limited to those with denominators of 2, 3, 4, 6, and 8 in DM.				
3.NOS.F.10	Recognize and explain that a fraction represents a part of a whole.	2B	11	2, 3, 4
		3B	9	1

Standard	Standard Description	DM	Chapter	Lesson
	a. Partition shapes into parts with equal areas and express the area of each part using a unit fraction. a. Explain that a fraction 1/*d* represents one part of a whole that is divided into d equal parts, and that a fraction *c/d* represents c parts of size 1/*d*.			
3.NOS.F.11	Explain a fraction of a set *c/d* as the quantity formed by *c* items as part of the given set of *d* objects. Fraction of a set is covered in DM 4A in the context of multiplying a whole number by a fraction.	4A	8	4, 5, 6
3.NOS.F.12	Represent a fraction as a number on the number line. a. Represent a fraction 1/*d* on a number line by defining the interval from 0 to 1 as the whole and partitioning it into *d* equal lengths. Recognize that each length measures 1/*d* and that the endpoints of the length starting at 0 represents the number on the number line. b. Represent a fraction *c/d* on a number line by marking off *c* lengths of 1/*d* from 0. Recognize that the resulting interval has size *c/d* and that the endpoint of the length locates the number *c/d* on the number line.	3B	9	2
3.NOS.F.13	Explain equivalence of fractions and compare fractions by reasoning about their size, recognizing that comparisons are valid only when the two fractions refer to the same whole. a. Represent two fractions as equivalent if they are the same size, or they represent the same point on the number line.	3B	9	3, 4, 5
			10	1, 2

Standard	Standard Description	DM	Chapter	Lesson
	b. Identify and generate equivalent fractions and explain why the fractions are equivalent using concrete materials, drawings, number lines, or equations. c. Express whole numbers as fractions and identify fractions that are equivalent to whole numbers. d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions.			
Algebraic Thinking				
Solve problems involving the four operations and identify and explain patterns in arithmetic				
3.AT.A.1	Use multiplication and division within 100 to solve one-step problems in context involving equal groups, arrays, and area by using concrete materials, drawings, and/or equations.	2A	7	1–11
		2B	9	1–9
		3A	4	1–10
		3B	8	1, 2, 6, 7
3.AT.A.2	Use the four operations to solve two-step problems in context (within number limits for each operation as stated in 3.NOS.B and 3.NOS.D). a. Represent these problems using equations with a letter standing for the unknown quantity. b. Assess the reasonableness of answers in terms of context, using mental computation and estimation strategies including, rounding, front-end estimation, and benchmark numbers. The DM textbooks and workbooks use blanks, not letters, for unknowns. The DM Teacher's Guide includes optional	3A	2	11, 12
			3	6, 7
			4	9, 10
		3B	8	5, 10
			11	7, 8

Standard	Standard Description	DM	Chapter	Lesson
	material where letters are used instead of blanks.			
3.AT.A.3	Identify arithmetic patterns and explain them using properties of operations.	2A	7	1, 4, 7
			9	1, 5
		3A	1	7
			2	5
			4	4, 6
		3B	8	1, 2, 6, 7
Geometric Reasoning and Measurement				
Solve problems involving measurement and estimation of intervals of time, liquid, and masses of objects.				
3.GR.A.1	Measure the length of an object to the nearest half and quarter unit by using appropriate tools.	3B	9	2
3.GR.A.2	Solve problems in context that involve addition and subtraction of time intervals in minutes. DM 3B lessons include adding and subtracting time intervals in hours and minutes, not just minutes.	2B	12	1–4
		3B	14	1, 2, 3
3.GR.A.3	Measure and estimate liquid volumes and masses of objects using standard units of liters(l), grams (g), and kilograms (kg). DM 3B lessons include compound units, e.g. 4 kg 20 g.	2A	5	1, 2
		2B	13	1, 2
		3B	11	1, 5, 6
3.GR.A.4	Add, subtract, multiply, or divide to solve one-step word problems involving masses or liquid volumes that are given in the same units.	2A	5	1, 2
		2B	13	3
		3B	11	1–8
Reason with shapes and their attributes.				
3.GR.B.5	Explain that shapes in different categories may share, and that the shared attributes can define a larger category of shapes.	2B	15	2, 4, 6
		3B	12	4, 6
Understand concepts of area and perimeter.				

Standard	Standard Description	DM	Chapter	Lesson
3.GR.C.6	Identify area as an attribute of a two-dimensional figure and measure area of rectangular space by counting square units (non-standard equal-sized units, square centimeters, square meters, square inches, square feet).	3B	13	1, 2
3.GR.C.7	Relate area to multiplication and addition. a. Determine the area of a rectangle with whole-number side lengths by tiling and connecting the visual representation to multiplication of the side lengths to solve problems in context. b. Use tiling and area models to show that the area of a rectangle with whole number side lengths b and $c + d$ is the sum of $b \times c$ and $b \times d$, representing the Distributive Property of Multiplication. c. Determine the area of composite rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas.	3B	13	3, 4, 5, 9
3.GR.C.8	Identify perimeter as an attribute of two-dimensional figures and measure the distance around the outside of a figure by counting units or adding lengths.	3B	13	6, 7
3.GR.C.9	Solve problems in contexts involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and finding rectangles with the same perimeter and different areas or with the same area and different perimeters.	3B	13	7, 8, 9
Reasoning with Data and Statistics				
Represent and interpret data.				
3.DS.A.1		2B	14	1, 2, 3

Standard	Standard Description	DM	Chapter	Lesson
	Ask and answer questions by collecting, organizing and summarizing data, recognizing the importance of context when analyzing data. a. Create a scaled data visualization to display collected or given data. b. Summarize data presented in scaled data visualizations by describing the story the data is telling. c. Identify patterns in the data and evaluate whether these patterns might apply to different contexts or situations.	3A	7	1, 2, 3

Grade 4

Standard	Standard Description	DM	Chapter	Lesson
Number and Operation Sense				
Generalize place value understanding for multi-digit whole numbers.				
4.NOS.A.1	Apply and extend place value understanding to multi-digit whole numbers within 1,000,000. a. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. b. Estimate quantities by reasoning about their location on a number line, their relationship to benchmark numbers, and rounding to any place. c. Compare two multi-digit numbers by reasoning about the values of the digits and the location of the numbers on a number line. Record the results of comparisons with the symbols >, =, and <.	4A	1	1–6
4.NOS.A.2	Explain that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right	4A	1	1, 2
Use place value understanding and properties of operations to perform multi-digit arithmetic.				
4.NOS.B.3	Fluently add and subtract multi-digit whole numbers within 1,000,000. a. Apply estimation strategies to estimate sums and differences. b. Use computational strategies efficiently. c. Use a standard algorithm. d. Determine and explain when a strategy or algorithm is most efficient.	4A	2	1–4
4.NOS.B.4	Extend place value understanding and basic facts to multiply a multi-digit whole number by a multiple of ten.	4A	4	5

Standard	Standard Description	DM	Chapter	Lesson
4.NOS.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers. a. Apply estimation strategies to estimate products. b. Use strategies based on place value to multiply. c. Use properties of operations to multiply. d. Represent and explain the computation by connecting rectangular arrays, area models, and/or equations to the meaning of multiplication. DM 3 lessons cover multiplying a whole number of up to three digits by a one-digit number.	3A	5	1–9
		3B	8	2, 8
		4A	4	1–6
4.NOS.B.6	Divide whole numbers with up to four-digit dividends and one-digit divisors with and without remainders. a. Apply estimation strategies to estimate quotients. b. Use strategies based on place value to divide. c. Use properties of operations and/or the inverse relationship between multiplication and division to divide. d. Represent and explain the computation by connecting rectangular arrays, area models, and/or equations to the meaning of division. DM 3 lessons cover dividing a whole number of up to three digits.	3A	6	1–9
		3B	8	2, 8
		4A	5	1, 2, 3
Gain familiarity with factors and multiples.				
4.NOS.C.7	Recall or quickly derive multiplication and division facts within 100.	2A	7	1–10
		2B	9	1–9
		3A	4	1, 3, 10
		3B	8	1, 2, 6

Standard	Standard Description	DM	Chapter	Lesson
	a. Skip count (2s, 5s, 10s) and apply properties of operations (0s, 1s) to derive foundational facts. b. Derive unknown facts from known facts using double facts to multiply and divide. c. Use properties of operations to multiply. d. Use the inverse relationship between multiplication and division to multiply and divide. In DM 4A, there is an assumption that this standard is mastered.			
4.NOS.C.8	Explain and apply concepts of factors, multiples, and prime and composite numbers for whole numbers in the range of 1-100. a. Identify factor pairs for a whole number in the range of 1–100. b. Determine whether a given whole number in the range of 1–100 is a multiple of a one-digit number. c. Distinguish between factors and multiples and explain how they relate to a given number. d. Determine whether a given whole number in the range of 1–100 is prime, composite, or neither.	4A	3	1, 3, 4
Extend understanding of fraction equivalence and ordering. Fractions in DM 4 are not limited to those with denominators of 2, 3, 4, 5, 6, 8, 10, 12, and 100.				
4.NOS.D.9	Understand and generate equivalent fractions. a. Identify and generate equivalent fractions using representations and the Identity Property of Multiplication. b. Explain why fractions are equivalent (c/d = (n × c)/(n × d)).	3B	10	2
		4A	6	1

Standard	Standard Description	DM	Chapter	Lesson
4.NOS.D.10	Compare two fractions with different numerators and different denominators, understanding that comparisons are valid only when the two fractions refer to the same whole. a. Use benchmark numbers, common numerators, and common denominators to compare. b. Record comparisons with symbols , =, . c. Justify comparisons using representations and reasoning.	3B	10	4, 5, 6
		4A	6	2
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Fractions in DM 4 are not limited to those with denominators of 2, 3, 4, 5, 6, 8, 10, 12, and 100.				
4.NOS.E.11	Apply understanding of a fraction c/d with $d >1$ as a sum of unit fractions $(1/d)$ to decompose a fraction (including fractions greater than 1) into a sum of fractions with the same denominator in more than one way, recording each decomposition as an equation. Justify decompositions using visual fraction models and equations.	3B	10	7, 8, 9
		4A	7	1
4.NOS.E.12	Apply and extend previous understanding of addition and subtraction of whole numbers to add and subtract fractions with like denominators. a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. b. Estimate sums and differences by reasoning about benchmark numbers and assess reasonableness of answers.	3B	10	7, 8, 9
		4A	7	1–7

Standard	Standard Description	DM	Chapter	Lesson
	c. Apply and extend whole number addition and subtraction strategies to add and subtract fractions. d. Solve problems in context involving addition and subtraction of fractions using visual fraction models and equations to represent the problem. DM 3B lessons cover adding and subtracting fractions with the same denominator with sums to 1. DM 4A lessons include adding and subtracting fractions with related denominators, as well as mixed numbers.			
4.NOS.E.13	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number (b × c/d). a. Estimate products by reasoning about benchmark numbers and assess reasonableness of answers. b. Use understanding of multiplication as equal groups to multiply a unit fraction by whole number. c. Use understanding of multiplication as equal groups to multiply a fraction by whole number. d. Solve problems in context involving multiplication of a fraction by a whole number, using visual fraction models and equations to represent the problem.	4A	8	1, 2, 3
Understand decimal notation for fractions and compare decimal fractions.				
4.NOS.F.14	Express a fraction with denominator 10 as an equivalent fraction with denominator 100 to add two fractions with respective denominators 10 and 100.	4B	12	1–4
4.NOS.F.15	Use decimal notation for fractions with denominators 10 or 100.	4B	12	1–4

Standard	Standard Description	DM	Chapter	Lesson
4.NOS.F.16	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions.	4B	12	8
Algebraic Thinking				
Use the four operations with whole numbers to solve problems.				
4.AT.A.1	Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.	3A	4	8, 9, 10
		4A	4	1–4
4.AT.A.2	Multiply or divide to solve multiplicative comparison problems in context by using drawings and equations with a symbol for the unknown number to represent the problem.	3A	4	8, 9, 10
		4A	4	1–8
4.AT.A.3	Distinguish multiplicative comparison from additive comparison.	3A	4	7–10
		4A	4	4
4.AT.A.4	Solve multistep problems in context involving whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. a. Represent these problems using equations or expressions with a letter standing for the unknown quantity. b. Assess the reasonableness of answers in terms of context including interpreting remainders. The DM textbook and workbook use blanks, not letters, for unknowns. The DM Teacher's Guide includes optional material where letters are used instead of blanks.	4A	2	1–5
			3	5
			4	4, 8
			5	4-7

Standard	Standard Description	DM	Chapter	Lesson
Geometric Reasoning and Measurement				
Solve problems involving measurement conversion, area, and perimeter.				
4.GR.A.1	Apply the relationship between measurement units within a given measurement system (customary: in, ft, yd, oz, lb, sec, min, hr; metric: cm, m, km, g, kg, mL, L) to convert measurements from a larger unit to smaller unit.	4B	10	1–8
4.GR.A.2	Use the four operations to solve problems in context involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving common fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	4B	10	1–8
			13	1–9
4.GR.A.3	Apply the area and perimeter formulas for rectangles in context, including rectangles with missing dimensions.	4B	11	1–6
4.GR.A.4	Relate the area of a triangle to the area of a rectangle using decomposition and visual models. Derive and apply the formula to solve problems in contexts involving triangles positioned within or formed from the decomposition of rectangles. This standard is covered in DM 5.	5A	7	4, 5, 6
Understand concepts of angle and measure angles.				
4.GR.B.5	Identify angles as geometric figures formed by two rays that share a common endpoint and describe angle size as the amount of rotation between the two rays measured in degrees with reference to a circle.	3B	12	1, 2, 3
		4B	15	1
4.GR.B.6	Measure angles in whole-number degrees using a protractor. Estimate and sketch angles of specified measure.	4B	15	2, 3

Standard	Standard Description	DM	Chapter	Lesson
4.GR.B.7	Explain that when an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in context.	4B	15	4, 5, 6
Draw and identify lines and angles and classify shapes by properties of their lines and angles.				
4.GR.C.8	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. Points, line segments, and rays are defined in the DM Teacher's Guide only with a supplementary activity.	4B	15	3
			16	1, 2, 3
4.GR.C.9	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category and identify right triangles. Students classify triangles according to whether they have 2, 3, or 0 equal sides in DM 3B, but do not name them. They learn the names in DM 4 in the context of determining the number of lines of symmetry in geometric figures.	3B	12	4, 5
		4B	16	4, 5
Reasoning with Data and Statistics				
Represent and interpret data.				
4.DS.A.1	Ask and answer questions by collecting, organizing and summarizing data, recognizing the importance of context when analyzing data. a. Create scaled data visualization to display data to communicate an idea. b. Summarize data presented in scaled data visualizations and draw conclusions about the data.	3A	7	1, 2, 3
		4A	9	1–4

Standard	Standard Description	DM	Chapter	Lesson
	c. Compare and contrast different data visualizations of the same data by varying attributes and explain how changing the attributes affects the interpretation. Bar graphs are covered in DM 3. Line graphs and line plots are covered in DM 4.			

Grade 5

Standard	Standard Description	DM	Chapter	Lesson
Number and Operation Sense				
Understand the place value system.				
5.NOS.A.1	Explain that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	5A	1	1
		5B	9	6, 7
5.NOS.A.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10 and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole number exponents to denote powers of 10. Exponents are not used in DM 5.	5A	1	1–5
		5B	9	6, 7
5.NOS.A.3	Read, write, and compare decimals to thousandths. a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form. b. Estimate decimal quantities by reasoning about their location on a number line, their relationship to benchmark numbers and rounding to any place. c. Compare two decimals to thousandths by reasoning about the values of the digits and the location on the number line. Record the results of comparisons with the symbols >, =, < symbols.	5B	9	1–5
Perform operations with multi-digit whole numbers and with decimals to hundredths.				
5.NOS.B.4	Fluently multiply multi-digit whole numbers.	4A	4	1–8
		5A	3	1, 2

Standard	Standard Description	DM	Chapter	Lesson
	a. Apply estimation strategies to estimate products. b. Use computational strategies efficiently to multiply. c. Use a standard algorithm to multiply. d. Determine and explain when a strategy or algorithm is most efficient. DM 4A lessons cover multiplying a number with up to 5-digits by a 1-digit number and a number with up to 3 digits by a 2-digit number. DM 5A lessons review multiplying by a two-digit number.			
5.NOS.B.5	Divide multi-digit whole numbers with up to four-digit dividends and two-digit divisors. a. Apply estimation strategies to estimate quotients. b. Use partial quotients efficiently to divide. c. Use properties of operations and/or the inverse relationship between multiplication and division to divide. d. Represent and explain the computation by connecting rectangular arrays, area models, and/or equations to the meaning of division.	5A	3	4–9
5.NOS.B.6	Apply and extend previous understanding of addition and subtraction of whole numbers to add and subtract decimals to hundredths. a. Apply estimation strategies to estimate sums and differences of decimals. b. Use concrete models, drawings, strategies based on place value, properties of operations and/or the inverse relationship between	4B	13	1–9
		5B	10	1, 2

Standard	Standard Description	DM	Chapter	Lesson
	addition and subtraction to add and subtract decimals in context. c. Use an algorithm to add and subtract decimals. d. Determine and explain when a strategy or algorithm is or is not needed. DM 4A lessons cover adding and subtracting decimals to hundredths. DM 5B lessons cover adding and subtracting decimals to thousandths.			
5.NOS.B.7	Apply and extend previous understanding of multiplication and division of whole numbers to multiply and divide decimals to hundredths in context. a. Apply estimation strategies to estimate products and quotients. b. Use concrete models, drawings, and arrays to multiply and divide. c. Use strategies based on place value to multiply and divide. d. Use properties of operations and/or the inverse relationship between multiplication and division to multiply and divide. e. Represent and explain the computation by connecting concrete models, drawings, and/or equations to the meaning of multiplication and division. DM 4A lessons cover multiplying and dividing decimals to hundredths by a 1-digit whole number. DM 5B lessons cover multiplying decimals to thousandths by a decimal of up to 2 digits, dividing decimals by a 2-digit whole number, and dividing a whole number by a decimal.	4B 5B	14 10	1–9 3–10

Standard	Standard Description	DM	Chapter	Lesson
Use equivalent fractions as a strategy to add and subtract fractions.				
5.NOS.C.8	Add and subtract fractions with unlike denominators. a. Estimate sums and differences by reasoning about benchmark numbers and assess reasonableness of answers. b. Apply and extend whole number addition and subtraction strategies to add and subtract fractions. c. Use equivalent fractions to produce an equivalent sum or difference of fractions with like denominators. DM 4A lessons cover adding and subtracting fractions with related denominators.	4A	7	2–7
		5A	4	2–9
5.NOS.C.9	Solve problems in context involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators using visual fraction models and/or equations to represent the problem.	5A	4	2–9
Apply and extend previous understandings of multiplication and division to multiply and divide fractions.				
5.NOS.D.10	Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b) in context using visual fraction models and equations to represent the problem.	4A	6	7, 8
		5A	4	1
5.NOS.D.11	Apply and extend previous understandings of multiplication to multiply a whole number by a fraction ((c/d) × b). a. Estimate products by reasoning about benchmark numbers and assess reasonableness of answers. b. Multiply a whole number by a fraction.	4A	8	1–9
		5A	5	1–4

Standard	Standard Description	DM	Chapter	Lesson
5.NOS.D.12	Apply and extend previous understandings of multiplication to multiply a fraction by a fraction. a. Estimate products by reasoning about benchmark numbers and assess reasonableness of answers. b. Apply and extend whole number multiplication strategies. c. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths and show that the area is the same as would be found by multiplying the side lengths.	5A	5	5–7
			7	2
5.NOS.D.13	Apply and extend previous understandings of multiplication to multiply a fraction by a fraction, with one or both factors greater than 1. a. Estimate products by reasoning about benchmark numbers and assess reasonableness of answers. a. b. Apply and extend whole number multiplication strategies.	5A	5	8
			7	2
5.NOS.D.14	Interpret multiplication as scaling (resizing). a. Compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. b. Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explain why multiplying a given number by a fraction less than 1 results in a product smaller than the	5A	5	2–8

Standard	Standard Description	DM	Chapter	Lesson
	given number. Relate the principle of fraction equivalence a/b = (n × a)/(n × b) to the Identity Property of Multiplication.			
5.NOS.D.15	Solve problems in contexts involving multiplication of fractions and mixed numbers.	5A	5	1–9
5.NOS.D.16	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions in context. a. Apply estimation strategies to estimate quotients and assess reasonableness of answers. b. Use visual fraction models and equations to interpret division of a unit fraction by a non-zero whole number and compute quotients. c. Use visual fraction models and equations to interpret division of a whole number by a unit fraction and compute quotients. a. d. Represent and explain the computation by connecting visual fraction models and/or equations to the meaning of division with unit fractions.	5A	6	1, 4
Algebraic Thinking				
Write and interpret numerical expressions.				
5.AT.A.1	Interpret and evaluate numerical expressions with grouping symbols.	5A	2	2, 3
5.AT.A.2	Write expressions that record calculations with numbers and interpret numerical expressions without evaluating them.	5A	2	1–4
Analyze patterns and relationships.				
5.AT.B.3	Generate and analyze number patterns.	5B	12	5

Standard	Standard Description	DM	Chapter	Lesson
	a. Generate a number pattern that follows a given rule and identify relationships between the numbers within the pattern. b. Generate two numerical patterns using two given rules and identify relationships between corresponding terms. b. c. Use tables, ordered pairs, and graphs to represent the relationship between quantities.			
Geometric Reasoning and Measurement				
Convert like measurement units within a given measurement system.				
5.GR.A.1	Apply the relationship between measurement units within a given measurement system to convert among different-sized standard measurement units within a given measurement system and use these conversions in solving multi-step problems.	4B	10	1–9
		5A	7	1
		5B	9	8
Classify two-dimensional figures based on properties.				
5.GR.B.2	Explain that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.	5B	11	3, 6
5.GR.B.3	Classify two-dimensional figures based on properties. a. Classify triangles based on properties. b. Classify quadrilaterals in a hierarchy based on properties.	5B	11	3, 6
Understand concepts of volume and relate volume to multiplication and to addition				
5.GR.C.4	Identify volume as an attribute of three-dimensional figures and measure volume by counting cubic units that fill a figure without gaps or overlaps.	5A	8	1

Standard	Standard Description	DM	Chapter	Lesson
5.GR.C.5	Relate volume to the operations of multiplication and addition and solve problems in context. a. Find the volume of a right rectangular prism with whole-number side lengths by filling it with unit cubes in layers and show that the volume is the same as would be found by multiplying the edge lengths, or by multiplying the height by the area of the base. Represent products of three whole numbers as volumes. b. Apply the formulas V = (l)(w)(h) and V = (B)(h) for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths to solve problems in the context. c. Determine the volumes of composite figures by decomposing them into non-overlapping right rectangular prisms and adding their volumes together to solve problems in context.	5A	8	2–8
Graph points on the coordinate plane to solve contextual and mathematical problems.				
5.GR.D.6	Define the coordinate system as a pair of perpendicular lines called axes that intersect at the origin. Use understanding that the coordinate values represent the distance from the origin on the x-axis and y-axis to graph and name coordinate points in the first quadrant using ordered pairs.	5B	12	4
5.GR.D.7	Represent problems by graphing points in the first quadrant of the coordinate plane and interpreting coordinate values of points in the context of the situation.	4A	9	1, 2
		5B	12	4, 5, 6

Standard	Standard Description	DM	Chapter	Lesson
Reasoning with Data and Statistics				
Represent and interpret data.				
5.DS.A.1	Ask and answer questions by collecting, organizing and summarizing data, recognizing the importance of context when analyzing data. a. Create scaled data visualization to display data and communicate relationships or support a claim. b. Summarize data presented in scaled visualizations by identifying the mode, the range, and any gaps in data and draw conclusions. a. c. Evaluate whether a data visualization accurately represents the data and allows for accurate interpretation given the context. Bar graphs are covered in DM 3A. Line graphs and line plots are covered on DM 4A and 5B. Average is covered in DM 5B, but not mode. Circle graphs are not covered.	3A	7	1, 2, 3
		4A	9	3
		5B	12	3, 5