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2021 Oregon Mathematics Standards
Oregon Department of Education : Mathematics Standards : Mathematics : State of Oregon
DM = Dimensions Math

Kindergarten

Standard	Standard Description	DM	Chapter	Lesson
Algebraic Reasoning: Operations				
Understand addition and subtraction.				
K.OA.A.1	Represent addition as putting together and adding to and subtraction as taking apart and taking from using objects, drawings, physical expressions, numbers or equations.	KB	9	1–12
			10	1–10
			11	1–6
K.OA.A.2	Add and subtract within 10. Model authentic contexts and solve problems that use addition and subtraction within 10.	KB	9	1–12
			10	1–10
			11	1–6
K.OA.A.3	Using objects or drawings, and equations, decompose numbers less than or equal to 10 into pairs in more than one way.	KB	8	7–11
			10	4–7
K.OA.A.4	By using objects, drawings, or equations, find the unknown number that makes 10 when added to a given number from 1 - 9.	KB	8	11
K.OA.A.5	Fluently add and subtract within 5 with accurate, efficient, and flexible strategies.	KB	8	5, 6
			9	2
			10	4–7
			11	1–5
Numeric Reasoning: Counting and Cardinality				
Know number names and the count sequence.				
K.NCC.A.1	Orally count to 100 by ones and by tens in sequential order.	KB	12	1, 7, 8
K.NCC.A.2	Count forward beginning from a given number within 100 of a known sequence.	KB	12	1–8

Standard	Standard Description	DM	Chapter	Lesson
K.NCC.A.3	Identify number names, write numbers, and the count sequence from 0-20. Represent a number of objects with a written number 0-20.	KA	2	3–10
			3	6–10
		KB	7	3, 4
Count to tell the number of objects.				
K.NCC.B.4	Understand the relationship between numbers and quantities; connect counting to cardinality.	KA	2	1, 2
			3	2–5
K.NCC.B.5	Count to answer "how many?" questions using up to 20 objects arranged in a variety of configurations or as 10 objects in a scattered configuration. Given a number from 1-20, count out that many objects.	KA	2	1, 2
			3	1
		KB	7	1–4
Compare Numbers.				
K.NCC.C.6	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.	KA	6	1, 2
K.NCC.C.7	Compare two numbers between 1 and 10 presented as written numerals.	KA	6	3
Numeric Reasoning: Base Ten Arithmetic				
Work with numbers 11–19 to gain a foundation for place value.				
K.NBT.A.1	Compose and decompose from 11 to 19 into groups of ten ones and some further ones using objects, drawings, or equations.	KB	7	1–4
Geometric Reasoning and Measurement				
Identify and describe shapes.				
K.GM.A.1	Describe objects in the environment using names of shapes and describe the relative positions of these objects in their environment.	KA	4	1–8
K.GM.A.2	Correctly name common two-dimensional and three-dimensional geometric shapes regardless of their orientations or overall size.	KA	4	1–8

Standard	Standard Description	DM	Chapter	Lesson
K.GM.A.3	Identify shapes as two-dimensional or three-dimensional.	KA	4	1–3
Analyze, compare, create, and compose shapes.				
K.GM.B.4	Analyze and compare two and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts and attributes.	KA	4	1–9
K.GM.B.5	Represent shapes in the world by building shapes from components and drawing shapes.	KA	4	4, 5, 6, 8
K.GM.B.6	Compose common shapes to form larger shapes.	KA	4	10
Describe and compare measurable attributes.				
K.GM.C.7	Describe several measurable attributes of a single object using measurable terms, such as length or weight.	KA	5	1, 2, 5, 6, 8
K.GM.C.8	Directly compare two objects with a measurable attribute in common, and describe which object has "more" or "less" of the attribute.	KA	5	1, 2, 5, 6, 8
Data Reasoning				
Pose investigative questions and collect/consider data				
K.DR.A.1	Generate questions to investigate situations within the classroom. Collect or consider data that can naturally answer questions by sorting and counting. Students do not collect their own data in DM K or DM 1.	2B	14	1, 2
Analyze, represent, and interpret data.				
K.DR.B.2	Analyze data sets by counting the number of objects in each category and interpret results by classifying and sorting objects by count.	KA	2	10
			4	11

Grade 1

Standard	Standard Description	DM	Chapter	Lesson
Algebraic Reasoning: Operations				
Recognize and solve problems involving addition and subtraction.				
1.OA.A.1	Use addition and subtraction within 20 to solve and represent problems in authentic contexts involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.	1A	3	1–8
			4	1–10
			6	1–5
			7	1–6
		1B	11	1
1.OA.A.2	Solve problems that call for addition of three whole numbers whose sum is less than or equal to 20 using objects, drawings or equations. Students add three numbers whose sum is within 40, not 20, in DM 1.	1B	13	7
Understand and apply properties of operations and the relationship between addition and subtraction.				
1.OA.B.3	Apply properties of operations as strategies to add and subtract.	1A	3	1–5
			4	1–4, 7
			6	1–4
			7	1–4
1.OA.B.4	Understand subtraction as an unknown-addend problem.	1A	2	1–7
			4	7
Add and subtract within 20				
1.OA.C.5	Relate counting to addition and subtraction.	1A	4	7
1.OA.C.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10 with accurate, efficient, and flexible strategies.	1A	3	1–8
			4	1–10
			6	1–5
			7	1–6
		1B	11	1
Work with addition and subtraction equations				
1.OA.D.7	Use the meaning of the equal sign to determine whether equations involving addition and subtraction are true or false.	1A	3	1, 4
			7	1, 2

Standard	Standard Description	DM	Chapter	Lesson
1.OA.D.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.	1A	3	1–5, 8
			4	1, 6, 10
			6	1, 2, 5
			7	2, 6
Numeric Reasoning: Base Ten Arithmetic				
Extend the counting sequence.				
1.NBT.A.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. Students work with numbers only within 100, not 120, in DM 1. The Teacher's Guide has an optional activity for counting to 120 by rote.	1B	12	1, 2, 3
			16	1, 2, 3
Understand place value.				
1.NBT.B.2	Understand 10 as a bundle of ten ones and that the two digits of a two-digit number represent amounts of tens and ones.	1A	5	1
		1B	12	1, 2
			16	1, 2
1.NBT.B.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. Students compare numbers in DM 1, but do not use the symbols until DM 2.	1A	5	4
		1B	12	4
			16	4
		2A	1	3
Use place value understanding and properties of operations to add and subtract.				
1.NBT.C.4	Add within 100 using concrete or visual representations and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written method and explain why sometimes it is necessary to compose a ten.	1A	5	5, 6
		1B	12	1, 2, 3
			13	1–6
			16	2, 3, 4
			17	1–11
1.NBT.C.5	Without having to count, mentally find 10 more or 10 less than a given two-digit number and explain the reasoning used.	1B	12	3
			16	3
			17	2, 9

Standard	Standard Description	DM	Chapter	Lesson
1.NBT.C.6	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 using concrete or visual representations and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Relate the strategy and model used to a written method and explain the reasoning used.	1B	12	3
			16	2, 3
			17	9, 10, 11
Geometric Reasoning and Measurement				
Reason with shapes and their attributes.				
1.GM.A.1	Distinguish between defining attributes versus non-defining attributes for a wide variety of shapes. Build and draw shapes to possess defining attributes.	1A	8	1, 2
1.GM.A.2	Compose common two-dimensional shapes or three-dimensional shapes to create a composite shape, and create additional new shapes from composite shapes.	1A	8	3
1.GM.A.3	Partition circles and rectangles into two and four equal shares. Describe the equal shares and understand that partitioning into more equal shares creates smaller shares.	1B	15	1, 2
Describe and compare measurable attributes.				
1.GM.B.4	Order three objects by length; compare the lengths of two objects indirectly by using a third object.	1B	10	1, 2
1.GM.B.5	Express the length of an object as a whole number of non-standard length units, by laying multiple copies of a shorter object (the length unit) end to end.	1B	10	2, 3
Tell and write time.				
1.GM.C.6	Tell and write time in hours and half-hours using analog and digital clocks.	1B	18	1, 2

Standard	Standard Description	DM	Chapter	Lesson
Data Reasoning				
Pose investigative questions and collect/consider data.				
1.DR.A.1	Generate questions to investigate situations within the classroom. Collect or consider data that can naturally answer questions by representing data visually. Students create and analyze picture graphs in DM 1, but do not collect data themselves until DM 2.	2B	14	1, 2
Analyze, represent, and interpret data.				
1.DR.B.2	Analyze data sets with up to three categories by representing data visually, such as with graphs and charts, and interpret information presented to answer investigative questions.	1B	11	3
		2B	14	1, 2

Grade 2

Standard	Standard Description	DM	Chapter	Lesson
Algebraic Reasoning: Operations				
Represent and solve problems involving addition and subtraction.				
2.OA.A.1	Use addition and subtraction within 100 to solve one- and two-step problems in authentic contexts by using drawings and equations with a symbol for the unknown. Chapter 2 in DM 2 involves addition and subtraction within 20, and chapter 3 involves addition and subtraction within subtraction within 1,000. There is no separate chapter for addition and subtraction within 100. Students learned to add and subtract within 100 in DM 1.	1B	13	1–8
			17	1–12
		2A	2	1–5
			3	1–10
Add and subtract within 20.				
2.OA.B.2	Fluently add and subtract within 20 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.	1A	6	1–5
			7	1–5
		2A	2	1, 2
Work with equal groups to gain foundations for multiplication.				
2.OA.C.3	Determine whether a group up to 20 objects has an odd or even number by pairing objects or counting them by 2s; record using drawings and equations including expressing an even number as a sum of two equal addends. Odd and even numbers are not taught in DM until students divide numbers past 20 by 2.	3B	4	6
2.OA.C.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. Arrays in DM 1 include totals to 40, and in DM 2 include totals to 50.	1A	14	1
		2A	6	1, 2

Standard	Standard Description	DM	Chapter	Lesson
Numeric Reasoning: Base Ten Arithmetic				
Understand place value.				
2.NBT.A.1	Understand 100 as a bundle of ten tens and that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.	2A	1	1
2.NBT.A.2	Count within 1000; skip-count by 5's, 10's, and 100's.	2A	1	4, 7
			7	1, 2, 7
		2B	10	1, 2, 3
			12	1
2.NBT.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	2A	1	4, 5
2.NBT.A.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	2A	1	6
Use place value understanding and properties of operations to add and subtract.				
2.NBT.B.5	Fluently add & subtract within 100 using accurate, efficient, & flexible strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. DM 2 chapters include addition and subtraction within 1,000.	1B	13	1–8
			17	1–12
		2A	3	1–10
2.NBT.B.6	Add up to four two-digit numbers using strategies based on place value and properties of operations and describe how two different strategies result in the same sum. Students add up to three three-digit numbers in 2A, but there is an activity in the TG for adding four two-digit numbers.	1B	13	1–7
			17	1–11
		2A	2	1–4
2.NBT.B.7	Add and subtract within 1000 using concrete or visual representations and strategies based on place value,	2A	3	1–10

Standard	Standard Description	DM	Chapter	Lesson
	properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written method and explain why sometimes it is necessary to compose or decompose tens or hundreds.			
2.NBT.B.8	Without having to count, mentally find 10 more or 10 less and 100 more or 100 less than a given three-digit number.	2A	1	2, 7
		2B	8	4, 9
2.NBT.B.9	Explain why strategies to add and subtract work using properties of operations and the relationship between addition and subtraction.	2A	2	1–4
			3	1–10
		2B	8	1–9
Geometric Reasoning and Measurement				
Reason with shapes and their attributes.				
2.GM.A.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.	2B	15	1–5
2.GM.A.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	2A	11	1, 2
2.GM.A.3	Partition circles and rectangles into two, three, or four equal parts. Recognize that equal parts of identical wholes need not have the same shape.	2B	11	1, 2
Measure and estimate length in standard units.				
2.GM.B.4	Measure the length of an object by selecting and using appropriate measurement tools.	2A	4	1–7
2.GM.B.5	Measure the length of an object using two different length units and describe how the measurements relate to the size of the unit chosen.	2A	4	1
2.GM.B.6	Estimate lengths using units of inches, feet, yards, centimeters, and meters.	2A	4	2, 4, 7

Standard	Standard Description	DM	Chapter	Lesson
2.GM.B.7	Measure two objects and determine the difference in their lengths in terms of a standard length unit.	2A	4	1, 5
Relate addition and subtraction to length.				
2.GM.C.8	Use addition and subtraction within 100 to solve problems in authentic contexts involving lengths that are given in the same units.	2A	4	8
2.GM.C.9	Represent whole number lengths on a number line diagram; use number lines to find sums and differences within 100. Number lines are not used for addition and subtraction past 20 in DM.	2A	4	1, 5
Work with time and money.				
2.GM.D.10	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	2B	12	1, 3
2.GM.D.11	Solve problems in authentic contexts involving dollar bills, quarters, dimes, nickels, and pennies, using $ (dollars) and c (cents) symbols appropriately.	2B	10	1–7
Data Reasoning				
Pose investigative questions and collect/consider data.				
2.DR.A.1	Generate questions to investigate situations within the classroom. Collect or consider data that can naturally answer questions by using measurements with whole-number units.	2B	14	1, 2
Analyze, represent, and interpret data.				
2.DR.B.2	Analyze data with a single-unit scale and interpret information presented to answer investigative questions.	2B	14	1, 2

Grade 3

Standard	Standard Description	DM	Chapter	Lesson
Algebraic Reasoning: Operations				
Represent and solve problems involving multiplication and division.				
3.OA.A.1	Represent and interpret multiplication of two factors as repeated addition of equal groups.	2A	7	1–5, 7
		3A	4	1, 2
3.OA.A.2	Represent and interpret whole-number quotients as dividing an amount into equal sized groups.	2A	6	4, 5
			7	8, 9
		2B	9	3, 7
		3A	4	3, 5
3.OA.A.3	Use multiplication and division within 100 to solve problems in authentic contexts involving equal groups, arrays, and/or measurement quantities.	3A	4	1–9
		3B	8	1, 2, 4, 6, 7, 9
3.OA.A.4	Determine the unknown number in a multiplication or division equation relating three whole numbers by applying the understanding of the inverse relationship of multiplication and division.	3A	4	3, 4, 7, 10
Understand properties of multiplication and the relationship between multiplication and division’				
3.OA.B.5	Apply properties of operations as strategies to multiply and divide.	3A	4	1, 2
			5	1–5
		3B	8	1, 2, 6, 7
3.OA.B.6	Understand division as an unknown-factor in a multiplication problem.	3A	4	3, 4
		3B	8	1, 2, 6, 7
Multiply and divide within 100.				
3.OA.C.7	Fluently multiply and divide within 100 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations. Students learn the multiplication and division facts for 2, 3, 4, 5, and 10 in DM 2. These are reviewed in DM 3.	2A	6	1–7
			7	2–11
		2B	9	1–9
		3A	4	1–9
		3B	8	1, 2, 4, 6, 7, 9

Standard	Standard Description	DM	Chapter	Lesson
Solve problems involving the four operations, and identify and explain patterns in arithmetic.				
3.OA.D.8	Solve two-step problems in authentic contexts that use addition, subtraction, multiplication, and division in equations with a letter standing for the unknown quantity. DM textbooks do not use letters for unknown quantities, just blanks. The Teacher's Guide does include the optional use of them in lessons.	3A	2	2, 9, 11
			3	1, 2, 3, 6
			4	8, 9
			5	1–5
3.OA.D.9	Identify and explain arithmetic patterns using properties of operations, including patterns in the addition table or multiplication table.	3A	1	7
			2	5
		3B	8	1, 2, 6, 7
Numeric Reasoning: Base Ten Arithmetic				
Use place value understanding and properties of operation to perform multi-digit arithmetic.				
3.NBT.A.1	Use place value understanding to round whole numbers within 1000 to the nearest 10 or 100.	3A	1	8, 9
3.NBT.A.2	Fluently add and subtract within 1000 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations. Students learn to add and subtract within 1,000 in DM 2 and within 10,000 in DM 3.	2A	3	1–12
		3A	3	1–7
3.NBT.A.3	Find the product of one-digit whole numbers by multiples of 10 in the range 10-90, such as 9 x 80. Students use a range of strategies and algorithms based on place value and properties of operations.	3A	5	1
Numeric Reasoning: Fractions				
Develop an understanding of fractions as numbers.				
3.NF.A.1	Understand the concept of a unit fraction and explain how multiple copies of a unit fraction form a non-unit fraction.	2B	11	2, 3
		3B	9	1

Standard	Standard Description	DM	Chapter	Lesson
3.NF.A.2	Understand a fraction as a number on the number line; Represent fractions on a number line diagram.	3B	9	2
3.NF.A.3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	3B	10	2
Geometric Reasoning and Measurement				
Reason with shapes and their attributes.				
3.GM.A.1	Understand that shapes in different categories may share attributes and that shared attributes can define a larger category.	2B	15	2–5
		3B	12	5, 6
3.GM.A.2	Partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.	2B	11	1, 2
		3B	9	1
Solve problems involving measurement and estimation.				
3.GM.B.3	Tell, write, and measure time to the nearest minute. Solve problems in authentic contexts that involve addition and subtraction of time intervals in minutes.	3B	14	1–6
3.GM.B.4	Measure, estimate and solve problems in authentic contexts that involve liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).	3B	11	5, 6, 7
Geometric measurement: understand concepts of area and relate to multiplication and addition.				
3.GM.C.5	Recognize area as an attribute of plane figures and understand concepts of area measurement presented in authentic contexts by tiling and counting unit squares.	3B	13	1, 2, 3
3.GM.C.6	Measure areas by counting standard and non-standard unit squares.	3B	13	1, 2, 3

Standard	Standard Description	DM	Chapter	Lesson
3.GM.C.7	Relate area to multiplication and addition. Use relevant representations to solve problems in authentic contexts.	3B	13	3, 4, 5
Geometric measurement: recognize perimeter				
3.GM.D.8	Solve problems involving authentic contexts for perimeters of polygons.	3B	13	6, 7
Data Reasoning				
Pose investigative questions and collect/consider data.				
3.DR.A.1	Generate questions to investigate situations within the classroom, school or community. Collect or consider measurement data that can naturally answer questions by using information presented in a scaled picture and/or bar graph.	3B	7	1
Analyze, represent, and interpret data.				
3.DR.B.2	Analyze measurement data with a scaled picture graph or a scaled bar graph to represent a data set with several categories. Interpret information presented to answer investigative questions.	3B	7	1, 2, 3

Grade 4

Standard	Standard Description	DM	Chapter	Lesson
Algebraic Reasoning: Operations				
Use the four operations with whole numbers to solve problems.				
4.OA.A.1	Interpret a multiplication equation as comparing quantities. Represent verbal statements of multiplicative comparisons as equations.	3A	4	8, 9
			5	6, 8
		4A	4	1–8
			5	5, 6
4.OA.A.2	Multiply or divide to solve problems in authentic contexts involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison.	3A	4	8, 9
			5	6, 8
			6	5, 9
		4A	4	1–8
			5	1–7
4.OA.A.3	Solve multistep problems in authentic contexts using whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.	3A	4	1–10
			5	1–9
			6	1–9
		3B	8	1–10
		4A	4	1–8
			5	1–7
Gain familiarity with factors and multiples.				
4.OA.B.4	Find all factor pairs for a whole number in the range 1-100. Determine whether a given whole number in the range of 1-100 is a multiple of a given one-digit number, and whether it is prime or composite.	4A	3	1, 3, 4
Generate and analyze patterns.				
4.OA.C.5	Analyze a number, visual, or contextual pattern that follows a given rule.	4A	1	3
			2	4
Numeric Reasoning: Base Ten Arithmetic				
Generalize place value understanding for multi-digit whole numbers.				
4.NBT.A.1	Recognize 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

Standard	Standard Description	DM	Chapter	Lesson
4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Use understandings of place value within these forms to compare two multi-digit numbers using >, =, and < symbols.	4A	1	1, 2, 4
4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.	4A	1	5, 6
Use place value understanding and properties of operations to perform multi-digit arithmetic.				
4.NBT.B.4	Fluently add and subtract multi-digit whole numbers using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.	3A	3	1–7
		4A	1	1, 2
4.NBT.B.5	Use representations and strategies to multiply a whole number of up to four digits by a one-digit number, and a two-digit number by a two-digit number using strategies based on place value and the properties of operations.	3A	5	1–8
		3B	8	3, 8
		4A	4	2, 3, 5, 6
4.NBT.B.6	Use representations and strategies to find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division.	3A	5	1–8
		3B	8	3, 8
		4A	4	2, 3, 5, 6
Numeric Reasoning: Fractions				
Extend understanding of fraction equivalence and ordering.				
4.NF.A.1	Use visual fraction representations to recognize, generate, and explain relationships between equivalent fractions.	3B	10	1, 2, 3
		4A	6	1
4.NF.A.2	Compare two fractions with different numerators and/or different denominators, record the results with the	3B	9	3, 4
			10	4, 5
		4A	6	2

Standard	Standard Description	DM	Chapter	Lesson
	symbols >, =, or <, and justify the conclusions.			
Build fractions from unit fractions.				
4.NF.B.3	Understand a fraction (a/b) as the sum (a) of fractions of the same denominator (1/b). Solve problems in authentic contexts involving addition and subtraction of fractions referring to the same whole and having like denominators.	3B	9	1, 2
			10	7, 8, 9
		4A	6	1, 2
4.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Represent and solve problems in authentic contexts involving multiplication of a fraction by a whole number.	4B	10	1, 2, 3
Understand decimal notation for fractions, and compare decimal fractions.				
4.NF.C.5	Demonstrate and explain the concept of equivalent fractions with denominators of 10 and 100, using concrete materials and visual models. Add two fractions with denominators of 10 and 100.	4B	12	1–4
4.NF.C.6	Use and interpret decimal notation for fractions with denominators 10 or 100.	4B	12	1–4
4.NF.C.7	Use decimal notation for fractions with denominators 10 or 100. Compare two decimals to hundredths place by reasoning about their size, and record the comparison using the symbols >, =, or <.	4B	12	8
Geometric Reasoning and Measurement				
Draw and identify lines and angles, and classify shapes by properties of their lines and angles.				
4.GM.A.1	Explore, investigate, and draw points, lines, line segments, rays, angles, and perpendicular and parallel lines. Identify these in two-dimensional figures.	3A	12	2, 3
		4B	15	1
			16	1, 2

Standard	Standard Description	DM	Chapter	Lesson
	Lines, line segments, and rays are not named in DM, but the Teacher's Guide does include definitions that students in elementary grades can use, should instructors wish to add that. Angles are introduced in DM 3.			
4.GM.A.2	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.	3B	12	4, 5, 6
		4B	16	4, 5
4.GM.A.3	Recognize and draw a line of symmetry for a two dimensional figure.	4B	16	5
Solve problems involving measurement and conversion of measurements.				
4.GM.B.4	Know relative sizes of measurement units and express measurements in a larger unit in terms of a smaller unit.	4B	10	1–8
			11	1, 2
4.GM.B.5	Apply knowledge of the four operations and relative size of measurement units to solve problems in authentic contexts that include familiar fractions or decimals.	4B	10	7, 8
			11	1, 2
4.GM.B.6	Apply the area and perimeter formulas for rectangles in authentic contexts and mathematical problems.	4B	11	1–5
Geometric measurement: understand concepts of angle and measure angles.				
4.GM.C.7	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. Understand and apply concepts of angle measurement.	3B	12	2, 3
		4B	15	1
4.GM.C.8	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	4B	15	2, 3
4.GM.C.9	Recognize angle measure as additive. 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.	4B	15	4, 5, 6

Standard	Standard Description	DM	Chapter	Lesson
Data Reasoning				
Pose investigative questions and collect/consider data.				
4.DR.A.1	Generate questions to investigate situations within the classroom, school or community. Determine strategies for collecting or considering data involving addition and subtraction of fractions that can naturally answer questions by using information presented in line plots.	4A	9	3
Analyze, represent, and interpret data.				
4.DR.B.2	Analyze line plots to display a distribution of numerical measurement data, which include displays of data sets of fractional measurements with the same denominator. Interpret information presented to answer investigative questions.	4A	9	3

Grade 5

Standard	Standard Description	DM	Chapter	Lesson
Algebraic Reasoning: Operations				
Write and interpret numerical expressions.				
5.OA.A.1	Write and evaluate numerical expressions that include parentheses.	5A	2	1–4
5.OA.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.OA.B.3	Generate two numerical patterns using two given rules. Identify and analyze relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns and graph them on a coordinate plane.	5B	12	5
Numeric Reasoning: Base Ten Arithmetic				
Understand the place value system.				
5.NBT.A.1	Recognize 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.NBT.A.2	Use whole number exponents to denote powers of 10 and explain the patterns in placement of digits that occur when multiplying and/or dividing whole numbers and decimals by powers of 10. Students do not use exponents in DM 5.	5A	1	6, 7
5.NBT.A.3	Read, write, and compare decimals to thousandths	5B	9	3
5.NBT.A.4	Use place value understanding to round decimals to any place.	5B	9	4

Standard	Standard Description	DM	Chapter	Lesson
Perform operations with multi-digit whole numbers and with decimals to hundredths.				
5.NBT.B.5	Fluently multiply multi-digit whole numbers using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.	5A	3	1–3
5.NBT.B.6	Use a variety of representations and strategies to find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors. Student divide by a 1-digit whole number in DM 4A, and by a 2-digit number in DM 5A.	5A	3	4–8
5.NBT.B.7	Use a variety of representations and strategies to add, subtract, multiply, and divide decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.	4B	13	1–3
		5B	9	9
			10	1–9
Numeric Reasoning: Fractions				
Use equivalent fractions as a strategy to add and subtract fractions.				
5.NF.A.1	Add and subtract fractions with unlike denominators, including common fractions larger than one and mixed numbers.	4A	7	1–7
		5A	4	1–9
5.NF.A.2	Solve problems in authentic contexts involving addition and subtraction of fractions with unlike denominators, including common fractions larger than one and mixed numbers.	5A	4	1–9
Apply and extend previous understandings of multiplication and division.				
5.NF.B.3	Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve problems in authentic contexts involving division of whole numbers that result in answers that are common fractions or mixed numbers.	4A	6	7
		5A	4	1

Standard	Standard Description	DM	Chapter	Lesson
5.NF.B.4	Apply and extend previous understanding and strategies of multiplication to multiply a fraction or whole number by a fraction. Multiply fractional side lengths to find areas of rectangles, and represent fractional products as rectangular areas.	4A	8	4, 5, 6
		5A	5	1–8
			7	2
5.NF.B.5	Apply and extend previous understandings of multiplication and division to represent and calculate multiplication and division of fractions. Interpret multiplication as scaling (resizing) by comparing the size of products of two factors.	5A	5	1–8
			6	1–7
5.NF.B.6	Solve problems in authentic contexts involving multiplication of common fractions and mixed numbers.	4A	8	7, 8
		5A	5	8
			7	1–7
5.NF.B.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions, including solving problems in authentic contexts.	5A	6	1–7
Geometric Reasoning and Measurement				
Graph points on the coordinate plane to solve real-world and mathematical problems.				
5.GM.A.1	Graph and name coordinate points in the first quadrant using the standard (x, y) notation. Understand the coordinate points values represent the distance traveled along the horizontal x-axis and vertical y-axis.	5B	12	4
5.GM.A.2	Represent authentic contexts and mathematical problems by graphing points in the first quadrant of the coordinate plane. Interpret the meaning of the coordinate values based on the context of a given situation.	4A	9	1, 2
		5B	12	4, 5, 6

Standard	Standard Description	DM	Chapter	Lesson
Classify two-dimensional figures into categories based on their properties.				
5.GM.B.3	Classify two-dimensional figures within a hierarchy based on their geometrical properties, and explain the relationship across and within different categories of these figures.	4B	16	4
		5B	11	3, 6
Convert like measurement units within a given measurement system.				
5.GM.C.4	Convert between different-sized standard measurement units within a given measurement system. Use these conversions in solving multi-step problems in authentic contexts.	4B	10	1–9
		5A	7	1
		5B	9	8
Geometric measurement: understand concepts of volume.				
5.GM.D.5	Recognize that volume is a measurable attribute of solid figures.	5A	8	1
5.GM.D.6	Measure the volume of a rectangular prism by counting unit cubes using standard and nonstandard units.	5A	8	2
5.GM.D.7	Relate volume of rectangular prisms to the operations of multiplication and addition. Solve problems in authentic contexts involving volume using a variety of strategies.	5A	8	2–8
Data Reasoning				
Pose investigative questions and collect/consider data.				
5.DR.A.1	Generate questions to investigate situations within the classroom, school or community. Determine strategies for collecting or considering data involving operations with fractions for this grade that can naturally answer questions by using information presented in line plots.	5B	12	3
Analyze, represent, and interpret data.				
5.DR.B.2	Analyze graphical representations and describe the distribution of the numerical data through line plots or categorical data through bar graphs. Interpret	3A	7	1, 2
		4A	9	1, 2, 3
		5B	12	1, 2, 3

Standard	Standard Description	DM	Chapter	Lesson
	information presented to answer investigative questions. DM 5 only covers line plots and straight-line graphs. DM 3 covers bar graphs. DM 4 includes line graphs and bar graphs.			