

ARCHDIOCESE OF MIAMI

MATHEMATICS CURRICULUM MAP

Kindergarten through 8th Grade

Revised, Spring 2025



This curriculum map is aligned with the Florida B.E.S.T. (Benchmarks for Excellent Student Thinking) Standards for Mathematics and designed to guide Catholic elementary educators in delivering comprehensive, standards-based mathematics education over the course of four quarters. Rooted in our Catholic identity and commitment to academic excellence, this map ensures that instruction is developmentally appropriate and supports teachers in planning purposeful lessons, differentiating instruction, and assessing student progress with consistency and clarity, while nurturing their growth as faithful, competent, and compassionate learners.

Mathematical Thinking and Reasoning Standards
Number Sense and Operations
Algebraic Reasoning
Measurement
Geometric Reasoning

Mathematical Thinking and Reasoning Standards	
MA.K12.MTR.1.1	Actively participate in effortful learning both individually and collectively.
	Mathematicians who participate in effortful learning both individually and with others: • Analyze the problem in a way that makes sense given the task. • Ask questions that will help with solving the task. • Build perseverance by modifying methods as needed while solving a challenging task. • Stay engaged and maintain a positive mindset when working to solve tasks. • Help and support each other when attempting a new method or approach.
MA.K12.MTR.2.1	Demonstrate understanding by representing problems in multiple ways.
	Mathematicians who demonstrate understanding by representing problems in multiple ways: • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose.
MA.K12.MTR.3.1	Complete tasks with mathematical fluency.
	Mathematicians who complete tasks with mathematical fluency: • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations.
MA.K12.MTR.4.1	Engage in discussions that reflect on the mathematical thinking of self and others.

Data Analysis and Probability

Fractions

Functions

	Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others: • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence.
MA.K12.MTR.5.1	Use patterns and structure to help understand and connect mathematical concepts.
	"Mathematicians who use patterns and structure to help understand and connect mathematical concepts: • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations."
MA.K12.MTR.6.1	Assess the reasonableness of solutions.
	Mathematicians who assess the reasonableness of solutions: • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context.
MA.K12.MTR.7.1	Apply mathematics to real-world contexts.
	Mathematicians who apply mathematics to real-world contexts: • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
	<i>Number Sense</i>	<i>MA.K.NSO.1</i>	<i>Develop an understanding for counting using objects in a set.</i>					
1		MA.K.NSO.1.1	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. <i>State the number of objects in a rearrangement of that group without recounting.</i>	Clarification 1: Instruction focuses on developing an understanding of cardinality and one-to-one correspondence. Clarification 2: Instruction includes counting objects and pictures presented in a line, rectangular array, circle or scattered arrangement. Objects presented in a scattered arrangement are limited to 10. Clarification 3: Within this benchmark, the expectation is not to write the number in word form.		MAFS.K.CC.1.1		
1		MA.K.NSO.1.2	Given a number from 0 to 20, count out that many objects.	Clarification 1: Instruction includes giving a number verbally or with a written numeral.		MAFS.K.CC.1.2		
1		MA.K.NSO.1.3	<i>Identify positions of objects within a sequence using the words “first,” “second,” “third,” “fourth” or “fifth.”</i>	New to Kindergarten Clarification 1: Instruction includes the understanding that rearranging a group of objects does not change the total number of objects but may change the order of an object in that group.				
2		MA.K.NSO.1.4	Compare the number of objects from 0 to 20 in two groups using the terms less than, equal to or greater than.	Clarification 1: Instruction focuses on matching, counting and the connection to addition and subtraction. Clarification 2: Within this benchmark, the expectation is not to use the relational symbols =, > or <.		MAFS.K.CC.2.4		
	<i>Number Sense</i>	<i>MA.K.NSO.2</i>	<i>Recite number names sequentially within 100 and develop an understanding for place value.</i>					
1		MA.K.NSO.2.1	Recite the number names to 100 by ones and by tens. Starting at a given number, count forward within 100 and <i>backward within 20.</i>	<i>Counting backward within 20 is new to Kindergarten</i> Clarification 1: When counting forward by ones, students are to say the number names in the standard order and understand that each successive number refers to a quantity that is one larger. When counting backward, students are to understand that each succeeding number in the count sequence refers to a quantity that is one less. Clarification 2: Within this benchmark, the expectation is to recognize and count to 100 by the end of Kindergarten.				
3		MA.K.NSO.2.2	Represent whole numbers from 10 to 20, using <i>a unit of ten and a group of ones</i> , with objects, drawings and expressions or equations.					

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3		MA.K.NSO.2.3	Locate, order and compare numbers from 0 to 20 using the number line and terms less than, equal to or greater than.	Number range is now from 0 to 20 and the use of the number line to compare is new to Kindergarten. Clarification 1: Within this benchmark, the expectation is not to use the relational symbols =, > or <. Clarification 2: When comparing numbers from 0 to 20, both numbers are plotted on the same number line. Clarification 3: When locating numbers on the number line, the expectation includes filling in a missing number by counting from left to right on the number line.				
	Number Sense	MA.K.NSO.3	<i>Develop an understanding of addition and subtraction operations with one- digit whole numbers.</i>					
3		MA.K.NSO.3.1	Explore addition of two whole numbers from 0 to 10, and related subtraction facts.	Clarification 1: Instruction includes objects, fingers, drawings, number lines and equations. Clarification 2: Instruction focuses on the connection that addition is “putting together” or “counting on” and that subtraction is “taking apart” or “taking from.” Refer to Situations Involving Operations with Numbers (Appendix A). Clarification 3: Within this benchmark, it is the expectation that one problem can be represented in multiple ways and understanding how the different representations are related to each other.				
3		MA.K.NSO.3.2	Add two one-digit whole numbers with sums from 0 to 10 and subtract using related facts with procedural reliability.	Number range is now from 0 to 10 and instruction focuses on helping a student choose a method they can use reliably. Clarification 1: Instruction focuses on helping a student choose a method they can use reliably.				
	Algebraic Reasoning	MA.K.AR.1	<i>Represent and solve addition problems with sums between 0 and 10 and subtraction problems using related facts.</i>					
3		MA.K.AR.1.1	For any number from 1 to 9, find the number that makes 10 when added to the given number.	Clarification 1: Instruction includes creating a ten using manipulatives, number lines, models and drawings.		MAFS.K.OA.1.1		
2		MA.K.AR.1.2	Given a number from 0 to 10, find the different ways it can be represented as the sum of two numbers.	Clarification 1: Instruction includes the exploration of finding possible pairs to make a sum using manipulatives, objects, drawings and expressions; and understanding how the different representations are related to each other.				

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2		MA.K.AR.1.3	Solve addition and subtraction real-world problems using objects, drawings or equations to represent the problem.	Clarification 1: Instruction includes understanding the context of the problem, as well as the quantities within the problem. Clarification 2: Students are not expected to independently read word problems. Clarification 3: Addition and subtraction are limited to sums within 10 and related subtraction facts. Refer to Situations Involving Operations with Numbers				
	<i>Algebraic Reasoning</i>	<i>MA.K.AR.2</i>	<i>Develop an understanding of the equal sign.</i>					
3		MA.K.AR.2.1	Explain why addition or subtraction equations are true using objects or drawings.	New to Kindergarten Clarification 1: Instruction focuses on the understanding of the equal sign. Clarification 2: Problem types are limited to an equation with two or three terms. The sum or difference can be on either side of the equal sign. Clarification 3: Addition and subtraction are limited to sums within 20 and related subtraction facts.				
	<i>Measurement</i>	<i>MA.K.M.1</i>	<i>Identify and compare measurable attributes of objects.</i>					
4		MA.K.M.1.1	Identify the attributes of a single object that can be measured such as length, volume or weight.	Concept of volume is new to Kindergarten. Clarification 1: Within this benchmark, measuring is not required.		MAFS.K.MD.1.1		
4		MA.K.M.1.2	Directly compare two objects that have an attribute which can be measured in common. Express the comparison using language to describe the difference.	Clarification 1: To directly compare length, objects are placed next to each other with one end of each object lined up to determine which one is longer. Clarification 2: Language to compare length includes short, shorter, long, longer, tall, taller, high or higher. Language to compare volume includes has more, has less, holds more, holds less, more full, less full, full, empty, takes up more space or takes up less space. Language to compare weight includes heavy, heavier, light, lighter, weighs more or weighs less.		MAFS.K.MD.1.2		
4		MA.K.M.1.3	Express the length of an object, up to 20 units long, as a whole number of lengths by laying non-standard objects end to end with no gaps or overlaps.	Measurement lengths up to 20 units long is new to Kindergarten. Clarification 1: Non-standard units of measurement are units that are not typically used, such as paper clips or colored tiles. To measure with non-standard units, students lay multiple copies of the same object end to end with no gaps or overlaps. The length is shown by the number of objects needed.				

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	Geometric Reasoning	MA.K.GR.1	Identify, compare and compose two- and three-dimensional figures.					
4		MA.K.GR.1.1	Identify two- and three-dimensional figures regardless of their size or orientation. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders.	Clarification 1: Instruction includes a wide variety of circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders. Clarification 2: Instruction includes a variety of non-examples that lack one or more defining attributes. Clarification 3: Two-dimensional figures can be either filled, outlined or both.		MAFS.K.G.1.1–3		
4		MA.K.GR.1.2	Compare two-dimensional figures based on their similarities, differences and positions. Sort two-dimensional figures based on their similarities and differences. Figures are limited to circles, triangles, rectangles and squares.	Clarification 1: Instruction includes exploring figures in a variety of sizes and orientations. Clarification 2: Instruction focuses on using informal language to describe relative positions and the similarities or differences between figures when comparing and sorting.		MAFS.K.G.2.4–6		
4		MA.K.GR.1.3	Compare three-dimensional figures based on their similarities, differences and positions. Sort three-dimensional figures based on their similarities and differences. Figures are limited to spheres, cubes, cones and cylinders.	Clarification 1: Instruction includes exploring figures in a variety of sizes and orientations. Clarification 2: Instruction focuses on using informal language to describe relative positions and the similarities or differences between figures when comparing and sorting.		MAFS.K.G.2.4–6		
4		MA.K.GR.1.4	Find real-world objects that can be modeled by a given two- or three- dimensional figure. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders.					
4		MA.K.GR.1.5	Combine two-dimensional figures to form a given composite figure . Figures used to form a composite shape are limited to triangles, rectangles and squares.	Clarification 1: This benchmark is intended to develop the understanding of spatial relationships.				
	Data Analysis & Probability	MA.K.DP.1	Develop an understanding for collecting, representing and comparing data.					
1		MA.K.DP.1.1	Collect and sort objects into categories and compare the categories by counting the objects in each category. Report the results verbally, with a written numeral or with drawings.	Report the results verbally, with a written numeral or with drawings is new to Kindergarten. Clarification 1: Instruction focuses on supporting work in counting. Clarification 2: Instruction includes geometric figures that can be categorized using their defining attributes. Clarification 3: Within this benchmark, it is not the expectation for students to construct formal representations or graphs on their own.		MAFS.K.MD.2.3		

[Florida's B.E.S.T. Mathematics Standards](#)

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Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
	<i>Number Sense and Operations</i>	<i>MA.1.NSO.1</i>	<i>Extend counting sequences and understand the place value of two-digit numbers.</i>					
2		MA.1.NSO.1.1	Starting at a given number, count forward and backwards within 120 by ones. Skip count by 2s to 20 and by 5s to 100.	Counting backwards within 120 by ones, and skip counting by 2s to 20 and by 5s to 100 are new to grade 1. Clarification 1: Instruction focuses on the connection to addition as “counting on” and subtraction as “counting back.” Clarification 2: Instruction also focuses on the recognition of patterns within skip counting which helps build a foundation for multiplication in later grades. Clarification 3: Instruction includes recognizing counting sequences using visual charts, such as a 120 chart, to emphasize base 10 place value.		MAFS.1.NBT.1.1		
3		MA.1.NSO.1.2	Read numbers from 0 to 100 written in standard form, expanded form and word form. Write numbers from 0 to 100 using standard form and expanded form.	Reading numbers in word form and expanded form, and writing numbers in expanded form are new to grade 1.		MAFS.1.NBT.2.2		
3		MA.1.NSO.1.3	Compose and decompose two-digit numbers in multiple ways using tens and ones. Demonstrate each composition or decomposition with objects, drawings and expressions or equations.			MAFS.1.NBT.2.5		
3		MA.1.NSO.1.4	Plot, order and compare whole numbers up to 100.	Plotting and ordering numbers are new to grade 1. Clarification 1: When comparing numbers, instruction includes using a number line and using place values of the tens and ones digits. Clarification 2: Within this benchmark, the expectation is to use terms (less than, greater than, between, or equal to) and symbols (<,>=).				
	<i>Number Sense and Operations</i>	<i>MA.1.NSO.2</i>	<i>Develop an understanding of addition and subtraction operations with one- and two-digit numbers.</i>					

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1		MA.1.NSO.2.1	Recall addition facts with sums to 10 and related subtraction facts with automaticity .	Recall with automaticity is new to grade 1.		MAFS.1.OA.1.1		
1		MA.1.NSO.2.2	Add two whole numbers with sums from 0 to 20, and subtract using related facts with procedural reliability.	Clarification 1: Instruction focuses on helping a student choose a method they can use reliably. Clarification 2: Instruction includes situations involving adding to, putting together, comparing and taking from.		MAFS.1.OA.1.3		
3		MA.1.NSO.2.3	Identify the number that is one more, one less, ten more and ten less than a given two-digit number.	Clarification 1: Instruction focuses on helping a student choose a method they can use reliably		MAFS.1.OA.1.4		
3		MA.1.NSO.2.4	Explore the addition of a two-digit number and a one-digit number with sums to 100.	Clarification 1: Instruction focuses on combining ones and tens and composing new tens from ones, when needed. Clarification 2: Instruction includes the use of manipulatives, number lines, drawings or models.		MAFS.1.OA.3.7		
3		MA.1.NSO.2.5	Explore subtraction of a one-digit number from a two-digit number.	New to grade 1. Clarification 1: Instruction focuses on utilizing the number line as a tool for subtraction through “counting on” or “counting back.” The process of counting on highlights subtraction as a missing addend problem. Clarification 2: Instruction includes the use of manipulatives, drawings or equations to decompose tens and regroup ones, when needed.		MAFS.1.OA.3.8		
	Fractions	MA.1.FR.1	Develop an understanding of fractions by partitioning shapes into halves and fourths.					
		MA.1.FR.1.1	Partition circles and rectangles into two and four equal-sized parts. Name the parts of the whole using appropriate language including halves or fourths.	Clarification 1: This benchmark does not require writing the equal sized parts as a fraction with a numerator and denominator.				
	Algebraic Reasoning	MA.1.AR.1	Solve addition problems with sums between 0 and 20 and subtraction problems using related facts.					

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		MA.1.AR.1.1	Apply properties of addition to find a sum of three or more whole numbers.	Clarification 1: Within this benchmark, the expectation is to apply the associative and commutative properties of addition. It is not the expectation to name the properties or use parentheses. Refer to Properties of Operations, Equality and Inequality (Appendix D). Clarification 2: Instruction includes emphasis on using the properties to make a ten when adding three or more numbers. Clarification 3: Addition is limited to sums within 20.				
1		MA.1.AR.1.2	Solve addition and subtraction real-world problems using objects, drawings or equations to represent the problem.	Clarification 1: Instruction includes understanding the context of the problem, as well as the quantities within the problem. Clarification 2: Students are not expected to independently read word problems. Clarification 3: Addition and subtraction are limited to sums within 20 and related subtraction facts.		MAFS.1.OA.1.2		
	<i>Algebraic Reasoning</i>	<i>MA.1.AR.2</i>	Develop an understanding of the relationship between addition and subtraction.					
2		MA.1.AR.2.1	Restate a subtraction problem as a missing addend problem using the relationship between addition and subtraction.	Clarification 1: Addition and subtraction are limited to sums within 20 and related subtraction facts.		MAFS.1.MD.3.3		
2		MA.1.AR.2.2	Determine and explain if equations involving addition or subtraction are true or false.	Clarification 1: Instruction focuses on understanding of the equal sign. Clarification 2: Problem types are limited to an equation with no more than four terms. The sum or difference can be on either side of the equal sign. Clarification 3: Addition and subtraction are limited to sums within 20 and related subtraction facts				
2		MA.1.AR.2.3	Determine the unknown whole number in an addition or subtraction equation, relating three whole numbers, with the unknown in any position.	Clarification 1: Instruction begins the development of algebraic thinking skills where the symbolic representation of the unknown uses any symbol other than a letter. Clarification 2: Problems include the unknown on either side of the equal sign. Clarification 3: Addition and subtraction are limited to sums within 20 and related subtraction facts.				

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	<i>Measurement</i>	<i>MA.1.M.1</i>	<i>Compare and measure the length of objects.</i>					
4		MA.1.M.1.1	Estimate the length of an object to the nearest inch. Measure the length of an object to the nearest inch or centimeter.	Measuring an object to the nearest centimeter is new to grade 1. Clarification 1: Instruction emphasizes measuring from the zero point of the ruler. The markings on the ruler indicate the unit of length by marking equal distances with no gaps or overlaps. Clarification 2: When estimating length, the expectation is to give a reasonable number of inches for the length of a given object		MAFS.1.MD.1.1		
4		MA.1.M.1.2	Compare and order the length of up to three objects using direct and indirect comparison.	Clarification 1: When directly comparing objects, the objects can be placed side by side or they can be separately measured in the same units and the measurements can be compared. Clarification 2: Two objects can be compared indirectly by directly comparing them to a third object.		MAFS.1.MD.1.2		
		<i>MA.1.M.2</i>	<i>Tell time and identify the value of coins and combinations of coins and dollar bills.</i>					
4		MA.1.M.2.1	Using analog and digital clocks, tell and write time in hours and half-hours.	Clarification 1: Within this benchmark, the expectation is not to understand military time or to use a.m. or p.m. Clarification 2: Instruction includes the connection to partitioning circles into halves and to semicircles.		MAFS.1.MD.3.3		
4		MA.1.M.2.2	Identify pennies, nickels, dimes and quarters, and express their values using the ¢ symbol. State how many of each coin equal a dollar.	Clarification 1: Instruction includes the recognition of both sides of a coin. Clarification 2: Within this benchmark, the expectation is not to use decimal values.				

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4		MA.1.M.2.3	Find the value of combinations of pennies, nickels and dimes up to one dollar, and the value of combinations of one, five and ten dollar bills up to \$100.	Finding the value of combinations of coins with nickels and the combination of one, five and ten dollar bills are new to grade 1. Clarification 1: Instruction includes the identification of a one, five and ten-dollar bill and the computation of the value of combinations of pennies, nickels and dimes or one, five and ten dollar bills. Clarification 2: Instruction focuses on the connection to place value and skip counting. Clarification 3: Within this benchmark, the expectation is not to use decimal values or to find the value of a combination of coins and dollars.				
	Geometric Reasoning	MA.1.GR.1	Identify and analyze two- and three-dimensional figures based on their defining attributes.					
4		MA.1.GR.1.1	Identify, compare and sort two- and three-dimensional figures based on their defining attributes. Figures are limited to circles, semi-circles, triangles, rectangles, squares, trapezoids, hexagons, spheres, cubes, rectangular prisms, cones and cylinders.	Using formal and informal language to describe the defining attributes of figures when comparing and sorting; identifying two- and three-dimensional figures; and the addition of semi-circles and spheres are new to grade 1. Clarification 1: Instruction focuses on the defining attributes of a figure: whether it is closed or not; number of vertices, sides, edges or faces; and if it contains straight, curved or equal length sides or edges. Clarification 2: Instruction includes figures given in a variety of sizes, orientations and non-examples that lack one or more defining attributes. Clarification 3: Within this benchmark, the expectation is not to sort a combination of two- and three-dimensional figures at the same time or to define the attributes of trapezoids. Clarification 4: Instruction includes using formal and informal language to describe the defining attributes of figures when comparing and sorting.		MAFS.1.G.1.1		

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4		MA.1.GR.1.2	Sketch two-dimensional figures when given defining attributes. Figures are limited to triangles, rectangles, squares and hexagons.			MAFS.1.G.1.2		
4		MA.1.GR.1.3	Compose and decompose two- and three-dimensional figures. Figures are limited to semi-circles, triangles, rectangles, squares, trapezoids, hexagons, cubes, rectangular prisms, cones and cylinders.	Clarification 1: Instruction focuses on the understanding of spatial relationships relating to part-whole, and on the connection to breaking apart numbers and putting them back together. Clarification 2: Composite figures are composed without gaps or overlaps. Clarification 3: Within this benchmark, it is not the expectation to compose two- and three dimensional figures at the same time.		MAFS.1.G.1.2		
4		MA.1.GR.1.4	Given a real-world object, identify parts that are modeled by two- and three-dimensional figures. Figures are limited to semi-circles, triangles, rectangles, squares and hexagons, spheres, cubes, rectangular prisms, cones and cylinders.	New to grade 1.				
	Data Analysis and Probability	MA.1.DP.1	Collect, represent and interpret data using pictographs and tally marks.	Within Data Analysis and Probability, tally marks, and connecting them to skip counting, are new to grade 1. Clarification 1: Instruction includes connecting tally marks to counting by 5s. Clarification 2: Data sets include geometric figures that are categorized using their defining attributes and data from the classroom or school. Clarification 3: Pictographs are limited to single-unit scales.				
4		MA.1.DP.1.1	Collect data into categories and represent the results using tally marks or pictographs.	Clarification 1: Instruction includes connecting tally marks to counting by 5s. Clarification 2: Data sets include geometric figures that are categorized using their defining attributes and data from the classroom or school. Clarification 3: Pictographs are limited to single-unit scales.				

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2		MA.1.DP.1.2	Interpret data represented with tally marks or pictographs by calculating the total number of data points and comparing the totals of different categories.	Clarification 1: Instruction focuses on the connection to addition and subtraction when calculating the total and comparing, respectively.				

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1	<i>Number Sense and Operations</i>	<i>MA.2.NSO.1</i>	<i>Understand the place value of three-digit numbers.</i>					
1		MA.2.NSO.1.1	Read and write numbers from 0 to 1,000 using standard form, expanded form and word form.			MAFS.2.NBT.1.1		
1		MA.2.NSO.1.2	Compose and decompose three-digit numbers in multiple ways using hundreds, tens and ones. Demonstrate each composition or decomposition with objects, drawings and expressions or equations.			MAFS.2.NBT.1.2		
1		MA.2.NSO.1.3	Plot, order and compare whole numbers up to 1,000.	Plotting and ordering is new to grade 2. Clarification 1: When comparing numbers, instruction includes using a number line and using place values of the hundreds, tens and ones digits. Clarification 2: Within this benchmark, the expectation is to use terms (e.g., less than, greater than, between or equal to) and symbols ($<$, $>$ or $=$).		MAFS.2.NBT.1.3		
1		MA.2.NSO.1.4	Round whole numbers from 0 to 100 to the nearest 10.	New to grade 2. Clarification 1: Within the benchmark, the expectation is to understand that rounding is a process that produces a number with a similar value that is less precise but easier to use.		MAFS.2.NBT.2.4		
1/2	<i>Number Sense and Operations</i>	<i>MA.2.NSO.2</i>	<i>Add and subtract two- and three-digit whole numbers.</i>					
1/2		MA.2.NSO.2.1	Recall addition facts with sums to 20 and related subtraction facts with automaticity.			MAFS.2.OA.2.2		

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1/2		MA.2.NSO.2.2	Identify the number that is ten more, ten less, one hundred more and one hundred less than a given three-digit number.			MAFS.2.NBT.2.5		
1/2		MA.2.NSO.2.3	Add two whole numbers with sums up to 100 with procedural reliability. Subtract a whole number from a whole number, each no larger than 100, with procedural reliability.	Clarification 1: Instruction focuses on helping a student choose a method they can use reliably.		MAFS.2.NBT.2.6		
1/2		MA.2.NSO.2.4	Explore the addition of two whole numbers with sums up to 1,000. Explore the subtraction of a whole number from a whole number, each no larger than 1,000.	Clarification 1: Instruction includes the use of manipulatives, number lines, drawings or properties of operations or place value. Clarification 2: Instruction focuses on composing and decomposing ones, tens and hundreds when needed.		MAFS.2.NBT.2.7		
3	<i>Fractions</i>	<i>MA.2.FR.1</i>	<i>Develop an understanding of fractions.</i>					
3		MA.2.FR.1.1	Partition circles and rectangles into two, three or four equal-sized parts. Name the parts using appropriate language, and describe the whole as two halves, three thirds or four fourths.	Clarification 1: Within this benchmark, the expectation is not to write the equal-sized parts as a fraction with a numerator and denominator. Clarification 2: Problems include mathematical and real-world context.		MAFS.2.G.3.3		
3		MA.2.FR.1.2	Partition rectangles into two, three or four equal-sized parts in two different ways showing that equal-sized parts of the same whole may have different shapes.	Partitioning in two different ways to show equal size parts is new to grade 2.				
2	<i>Algebraic Reasoning</i>	<i>MA.2.AR.1</i>	<i>Solve addition problems with sums between 0 and 100 and related subtraction problems.</i>					

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
2		MA.2.AR.1.1	Solve one- and two-step addition and subtraction real-world problems.	Clarification 1: Instruction includes understanding the context of the problem, as well as the quantities within the problem. Clarification 2: Problems include creating real-world situations based on an equation. Clarification 3: Addition and subtraction are limited to sums up to 100 and related differences.		MAFS.2.OA.1.1		
2	<i>Algebraic Reasoning</i>	MA.2.AR.2	<i>Demonstrate an understanding of equality and addition and subtraction.</i>					
2		MA.2.AR.2.1	Determine and explain whether equations involving addition and subtraction are true or false.	New to grade 2. Clarification 1: Instruction focuses on understanding of the equal sign. Clarification 2: Problem types are limited to an equation with three or four terms. The sum or difference can be on either side of the equal sign. Clarification 3: Addition and subtraction are limited to sums up to 100 and related differences.		MAFS.2.MD.3.7		
2		MA.2.AR.2.2	Determine the unknown whole number in an addition or subtraction equation, relating three or four whole numbers, with the unknown in any position.	Clarification 1: Instruction extends the development of algebraic thinking skills where the symbolic representation of the unknown uses any symbol other than a letter. Clarification 2: Problems include having the unknown on either side of the equal sign. Clarification 3: Addition and subtraction are limited to sums up to 100 and related differences				
2	<i>Algebraic Reasoning</i>	MA.2.AR.3	<i>Develop an understanding of multiplication.</i>					
1		MA.2.AR.3.1	Represent an even number using two equal groups or two equal addends. Represent an odd number using two equal groups with one left over or two equal addends plus 1.	Clarification 1: Instruction focuses on the connection of recognizing even and odd numbers using skip counting, arrays and patterns in the ones place. Clarification 2: Addends are limited to whole numbers less than or equal to 12.				

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1		MA.2.AR.3.2	Use repeated addition to find the total number of objects in a collection of equal groups. Represent the total number of objects using rectangular arrays and equations.	Clarification 1: Instruction includes making a connection between arrays and repeated addition, which builds a foundation for multiplication. Clarification 2: The total number of objects is limited to 25.				
3	Measurement	MA.2.M.1	<i>Measure the length of objects and solve problems involving length.</i>					
3		MA.2.M.1.1	Estimate and measure the length of an object to the nearest inch, foot, yard, centimeter or meter by selecting and using an appropriate tool.	Clarification 1: Instruction includes seeing rulers and tape measures as number lines. Clarification 2: Instruction focuses on recognizing that when an object is measured in two different units, fewer of the larger units are required. When comparing measurements of the same object in different units, measurement conversions are not expected. Clarification 3: When estimating the size of an object, a comparison with an object of known size can be used.		MAFS.2.MD.1.1		
3		MA.2.M.1.2	Measure the lengths of two objects using the same unit and determine the difference between their measurements.	Clarification 1: Within this benchmark, the expectation is to measure objects to the nearest inch, foot, yard, centimeter or meter.		MAFS.2.MD.1.2		
3		MA.2.M.1.3	Solve one- and two-step real-world measurement problems involving addition and subtraction of lengths given in the same units.	Clarification 1: Addition and subtraction problems are limited to sums within 100 and related differences.		MAFS.2.MD.1.4		
3	Measurement	MA.2.M.2	<i>Tell time and solve problems involving money.</i>					

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
3		MA.2.M.2.1	Using analog and digital clocks, tell and write time to the nearest five minutes using a.m. and p.m. appropriately. Express portions of an hour using the fractional terms half an hour, half past, quarter of an hour, quarter after and quarter til.	Expressing portions of an hour using the fractional terms half an hour, half past, quarter of an hour, quarter after and quarter til, and the use of a.m. and p.m. are new to grade 2. Clarification 1: Instruction includes the connection to partitioning of circles and to the number line. Clarification 2: Within this benchmark, the expectation is not to understand military time.		MAFS.2.MD.3.7		
3		MA.2.M.2.2	Solve one- and two-step addition and subtraction real-world problems involving either dollar bills within \$100 or coins within 100¢ using \$ and ¢ symbols appropriately.	Clarification 1: Within this benchmark, the expectation is not to use decimal values. Clarification 2: Addition and subtraction problems are limited to sums within 100 and related differences.		MAFS.2.MD.3.8		
4	<i>Geometric Reasoning</i>	<i>MA.2.GR.1</i>	<i>Identify and analyze two-dimensional figures and identify lines of symmetry.</i>					
4		MA.2.GR.1.1	Identify and draw (using rulers) two-dimensional figures based on their defining attributes. Figures are limited to triangles, rectangles, squares, pentagons, hexagons and octagons.	Octagons and drawing using rulers and straight edges are new to grade 2. Clarification 1: Within this benchmark, the expectation includes the use of rulers and straight edges.		MAFS.2.G.1.1		
4		MA.2.GR.1.2	Categorize two-dimensional figures based on the number and length of sides, number of vertices, whether they are closed or not and whether the edges are curved or straight.	New to grade 2. Clarification 1: Instruction focuses on using formal and informal language to describe defining attributes when categorizing.		MAFS.2.G.1.2		
4		MA.2.GR.1.3	Identify line(s) of symmetry for a two-dimensional figure.	New to grade 2. Clarification 1: Instruction focuses on the connection between partitioning two-dimensional figures and symmetry. Clarification 2: Problem types include being given an image and determining whether a given line is a line of symmetry or not.		MAFS.2.G.1.3		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
4	<i>Geometric Reasoning</i>	MA.2.GR.2	<i>Describe perimeter and find the perimeter of polygons.</i>					
2		MA.2.GR.2.1	Explore perimeter as an attribute of a figure by placing unit segments along the boundary without gaps or overlaps. Find perimeters of rectangles by counting unit segments.	New to grade 2. Clarification 1: Instruction emphasizes the conceptual understanding that perimeter is an attribute that can be measured for a two-dimensional figure. Clarification 2: Instruction includes real-world objects, such as picture frames or desktops.				
2		MA.2.GR.2.2	Find the perimeter of a polygon with whole-number side lengths. Polygons are limited to triangles, rectangles, squares and pentagons.	New to grade 2. Clarification 1: Instruction includes the connection to the associative and commutative properties of addition. Refer to Properties of Operations, Equality and Inequality (Appendix D). Clarification 2: Within this benchmark, the expectation is not to use a formula to find perimeter. Clarification 3: Instruction includes cases where the side lengths are given or measured to the nearest unit. Clarification 4: Perimeter cannot exceed 100 units and responses include the appropriate units.				
2	Data Analysis and Probability	MA.2.DP.1	<i>Collect, categorize, represent and interpret data using appropriate titles, labels and units.</i>					
2		MA.2.DP.1.1	Collect, categorize and represent data using tally marks, tables, pictographs or bar graphs. Use appropriate titles, labels and units.	Scales using fives and tens are new to grade 2. Clarification 1: Data displays can be represented both horizontally and vertically. Scales on graphs are limited to ones, fives or tens.		MAFS.2.MD.4.10		
2		MA.2.DP.1.2	Interpret data represented with tally marks, tables, pictographs or bar graphs including solving addition and subtraction problems.	Scales using fives and tens are new to grade 2. Clarification 1: Addition and subtraction problems are limited to whole numbers with sums within 100 and related differences. Clarification 2: Data displays can be represented both horizontally and vertically. Scales on graphs are limited to ones, fives or tens.				

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1	Number Sense	MA.3.NSO.1	Understand the place value of four-digit numbers					
1		MA.3.NSO.1.1	Read and write numbers from 0 to 10,000 using standard form, expanded form and word form.	New to grade 3		not found in 3rd MAFS found in 4th		
1		MA.3.NSO.1.2	Compose and decompose four-digit numbers in multiple ways using thousands, hundreds, tens and ones. Demonstrate each composition or decomposition using objects, drawings and expressions or equations.	New to grade 3		not found in 3rd MAFS found in 4th		
1		MA.3.NSO.1.3	Plot, order and compare whole numbers up to 10,000.	New to grade 3 Clarification 1: When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the thousands, hundreds, tens and ones digits. Clarification 2: Number lines, scaled by 50s, 100s or 1,000s, must be provided and can be a representation of any range of numbers. Clarification 3: Within this benchmark, the expectation is to use symbols (<, > or =)		introduced in MAFS in 5th grade		
1		MA.3.NSO.1.4	Round whole numbers from 0 to 1,000 to the nearest 10 or 100.	Whole number range is now from 0 to 1000		MAFS.3.MBT.1.1		
1		MA.3.NSO.2	Add and subtract multi-digit whole numbers. Build an understanding of multiplication and division operations					
1		MA.3.NSO.2.1	Add and subtract multi-digit whole numbers including using a standard algorithm with procedural fluency.			not found in 3rd MAFS found in 4th		
2		MA.3.NSO.2.2	Explore multiplication of two whole numbers with products from 0 to 144, and related division facts.	Product range is now from 0 to 144 Clarification 1: Instruction includes equal groups, arrays, area models and equations. Clarification 2: Within the benchmark, it is the expectation that one problem can be represented in multiple ways and understanding how the different representations are related to each other. Clarification 3: Factors and divisors are limited to up to 12.				
2		MA.3.NSO.2.3	Multiply a one-digit whole number by a multiple of 10, up to 90, or a multiple of 100, up to 900, with procedural reliability	Multiplying a one-digit whole number by a multiple of 100 up to 900 is new to grade 3 Clarification 1: When multiplying one-digit numbers by multiples of 10 or 100, instruction focuses on methods that are based on place value.		MAFS.3.NBT.1.2 (EXCEPT FOR RED)		
2		MA.3.NSO.2.4	Multiply two whole numbers from 0 to 12 and divide using related facts with procedural reliability	Multiplication facts now range from 0 to 12 Clarification 1: Instruction focuses on helping a student choose a method they can use reliably.		similar to MAFS.3.OA.1.4		
4	Fraction	MA.3.FR.1	Understand fractions as numbers and represent fractions.					
4		MA.3.FR.1.1	Represent and interpret unit fractions in the form $\frac{1}{n}$ as the quantity formed by one part when a whole is partitioned into n equal parts.	Clarification 1: This benchmark emphasizes conceptual understanding through the use of manipulatives or visual models. Clarification 2: Instruction focuses on representing a unit fraction as part of a whole, part of a set, a point on a number line, a visual model or in fractional notation. Clarification 3: Denominators are limited to 2, 3, 4, 5, 6, 8, 10 and 12.		MAFS.3.NF.1.1		
4		MA.3.FR.1.2	Represent and interpret fractions, including fractions greater than one, in the form of $\frac{m}{n}$ as the result of adding the unit fraction $\frac{1}{n}$ to itself m times	Clarification 1: Instruction emphasizes conceptual understanding through the use of manipulatives or visual models, including circle graphs, to represent fractions. Clarification 2: Denominators are limited to 2, 3, 4, 5, 6, 8, 10 and 12.		used to be in 4th now introduced in 3rd		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
4		MA.3.FR.1.3	Read and write fractions, including fractions greater than one, using standard form, numeral-word form and word form.	New to grade 3 Clarification 1: Instruction focuses on making connections to reading and writing numbers to develop the understanding that fractions are numbers and to support algebraic thinking in later grades. Clarification 2: Denominators are limited to 2, 3, 4, 5, 6, 8, 10 and 12.		this have never be done before in 3rd grade		
4		MA.3.FR.2	Order and compare fractions and identify equivalent fractions.					
4		MA.3.FR.2.1	Plot, order and compare fractional numbers with the same numerator or the same denominator	Clarification 1: Instruction includes making connections between using a ruler and plotting and ordering fractions on a number line. Clarification 2: When comparing fractions, instruction includes an appropriately scaled number line and using reasoning about their size. Clarification 3: Fractions include fractions greater than one, including mixed numbers, with denominators limited to 2, 3, 4, 5, 6, 8, 10 and 12.		MAFS.3.NF.1.3d		
4		MA.3.FR.2.2	Identify equivalent fractions and explain why they are equivalent	New to grade 3 Clarification 1: Instruction includes identifying equivalent fractions and explaining why they are equivalent using manipulatives, drawings, and number lines. Clarification 2: Within this benchmark, the expectation is not to generate equivalent fractions. Clarification 3: Fractions are limited to fractions less than or equal to one with denominators of 2, 3, 4, 5, 6, 8, 10 and 12. Number lines must be given and scaled appropriately.		MAFS.3.NF.1.3 a-b; they are same standard but should have different subheadings		
2	Algebraic Reasoning	MA.3.AR.1	Solve multiplication and division problems.					
2		MA.3.AR.1.1	Apply the distributive property to multiply a one-digit number and two-digit number. Apply properties of multiplication to find a product of one-digit whole numbers.	Clarification 1: Within this benchmark, the expectation is to apply the associative and commutative properties of multiplication, the distributive property and name the properties. Refer to K-12 Glossary (Appendix C). Clarification 2: Within the benchmark, the expectation is to utilize parentheses. Clarification 3: Multiplication for products of three or more numbers is limited to factors within 12. Refer to Properties of Operations, Equality and Inequality (Appendix D).		MAFS.3.OA.2.5		
2		MA.3.AR.1.2	Solve one- and two-step real-world problems involving any of four operations with whole numbers.	Clarification 1: Instruction includes understanding the context of the problem, as well as the quantities within the problem. Clarification 2: Multiplication is limited to factors within 12 and related division facts. Refer to Situations Involving Operations with Numbers (Appendix A).		MAFS.3.OA.1.3 (the BEST standard is not as specific as MAFS)		
2		MA.3.AR.2	Develop an understanding of equality and multiplication and division.					
2		MA.3.AR.2.1	Restate a division problem as a missing factor problem using the relationship between multiplication and division.	Clarification 1: Multiplication is limited to factors within 12 and related division facts. Clarification 2: Within this benchmark, the symbolic representation of the missing factor uses any symbol or a letter.		MAFS.3.OA.1.4 AND MAFS.3.OA.2.6		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
2		MA.3.AR.2.2	Determine and explain whether an equation involving multiplication or division is true or false (NEW VERBIAGE).	Clarification 1: Instruction extends the understanding of the meaning of the equal sign to multiplication and division. Clarification 2: Problem types are limited to an equation with three or four terms. The product or quotient can be on either side of the equal sign. Clarification 3: Multiplication is limited to factors within 12 and related division facts.		This is new/not part of MAFS		
2		MA.3.AR.2.3	Determine the unknown whole number in a multiplication or division equation, relating three whole numbers, with the unknown in any position.	Clarification 1: Instruction extends the development of algebraic thinking skills where the symbolic representation of the unknown uses any symbol or a letter. Clarification 2: Problems include the unknown on either side of the equal sign. Clarification 3: Multiplication is limited to factors within 12 and related division facts. Refer to Situations Involving Operations with Numbers (Appendix A).		MAFS.3.OA.1.4		
2		MA.3.AR.3	Identify numerical patterns, including multiplicative patterns.					
1		MA.3.AR.3.1	Determine and explain whether a whole number from 1 to 1,000 is even or odd.	New to grade 3 Clarification 1: Instruction includes determining and explaining using place value and recognizing patterns.		new used to be in 2nd grade MAFS		
2		MA.3.AR.3.2	Determine whether a whole number from 1 to 144 is a multiple of a given onedigit number.	New to grade 3 Clarification 1: Instruction includes determining if a number is a multiple of a given number by using multiplication or division.		new used to be in 4th grade MAFS		
1		MA.3.AR.3.3	Identify, create and extend numerical patterns .	Creating and extending numerical patterns are new to grade 3 Clarification 1: The expectation is to use ordinal numbers (1st, 2nd, 3rd, ...) to describe the position of a number within a sequence. Clarification 2: Problem types include patterns involving addition, subtraction, multiplication or division of whole numbers.		MAFS.3.OA.4.9; It combines MAFS and BEST language		
3	Measurement	MA.3.M.1	Measure attributes of objects and solve problems involving measurement					
3		MA.3.M.1.1	Select and use appropriate tools to measure the length of an object, the volume of liquid within a beaker and temperature.	Units of measure of centimeter, half inch, quarter inch, degree, milliliter, half cup, and quarter cup are new to grade 3 Clarification 1: Instruction focuses on identifying measurement on a linear scale, making the connection to the number line. Clarification 2: When measuring the length, limited to the nearest centimeter and half or quarter inch. Clarification 3: When measuring the temperature, limited to the nearest degree. Clarification 4: When measuring the volume of liquid, limited to nearest milliliter and half or quarter cup.		MAFS.3.MD.1.2, MAFS.3.MD.2.4		

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3		MA.3.M.1.2	Solve real-world problems involving any of the four operations with whole number lengths, masses, weights, temperatures or liquid volumes.	Including appropriate units; the comparison of attributes measured in the same units; and unit measures of yards, feet, inches, meters, centimeters, pounds, ounces, kilograms, grams, degrees Fahrenheit, degrees Celsius, gallons, quarts, pints, cups, liters, and milliliters are new to grade 3 Clarification 1: Within this benchmark, it is the expectation that responses include appropriate units. Clarification 2: Problem types are not expected to include measurement conversions. Clarification 3: Instruction includes the comparison of attributes measured in the same units. Clarification 4: Units are limited to yards, feet, inches; meters, centimeters; pounds, ounces; kilograms, grams; degrees Fahrenheit, degrees Celsius; gallons, quarts, pints, cups; and liters, milliliters.		MAFS.3.MD.1.2		
3		MA.3.M.2.	Tell and write time and solve problems involving time.					
3		MA.3.M.2.1	Using analog and digital clocks tell and write time to the nearest minute using a.m. and p.m. appropriately.	Clarification 1: Within this benchmark, the expectation is not to understand military time.		MAFS.3.MD.1.1		
3		MA.3.M.2.2	Solve one- and two-step real-world problems involving elapsed time	Clarification 1: Within this benchmark, the expectation is not to include crossing between a.m. and p.m.		MAFS.3.MD.1.1		
3	Geometric Reasoning	MA.3.GR.1	Describe and identify relationships between lines and classify quadrilaterals.					
3		MA.3.GR.1.1	Describe and draw points, lines, line segments, rays, intersecting lines, perpendicular lines and parallel lines. Identify these in two-dimensional figures.	New to grade 3 Clarification 1: Instruction includes mathematical and real-world context for identifying points, lines, line segments, rays, intersecting lines, perpendicular lines and parallel lines. Clarification 2: When working with perpendicular lines, right angles can be called square angles or square corners.		MAFS.4.G.1.1, MAFS.4.G.1.2, MAFS.4.G.1.3; used to be in 4th grade		
3		MA.3.GR.1.2	Identify and draw quadrilaterals based on their defining attributes. Quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids.	Clarification 1: Instruction includes a variety of quadrilaterals and a variety of non-examples that lack one or more defining attributes when identifying quadrilaterals. Clarification 2: Quadrilaterals will be filled, outlined or both when identifying. Clarification 3: Drawing representations must be reasonably accurate.		MAFS.4.G.1.1, MAFS.4.G.1.2, MAFS.4.G.1.3; used to be in 4th grade		
3		MA.3.GR.1.3	Draw line(s) of symmetry in a two-dimensional figure and identify linesymmetric two-dimensional figures.	New to grade 3 Clarification 1: Instruction develops the understanding that there could be no line of symmetry, exactly one line of symmetry or more than one line of symmetry. Clarification 2: Instruction includes folding paper along a line of symmetry so that both halves match exactly to confirm line-symmetric figures.		MAFS.4. G.1.3 used to be in 4th grade		
3		MA.3.GR.2	Solve problems involving the perimeter and area of rectangles.					
3		MA.3.GR.2.1	Explore area as an attribute of a two-dimensional figure by covering the figure with unit squares without gaps or overlaps. Find areas of rectangles by counting unit squares	Clarification 1: Instruction emphasizes the conceptual understanding that area is an attribute that can be measured for a two-dimensional figure. The measurement unit for area is the area of a unit square, which is a square with side length of 1 unit. Clarification 2: Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form (e.g., square centimeter or sq.cm.).				

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
3		MA.3.GR.2.2	Find the area of a rectangle with whole-number side lengths using a visual model and a multiplication formula.	Clarification 1: Instruction includes covering the figure with unit squares, a rectangular array or applying a formula. Clarification 2: Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form				
3		MA.3.GR.2.3	Solve mathematical and real-world problems involving the perimeter and area of rectangles with whole-number side lengths using a visual model and a formula.	Clarification 1: Within this benchmark, the expectation is not to find unknown side lengths. Clarification 2: Two-dimensional figures cannot exceed 12 units by 12 units and responses include the appropriate units in word form		MAFS.3.MD.4.8		
3		MA.3.GR.2.4	Solve mathematical and real-world problems involving the perimeter and area of composite figures composed of non-overlapping rectangles with whole-number side lengths	Clarification 1: Composite figures must be composed of non-overlapping rectangles. Clarification 2: Each rectangle within the composite figure cannot exceed 12 units by 12 units and responses include the appropriate units in word form.		MAFS.3.MD.4.8		
4	Data Analysis and Probability	MA.3.DP.1	Collect, represent and interpret numerical and categorical data					
4		MA.3.DP.1.1	Collect and represent numerical and categorical data with whole-number values using tables, scaled pictographs, scaled bar graphs or line plots. Use appropriate titles, labels and units.	Clarification 1: Within this benchmark, the expectation is to complete a representation or construct a representation from a data set. Clarification 2: Instruction includes the connection between multiplication and the number of data points represented by a bar in scaled bar graph or a scaled column in a pictograph. Clarification 3: Data displays are represented both horizontally and vertically.		MAFS.3.MD.2.3		
4		MA.3.DP.1.2	Interpret data with whole-number values represented with tables, scaled pictographs, circle graphs , scaled bar graphs or line plots by solving one- and two-step problems.	Use of circle graphs and line plots are new to grade 3 Clarification 1: Problems include the use of data in informal comparisons between two data sets in the same units. Clarification 2: Data displays can be represented both horizontally and vertically. Clarification 3: Circle graphs are limited to showing the total values in each category		MAFS.3.MD.2.3		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1	Number Sense & Operations	MA.4.NSO.1.1	Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right.			MAFS.4.NBT.1.1		
1		MA.4.NSO.1.2	Read and write multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form and word form.			MAFS.4.NBT.1.2		
1		MA.4.NSO.1.3	Plot, order, and compare multi-digit whole numbers up to 1,000,000.	Clarification 1: When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the hundred thousands, ten thousands, thousands, hundreds, tens and ones digits. Clarification 2: Scaled number lines must be provided and can be a representation of any range of numbers. Clarification 3: Within this benchmark, the expectation is to use symbols (<, > or =)		MAFS.4.NBT.1.2		
1		MA.4.NSO.1.4	Round whole numbers from 0 to 10,000 to the nearest 10, 100 or 1,000.	Changed from "round to any place."		MAFS.4.NBT.1.3		
1		MA.4.NSO.1.5	Plot, order, and compare decimals up to the hundredths.	Clarification 1: When comparing numbers, instruction includes using an appropriately scaled number line and using place values of the ones, tenths and hundredths digits. Clarification 2: Within the benchmark, the expectation is to explain the reasoning for the comparison and use symbols (<, > or =). Clarification 3: Scaled number lines must be provided and can be a representation of any range of numbers		MAFS.5.NBT.1.3 MAFS.4.NF.3.7		
1		MA.4.NSO.2.1	Recall multiplication facts with factors up to 12 and related division facts with automaticity.	Previously a 3rd grade standard up to 10		MAFS.3.OA.3.7		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1		MA.4.NSO.2.2	Multiply two whole numbers, up to three digits by up to two digits , with procedural reliability.	Clarification 1: Instruction focuses on helping a student choose a method they can use reliably. Clarification 2: Instruction includes the use of models or equations based on place value and the distributive property.		MAFS.4.NBT.2.5		
1		MA.4.NSO.2.3	Multiply two whole numbers, each up to two digits, including using a standard algorithm with procedural fluency .	Focus has shifted from area models to standard algorithm. Area models should still be included in above.		MAFS.4.NBT.2.5		
1		MA.4.NSO.2.4	Divide a whole number up to four digits by a one-digit whole number with procedural reliability. Represent remainders as fractional parts of the divisor.	Clarification 1: Instruction focuses on helping a student choose a method they can use reliably. Clarification 2: Instruction includes the use of models based on place value, properties of operations or the relationship between multiplication and division.		MAFS.4.NBT.2.6		
1		MA.4.NSO.2.5	Explore the multiplication and division of multi-digit whole numbers using estimation, rounding and place value.	Clarification 1: Instruction focuses on previous understanding of multiplication with multiples of 10 and 100, and seeing division as a missing factor problem. Clarification 2: Estimating quotients builds the foundation for division using a standard algorithm. Clarification 3: When estimating the division of whole numbers, dividends are limited to up to four digits and divisors are limited to up to two digits.		MAFS.4.OA.1.3		
1		MA.4.NSO.2.6	Identify the number that is one-tenth more, one-tenth less, one-hundredth more and one-hundredth less than a given number.					
1		MA.4.NSO.2.7	Explore the addition and subtraction of multi-digit numbers with decimals to the hundredths .	Decimal operations moved down from 5th grade. Clarification: Instruction includes connection to money and the use of manipulatives and models.		MAFS.4.NBT.2.4 MAFS.5.NBT.2.7		
2	Fractions	MA.4.FR.1.1	Model and express a fraction, including mixed numbers and fractions greater than one , with the denominator 10 as an equivalent fraction with th denominator 100.	Clarification 1: Instruction emphasizes conceptual understanding through the use of manipulatives, visual models, number lines or equations.		MAFS.4.NF.3.5		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
2		MA.4.FR.1.2	Use decimal notation to represent fractions with denominators of 10 or 100, including mixed numbers and fractions greater than 1, and use fractional notation with denominators of 10 or 100 to represent decimals.	Clarification 1: Instruction emphasizes conceptual understanding through the use of manipulatives visual models, number lines or equations. Clarification 2: Instruction includes the understanding that a decimal and fraction that are equivalent represent the same point on the number line and that fractions with denominators of 10 or powers of 10 may be called decimal fractions.		MAFS.4.NF.3.6		
2		MA.4.FR.1.3	Identify and generate equivalent fractions, including fractions greater than one. Describe how the numerator and denominator are affected when the equivalent fraction is created.	Missing: Explain why a fraction is equivalent to another, with attention to how the number and size of parts differ even though the two fractions are the same size. Clarification 1: Instruction includes the use of manipulatives, visual models, number lines or equations. Clarification 2: Instruction includes recognizing how the numerator and denominator are affected when equivalent fractions are generated.		MAFS.4.NF.1.1		
2		MA.4.FR.1.4	Plot, order and compare fractions, including mixed numbers and fractions greater than one, with different numerators and different denominators.	Clarification 1: When comparing fractions, instruction includes using appropriately scaled number lines and reasoning about their size. Clarification 2: Instruction includes using benchmark quantities such as 0, 1/4, 1/2, 3/4, and 1 to compare fractions. Clarification 3: Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, and 100 Clarification 4: Within this benchmark, the expectation is to use symbols (<, > or =) Missing: Recognize the comparisons are valid only when two fractions refer to the same whole.		MAFS.4.NF.1.2		
2		MA.4.FR.2.1	Decompose a fraction, including mixed numbers and fractions greater than one , into a sum of fractions with the same denominator in multiple ways. Demonstrate each decomposition with objects, drawings and equations.	Clarification 1: Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, and 100 Missing: Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.		MAFS.4.NF.2.3		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
2		MA.4.FR.2.2	Add and subtract fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability.	Clarification 1: Instruction includes the use of word form, manipulatives, drawings, the properties of operations, or number lines. Clarification 2: Expectation is not to simplify. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, 100. Missing: Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.		MAFS.4.NF.2.3		
2		MA.4.FR.2.3	Explore the addition of a fraction with denominator of 10 to a fraction with denominator of 100 using equivalent fractions.	Wording changed from Express to Explore. Clarification 1: Instruction includes use of visual models. Clarification 2: The expectation is not to simplify.		MAFS.4.NF.3.5		
2		MA.4.FR.2.4	Extend previous understanding of multiplication to explore the multiplication of a fraction by a whole number or a whole number by a fraction.	Wording changed from apply to explore. Clarification 1: Instruction includes the use of visual models or number lines and the connection to the commutative property of multiplication. Clarification 2: The expectation is not to simplify. Clarification 3: Fractions being multiplied are limited to less than 1. All denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, 100. Missing: Understand a fraction a/b as a multiple of $1/b$. Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number.		MAFS.4.NF.2.4		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1 & 2	Algebraic Reasoning	MA.4.AR.1.1	Solve real-world problems involving multiplication and division of whole numbers including problems in which remainders must be interpreted within the context.	Missing the word multi-step. Missing: distinguishing between multiplicative comparison from additive comparison. Missing: Represent verbal statements of multiplicative comparisons as multiplication equations. Clarification 1: Problems involving multiplication include multiplicative comparisons Clarification 2: Depending on the context, the solution to a division problem with a remainder may be the whole number part of the quotient, the whole number part of the quotient with the remainder, the whole number part of the quotient plus 1, or the remainder. Clarification 3: Multiplication is limited to products of up to 3 digits by 2 digits. Division is limited to up to 4 digits divided by 1 digit.		MAFS.4.OA.1.1 MAFS.4.OA.1.2 MAFS.4.OA.1.3		
3		MA.4.AR.1.2	Solve real-world problems involving addition and subtraction of fractions with like denominators, including mixed numbers and fractions greater than one.	Clarification 1: Problems include creating real-world situations based on an equation or representing a real-world problem with a visual model or equation. Clarification 2: Fractions within problems must reference the same whole. Clarification 3: Within this benchmark, the expectation is not to simplify or use lowest terms. Clarification 4: Denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, 100		MAFS.4.NF.2.3d		
3		MA.4.AR.1.3	Solve real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction.	Clarification 1: Problems include creating real-world situations based on an equation or representing a real-world problem with a visual model or equation. Clarification 2: Fractions within problems must reference the same whole. Clarification 3: Within this benchmark, the expectation is not to simplify or use lowest terms. Clarification 4: Denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, 100.		MAFS.4.NF.2.4c		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
3		MA.4.AR.2.1	Determine and explain whether an equation involving any of the four operations with whole numbers is true or false.	Clarification 1: Multiplication is limited to whole number factors within 12 and related division facts.		MAFS.4.OA.1.a		
3		MA.4.AR.2.2	Given a mathematical or real-world context , write an equation involving multiplication or division to determine the unknown whole number with the unknown in any position .	Clarification 1: Uses a letter for the unknown. Clarification 2: Problems include the unknown on either side of the equal sig. Clarificaion 3: Multiplication is limited to factors within 12 and related division facts.		MAFS.4.OA.1.b		
1		MA.4.AR.3.1	Determine factor pairs for a whole number from 0 to 144 . Determine whether a whole number from 0 to 144 is prime, composite or neither .	Clarification 1: Instruction includes the connection to the relationship between multiplication and division with patterns and divisibility rules . Clarification 2: The number 0 and 1 are neither prime nor composite. Missing (Moved to 3rd- must be covered during transition): Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number.		MAFS.4.OA.2.4		
1		MA.4.AR.3.2	Generate, describe , and extend a numerical pattern that follows a given rule.	Clarification 1: Instruction includes patterns within a mathematical or real-world context. Missing: Identify apparent features of the pattern that were not explicit in the rule itself.		MAFS.4.OA.3.5		
4	Measurement	MA.4.M.1.1	Select and use appropriate tools to measure attributes of objects.	Clarification 1: Attributes include length, volume, weight, mass, and temperature. Clarification 2: Instruction includes digital measurements and scales that are not linear in appearance. Clarification 3: When recording measurements, use fractions and decimals where appropriate.		MAFS.K12.MP.5.1		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
3		MA.4.M.1.2	Convert within a single system of measurement using the units: yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liter, milliliter; and hours, minutes, seconds.	Clarification 1: Instruction includes understanding how to convert from smaller to larger units or from larger to smaller units. Clarification 2: Within the benchmark, the expectation is not to convert from grams to kilograms, meters to kilometers, or milliliters to liters. Clarification 3: Problems involving fractions are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16, and 100. Missing: Record measurement equivalents in a two-column table.		MAFS.4.MD.1.1		
4		MA.4.M.2.1	Solve two-step real-world problems involving distances and intervals of time using any combination of the four operations.	Missing: Represent fractional quantities of distance and intervals of time using linear models. Clarification 1: Problems involving fractions will include addition and subtraction with like denominators and multiplication of a fraction by a whole number or a whole number by a fraction. Clarification 2: Problems involving fractions are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 16, and 100. Clarification 3: Within the benchmark, the expectation is not to use decimals.		MAFS.4.MD.1.2		
4		MA.4.M.2.2	Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation.			MAFS.4.MD.1.2		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
2	Geometric Reasoning	MA.4.GR.1.1	Informally explore angles as an attribute of two-dimensional figures. Identify and classify angles as acute, right, obtuse, straight or reflex.	Clarification 1: includes classifying angles using benchmark angles of 90 degrees and 180 degrees in two-dimensional figures. Clarification 2: identifying angles, the expectation includes two-dimensional figures and real-world pictures. Missing: An angle is measured with reference to a circle with its center at the common endpoint of the rays. Missing (Moved to 3rd Grade- Must be covered during transition): Draw points, lines, line segments, rays, perpendicular, and parallel lines.		MAFS.4.G.1.1		
2		MA.4.GR.1.2	Estimate angle measures. Using a protractor, measure angles in whole-number degrees and draw angles of specified measure in whole-number degrees. Demonstrate that angle measure is additive.	Clarification 1: includes measuring given angles and drawing angles using protractors. Instruction includes estimating angle measures using benchmark angles (30 degrees, 45 degrees, 60 degrees, 90 degrees, and 180 degrees). Clarification 2: focuses on the understanding that angles can be decomposed into non-overlapping angles whose measure sum to the measure of the original angle.		MAFS.4.MD.3.6 MAFS.4.MD.3.7		
2		MA.4.GR.1.3	Solve real-world and mathematical problems involving unknown whole-number angle measures. Write an equation to represent the unknown.					
2		MA.4.GR.2.1	Solve perimeter and area mathematical and real-world problems, including problems with unknown sides, for rectangles with whole-number side lengths.	Clarification 1: Symbolic representation of the unknown uses a letter. Clarification 2: Problems involving multiplication are limited to products of up to 3 digits by 2 digits. Problems involving division are limited to up to 4 digits divided by 1 digit. Clarification 3: Responses include the appropriate units in word form.		MAFS.4.MD.1.3		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
2		MA.4.GR.2.2	Solve problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters.	Clarification 1: Instruction focuses on the conceptual understanding of the relationship between perimeter and area. Clarification 2: Within this benchmark, rectangles are limited to having whole-number side lengths. Clarification 3: Problems involving multiplication are limited to products of up to 3 digits by 2 digits. Problems involving division are limited to up to 4 digits divided by 1 digit. Clarification 4: Responses include the appropriate units in word form.				
4	Data Analysis and Probability	MA.4.DP.1.1	Collect and represent numerical data, including fractional values, using tables, stem-and-leaf plots or line plots.	Clarification 1: Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, and 100.		MAFS.4.MD.2.4		
4		MA.4.DP.1.2	Determine the mode, median or range to interpret numerical data including fractional values, represented with tables, stem-and-leaf plots or line plots.					
4		MA.4.DP.1.3	Solve real-world problems involving numerical data.	Clarification 1: Instruction includes any of the four operations to solve problems. Clarification 2: Data involving fractions with like denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, 16, and 100. Fractions can be greater than 1. Clarification 3: Data involving decimals are limited to hundredths.		MAFS.4.MD.2.4		
				Missing from BEST (Moved to 3rd- Must be covered during transition): Fluently add and subtract multi-digit whole numbers using the standard algorithm.		MAFS.4.NBT.2.4		
				Missing from BEST (Moved to 3rd- Must be covered during transition): 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 triangle as a category, and identify right triangles.		MAFS.4.G.1.2		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
				Missing from BEST (Moved to 3rd- Must be covered during transition): Recognize a line of symmetry for a two-dimensional figure as 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.		MAFS.4.G.1.3		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1	Number Sense and Operations	MA.5.NSO.1	Understand the place value of multi-digit numbers with decimals to the thousandths place.			MAFS.5.NBT.1.1		
1*		MA.5.NSO.1.1	Express how the value of a digit in a multi-digit number with decimals to the thousandths changes if the digit moves one or more places to the left or right.	MAFS specified that a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 if what it represents in the place to its left.		MAFS.5.NBT.1.1 MAFS.5.NBT.1.2		
1*		MA.5.NSO.1.2	Read and write multi-digit numbers with decimals to the thousandths using standard form, word form and expanded form.			MAFS.5.NBT.1.3		
1		MA.5.NSO.1.3	Compose and decompose multi-digit numbers with decimals to the thousandths in multiple ways using the values of the digits in each place. Demonstrate the compositions or decompositions using objects, drawings and expressions or equations.					
1		MA.5.NSO.1.4	Plot, order and compare multi-digit numbers with decimals up to the thousandths.	Clarification 1: Instruction includes use of appropriately scaled number line and using place values of digits. Clarification 2: Must use appropriately scaled number lines. Clarification 3: Expected to use <, =, and > symbols for comparisons.		MAFS.5.NBT.1.3		
1		MA.5.NSO.1.5	Round multi-digit numbers with decimals to the thousandths to the nearest hundredth, tenth or whole number.			MAFS.5.NBT.1.4		
1		MA.5.NSO.2	Add, subtract, multiply and divide multi-digit numbers.					
1		MA.5.NSO.2.1	Multiply multi-digit whole numbers including using a standard algorithm with procedural fluency.			MAFS.5.NBT.2.5		
1*		MA.5.NSO.2.2	Divide multi-digit whole numbers, up to five digits by two digits, including using a standard algorithm with procedural fluency. Represent remainders as fractions.	Clarification 1: Expectation is not to use simplest form. Missing: Dividing using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.		MAFS.5.NBT.2.6		
1*		MA.5.NSO.2.3	Add and subtract multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency.	Missing: using concrete models or drawings 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 the reasoning used.		MAFS.5.NBT.2.7		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1*		MA.5.NSO.2.4	Explore the multiplication and division of multi-digit numbers with decimals to the hundredths using estimation, rounding and place value.	Clarification 1: Estimating quotients builds the foundation for division using a standard algorithm. Clarification 2: Instruction includes the use of models based on place value and the properties of operations		MAFS.5.NBT.2.7		
1*		MA.5.NSO.2.5	Multiply and divide a multi-digit number with decimals to the tenths by one-tenth and one-hundredth with procedural reliability.	Clarification 1: Instruction focuses on place value of the digit when multiplying or dividing. Missing: using concrete models or drawings and strategies based on the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.		MAFS.5.NBT.2.7		
2	Fractions	MA.5.FR.1	Interpret a fraction as an answer to a division problem			MAFS.5.NF.1.1		
2*		MA.5.FR.1.1	Given a mathematical or real-world problem, represent the division of two whole numbers as a fraction.	Clarification 1: Instruction includes making a connection between fractions and division by understanding that fractions can also represent division of a numerator by a denominator. Clarification 2: The expectation is not to simplify to lowest terms. Clarification 3: Fractions can include fractions greater than one.		MAFS.5.NF.2.3		
2		MA.5.FR.2	Perform operations with fractions.					
2		MA.5.FR.2.1	Add and subtract fractions with unlike denominators, including mixed numbers and fractions greater than 1, with procedural reliability.	Clarification 1: Instruction includes the use of estimation, manipulatives, drawings, or the properties of operations. Clarification 2: Instruction builds on the understanding from previous grades of factors up to 12 and their multiples. Missing: By replacing given fractions with equivalent fractions with like denominators.		MAFS.5.NF.1.1		
2*		MA.5.FR.2.2	Extend previous understanding of multiplication to multiply a fraction by a fraction, including mixed numbers and fractions greater than 1, with procedural reliability.	Clarification 1: Instruction includes use of manipulatives, drawings, or the properties of operations. Clarification 2: Denominators limited to whole numbers up to 20. Missing: Interpret the product $(a/b) \times q$ as a partition of q into b equal parts as a result of a sequence of operations $a \times q / b$. Missing: Find the area of a rectangle with fractional side lengths and represent fraction products as rectangular areas.		MAFS.5.NF.2.4		

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2*		MA.5.FR.2.3	When multiplying a given number by a fraction less than 1 or a fraction greater than 1, predict and explain the relative size of the product to the given number without calculating.	Clarification 1: Instruction focuses on the connection to decimals, estimation and assessing the reasonableness of an answer. Missing: The term <i>scaling</i>		MAFS.5.NF.2.5		
2*		MA.5.FR.2.4	Extend previous understanding of division to explore the division of a unit fraction by a whole number and a whole number by a unit fraction.	Clarification 1: Instruction includes the use of manipulatives, drawings, or the properties of operations. Clarification 2: Refer to Appendix A for "Situations Involving Operations with Numbers"		MAFS.5.NF.2.7		
2	Algebraic Reasoning	MA.5.AR.1	Solve problems involving the four operations with whole numbers and fractions.					
2		MA.5.AR.1.1	Solve multi-step real-world problems involving any combination of the four operations with whole numbers, including problems in which remainders must be interpreted within the context.	Clarification 1: Depending on the context, the solution of a division problem with a remainder may be the whole number part of the quotient, the whole number part of the quotient with the remainder, the whole number part of the quotient plus 1, or the remainder.		Review of MAFS. 4.OA.1.3		
2*		MA.5.AR.1.2	Solve real-world problems involving the addition, subtraction or multiplication of fractions, including mixed numbers and fractions greater than 1.	Clarification 1: Instruction includes the use of visual models and equations to represent the problem.		MAFS.5.NBT.2.6 MAFS.5.NF.1.2		
2		MA.5.AR.1.3	Solve real-world problems involving division of a unit fraction by a whole number and a whole number by a unit fraction.	Clarification 1: Instruction includes the use of visual models and equations to represent the problem.		MAFS.5.NF.2.7c		
2		MA.5.AR.2	Demonstrate an understanding of equality, the order of operations and equivalent numerical expressions					
2*		MA.5.AR.2.1	Translate written real-world and mathematical descriptions into numerical expressions and numerical expressions into written mathematical descriptions.	Clarification 1: Expressions are limited to any combination of the arithmetic operations, including parentheses, with whole numbers, decimals, and fractions Clarification 2: The expectation is not to include exponents or nested grouping symbols.		MAFS.5.OA.1.1 MAFS.5.OA.1.2		
3*		MA.5.AR.2.2	Evaluate multi-step numerical expressions using order of operations.	Clarification 1: Multi-step expressions are limited to any combination of arithmetic operations, including parentheses, with whole numbers, decimals, and fractions. Clarification 2: The expectation is not to include exponents or nested grouping symbols. Clarification 3: Decimals are limited to hundredths. Expressions cannot include division of a fraction by a fraction.		MAFS.5.OA.1.1		

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3		MA.5.AR.2.3	Determine and explain whether an equation involving any of the four operations is true or false.	Clarification 1: Problem types include equations that include parentheses but not nested parentheses. Clarification 2: Instruction focuses on the connection between properties of equality and order of operations.				
3		MA.5.AR.2.4	Given a mathematical or real-world context, write an equation involving any of the four operations to determine the unknown whole number with the unknown in any position.	Clarification 1: Instruction extends the development of algebraic thinking where the unknown letter is recognized as a variable. Clarification 2: Problems include the unknown and different operations on either side of the equal side.				
3		MA.5.AR.3	Analyze patterns and relationships between inputs and outputs.					
3*		MA.5.AR.3.1	Given a numerical pattern, identify and write a rule that can describe the pattern as an expression.	Clarification 1: Rules are limited to one or two operations using whole numbers. Missing: Generate two numerical patterns using two given rules.		MAFS.5.OA.2.3		
3*		MA.5.AR.3.2	Given a rule for a numerical pattern, use a two-column table to record the inputs and outputs.	Clarification 1: Instruction builds a foundation for proportional and linear relationships in later grades. Clarification 2: Rules are limited to one or two operations using whole numbers. This connects to coordinate plane (MA.GR.4.2)		MAFS.5.OA.2.3		
3	Measurement	MA.5.M.1	Convert measurement units to solve multi-step problems.					
3*		MA.5.M.1.1	Solve multi-step real-world problems that involve converting measurement units to equivalent measurements within a single system of measurement.	Clarification 1: Within the benchmark, the expectation is not to memorize the conversions. Clarification 2: Conversions include length, time, volume and capacity represented as whole numbers, fractions and decimals.		MAFS.5.MD.1.1		
3		MA.5.M.2	Solve multi-step real-world problems that involve converting measurement units to equivalent measurements within a single system of measurement.					
3		MA.5.M.2.1	Solve multi-step real-world problems involving money using decimal notation.	Extension of 4th Grade MA.4.M.2.2				
4	Geometric Reasoning	MA.5.GR.1	Classify two-dimensional figures and three-dimensional figures based on defining attributes					

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4*		MA.5.GR.1.1	Classify triangles or quadrilaterals into different categories based on shared defining attributes. Explain why a triangle or quadrilateral would or would not belong to a category.	Clarification 1: Triangles include scalene, isosceles, equilateral, acute, obtuse and right; quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids. Missing: Use of Venn Diagrams to classify and organize		MAFS.5.G.2.3 MAFS.5.G.2.4		
4		MA.5.GR.1.2	Identify and classify three-dimensional figures into categories based on their defining attributes. Figures are limited to right pyramids, right prisms, right circular cylinders, right circular cones and spheres.	Clarification 1: Defining attributes include the number and shape of faces, number and shape of bases, whether or not there is an apex, curved or straight edges and curved or flat faces.				
4		MA.5.GR.2	Find the perimeter and area of rectangles with fractional or decimal side lengths					
4		MA.5.GR.2.1	Find the perimeter and area of a rectangle with fractional or decimal side lengths using visual models and formulas.	Clarification 1: Instruction includes finding the area of a rectangle with fractional side lengths by tiling it with squares having unit fraction side lengths and showing that the area is the same as would be found by multiplying the side lengths. Clarification 2: Responses include the appropriate units in word form.		MAFS.5.NF.2.4		
4		MA.5.GR.3	Solve problems involving the volume of right rectangular prisms.					
4*		MA.5.GR.3.1	Explore volume as an attribute of three-dimensional figures by packing them with unit cubes without gaps. Find the volume of a right rectangular prism with whole-number side lengths by counting unit cubes.	Clarification 1: Instruction emphasizes the conceptual understanding that volume is an attribute that can be measured for a three-dimensional figure. The measurement unit for volume is the volume of a unit cube, which is a cube with edge length of 1 unit.		MAFS.5.MD.3.3		
4*		MA.5.GR.3.2	Find the volume of a right rectangular prism with whole-number side lengths using a visual model and a formula.	Clarification 1: Instruction includes finding the volume of right rectangular prisms by packing the figure with unit cubes, using a visual model or applying a multiplication formula. Clarification 2: Right rectangular prisms cannot exceed two-digit edge lengths and responses include the appropriate units in word form.		MAFS.5.MD.3.4		

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4*		MA.5.GR.3.3	Solve real-world problems involving the volume of right rectangular prisms, including problems with an unknown edge length, with whole-number edge lengths using a visual model or a formula. Write an equation with a variable for the unknown to represent the problem.	Clarification 1: Instruction progresses from right rectangular prisms to composite figures composed of right rectangular prisms. Clarification 2: When finding the volume of composite figures composed of right rectangular prisms, recognize volume as additive by adding the volume of non-overlapping parts. Clarification 3: Responses include the appropriate units in word form.		MAFS.5.MD.3.5		
4		MA.5.GR.4	Plot points and represent problems on the coordinate plane.					
4*		MA.5.GR.4.1	Identify the origin and axes in the coordinate system. Plot and label ordered pairs in the first quadrant of the coordinate plane	Clarification 1: Instruction includes the connection between two-column tables and coordinates on a coordinate plane. Clarification 2: Instruction focuses on the connection of the number line to the x- and y-axis. Clarification 3: Coordinate planes include axes scaled by whole numbers. Ordered pairs contain only whole numbers.		MAFS.5.G.1.1		
4*		MA.5.GR.4.2	Represent mathematical and real-world problems by plotting points in the first quadrant of the coordinate plane and interpret coordinate values of points in the context of the situation.	Clarification 1: Coordinate planes include axes scaled by whole numbers. Ordered pairs contain only whole numbers.		MAFS.5.G.1.2		
4	Data Analysis & Probability	MA.5.DP.1	Collect, represent and interpret data and find the mean, mode, median or range of a data set.					
4*		MA.5.DP.1.1	Collect and represent numerical data, including fractional and decimal values, using tables, line graphs or line plots.	Clarification 1: Within this benchmark, the expectation is for an estimation of fractional and decimal heights on line graphs. Clarification 2: Decimal values are limited to hundredths. Denominators are limited to 1, 2, 3 and 4. Fractions can be greater than one.		MAFS.5.MD.2.2		
4		MA.5.DP.1.2	Interpret numerical data, with whole-number values, represented with tables or line plots by determining the mean, mode, median or range.	Clarification 1: Instruction includes interpreting the mean in real-world problems as a leveling out, a balance point or an equal share.				

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
				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. MOVED TO 4th GRADE- Must be covered during transition.		MAFS.5.NBT.1.2		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1	Number Sense and Operations	MA.6.NSO.1	Extend Knowledge of numbers to negative numbers and develop an understanding of absolute value					
1		MA.6.NSO.1.1	Extend previous understanding of numbers to define rational numbers. Plot, order, and compare rational numbers.	Clarification 1: Within this benchmark, the expectation is to plot, order and compare positive and negative rational numbers when given in the same form and to plot, order and compare positive rational numbers when given in different forms (fraction, decimal, percentage). Clarification 2: Within this benchmark, the expectation is to use symbols (<, > or =).		MAFS.6.NS.3.6		
1		MA.6.NSO.1.2	Given a mathematical or real-world context, represent quantities that have opposite direction using rational numbers. Compare them on a number line and explain the meaning of zero within its context.	Clarification 1: includes vertical and horizontal number lines, context referring to distances, temperatures and finances and using informal verbal comparisons, such as, lower, warmer or more in debt. Clarification 2: this benchmark, the expectation is to compare positive and negative rational numbers when given in the same form.		MAFS.6.NS.3.7		
1		MA.6.NSO.1.3	Given a mathematical or real-world context, interpret the absolute value of a number as the distance from zero on a number line. Find the absolute value of rational numbers.	Clarification 1: includes the connection of absolute value to mirror images about zero and to opposites. Clarification 2: includes vertical and horizontal number lines and context referring to distances, temperature and finances.				
1		MA.6.NSO.1.4	Solve mathematical and real-world problems involving absolute value, including the comparison of absolute value.	Clarification 1: Absolute value situations include distances, temperatures and finances. Clarification 2: Problems involving calculations with absolute value are limited to two or fewer operations. Clarification 3: Within this benchmark, the expectation is to use integers only.		MAFS.6.NS.3.7		
1		MA.6.NSO.2	Add, subtract, multiply and divide positive rational numbers.					
1		MA.6.NSO.2.1	Multiply and divide positive multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency.	Clarification 1: Multi-digit decimals are limited to no more than 5 total digits.		MAFS.6.NS.2.3		
1		MA.6.NSO.2.2	Extend previous understanding of multiplication and division to compute products and quotients of positive fractions by positive fractions, including mixed numbers, with procedural fluency.	Clarification 1: Instruction focuses on making connections between visual models, the relationship between multiplication and division, reciprocals and algorithms.		MAFS.6.NS.3.1		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1		MA.6.NSO.2.3	Solve multi-step real-world problems involving any of the four operations with positive multi-digit decimals or positive fractions, including mixed numbers.	Clarification 1: Within this benchmark, it is not the expectation to include both decimals and fractions within a single problem.		MAFS.6.NS.2.3 MAFS.6.NS.3.1 MAFS.5.NF.2.3 MAFS.5.NF.2.4		
1		MA.6.NSO.3	Apply properties of operations to rewrite numbers in equivalent forms.					
1		MA.6.NSO.3.1	Given a mathematical or real-world context, find the greatest common factor and least common multiple of two whole numbers.	Clarification 1: Within this benchmark, expectations include finding greatest common factor within 1,000 and least common multiple with factors to 25. Clarification 2: Instruction includes finding the greatest common factor of the numerator and denominator of a fraction to simplify the fraction.		MAFS.6.NS.2.4		
1		MA.6.NSO.3.2	Rewrite the sum of two composite whole numbers having a common factor, as a common factor multiplied by the sum of two whole numbers.	Clarification 1: Instruction includes using the distributive property to generate equivalent expressions.		MAFS.6.NS.2.4		
1		MA.6.NSO.3.3	Evaluate positive rational numbers and integers with natural number exponents.	Clarification 1: Within this benchmark, expectations include using natural number exponents up to 5.		MAFS.6.NS.3.5 MAFS.6.EE.1.1		
1		MA.6.NSO.3.4	Express composite whole numbers as a product of prime factors with natural number exponents.			MAFS.6.NS.2.4		
1		MA.6.NSO.3.5	Rewrite positive rational numbers in different but equivalent forms including fractions, terminating decimals and percentages.	Clarification 1: Rational numbers include decimal equivalence up to the thousandths place.		MAFS.6.NS.3.6		
2		MA.6.NSO.4	Extend understanding of operations with integers.					
2		MA.6.NSO.4.1	Apply and extend previous understandings of operations with whole numbers to add and subtract integers with procedural fluency.	Clarification 1: Instruction begins with the use of manipulatives, models and number lines working towards becoming procedurally fluent by the end of grade 6. Clarification 2: Instruction focuses on the inverse relationship between the operations of addition and subtraction. If p and q are integers, then $p - q = p + (-q)$ and $p + q = p - (-q)$.		MAFS.6.NS.3.5 MAFS.6.NS.3.6		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
2		MA.6.NSO.4.2	Apply and extend previous understandings of operations with whole numbers to multiply and divide integers with procedural fluency.	Clarification 1: Instruction includes the use of models and number lines and the inverse relationship between multiplication and division, working towards becoming procedurally fluent by the end of grade 6. Clarification 2: Instruction focuses on the understanding that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number.				
2	Algebraic Reasoning	MA.6.AR.1	Apply previous understanding of arithmetic expressions to algebraic expressions.					
2		MA.6.AR.1.1	Given a mathematical or real-world context, translate written descriptions into algebraic expressions and translate algebraic expressions into written descriptions.			MAFS.6.EE.1.2		
2		MA.6.AR.1.2	Translate a real-world written description into an algebraic inequality in the form of $x > a$, $x < a$, $x \geq a$ or $x \leq a$. Represent the inequality on a number line.	Clarification 1: Variables may be on the left or right side of the inequality symbol.		MAFS.6.EE.2.5		
2		MA.6.AR.1.3	Evaluate algebraic expressions using substitution and order of operations.	Clarification 1: Within this benchmark, the expectation is to perform all operations with integers. Clarification 2: Refer to Properties of Operations, Equality and Inequality (Appendix D).		MAFS.6.EE.2.5		
2		MA.6.AR.1.4	Apply the properties of operations to generate equivalent algebraic expressions with integer coefficients	Clarification 1: Properties include associative, commutative and distributive. Clarification 2: Refer to Properties of Operations, Equality and Inequality (Appendix D).		MAFS.6.EE.1.3		
3		MA.6.AR.3	Understand ratio and unit rate concepts and use them to solve problems.					
3		MA.6.AR.3.1	Given a real-world context, write and interpret ratios to show the relative sizes of two quantities using appropriate notation: a/b , a to b , or $a:b$ where $b \neq 0$.	Clarification 1: Instruction focuses on the understanding that a ratio can be described as a comparison of two quantities in either the same or different units. Clarification 2: Instruction includes using manipulatives, drawings, models and words to interpret part-to-part ratios and part-to-whole ratios. Clarification 3: The values of a and b are limited to whole numbers.		MAFS.6.RP.1.1		

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3		MA.6.AR.3.2	Given a real-world context, determine a rate for a ratio of quantities with different units. Calculate and interpret the corresponding unit rate.	Clarification 1: Includes using manipulatives, drawings, models and words and making connections between ratios, rates and unit rates. Clarification 2: Problems will not include conversions between customary and metric systems.		MAFS.6.RP.1.2		
3		MA.6.AR.3.3	Extend previous understanding of fractions and numerical patterns to generate or complete a two- or three-column table to display equivalent part-to-part ratios and part-to-part-to-whole ratios.	Clarification 1: Instruction includes using two-column tables (e.g., a relationship between two variables) and three-column tables (e.g., part-to-part-to-whole relationship) to generate conversion charts and mixture charts.		MAFS.6.RP.1.3		
3		MA.6.AR.3.4	Apply ratio relationships to solve mathematical and real-world problems involving percentages using the relationship between two quantities.	Clarification 1: Instruction includes the comparison of part/whole to percent/100 in order to determine the percent, the part or the whole.		MAFS.6.RP.1.3		
3		MA.6.AR.3.5	Solve mathematical and real-world problems involving ratios, rates and unit rates, including comparisons, mixtures, ratios of lengths and conversions within the same measurement system.	Clarification 1: Instruction includes the use of tables, tape diagrams and number lines.		MAFS.6.RP.1.3		
3	Geometric Reasoning	MA.6.GR.1	Apply previous understanding of the coordinate plane to solve problems.					
3		MA.6.GR.1.1	Extend previous understanding of the coordinate plane to plot rational number ordered pairs in all four quadrants and on both axes. Identify the x - or y -axis as the line of reflection when two ordered pairs have an opposite x - or y -coordinate.			MAFS.6.G.1.3		
3		MA.6.GR.1.2	Find distances between ordered pairs, limited to the same x -coordinate or the same y -coordinate, represented on the coordinate plane.			MAFS.6.G.1.3		
3		MA.6.GR.1.3	Solve mathematical and real-world problems by plotting points on a coordinate plane, including finding the perimeter or area of a rectangle.	Clarification 1: Instruction includes finding distances between points, computing dimensions of a rectangle or determining a fourth vertex of a rectangle. Clarification 2: Problems involving rectangles are limited to cases where the sides are parallel to the axes.		MAFS.6.G.1.3		
3		MA.6.GR.2	Model and solve problems involving two-dimensional figures and three-dimensional figures.					

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3		MA.6.GR.2.1	Derive a formula for the area of a right triangle using a rectangle. Apply a formula to find the area of a triangle.	Clarification 1: Instruction focuses on the relationship between the area of a rectangle and the area of a right triangle. Clarification 2: Within this benchmark, the expectation is to know from memory a formula for the area of a triangle.		MAFS.6.G.1.1		
3		MA.6.GR.2.2	Solve mathematical and real-world problems involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles.	Clarification 1: Problem types include finding area of composite shapes and determining missing dimensions. Clarification 2: Within this benchmark, the expectation is to know from memory a formula for the area of a rectangle and triangle. Clarification 3: Dimensions are limited to positive rational numbers.		MAFS.6.G.1.1		
3		MA.6.GR.2.3	Solve mathematical and real-world problems involving the volume of right rectangular prisms with positive rational number edge lengths using a visual model and a formula.	Clarification 1: Problem types include finding the volume or a missing dimension of a rectangular prism.		MAFS.6.G.1.2		
3		MA.6.GR.2.4	Given a mathematical or real-world context, find the surface area of right rectangular prisms and right rectangular pyramids using the figure's net.	Clarification 1: Instruction focuses on representing a right rectangular prism and right rectangular pyramid with its net and on the connection between the surface area of a figure and its net. Clarification 2: Within this benchmark, the expectation is to find the surface area when given a net or when given a three-dimensional figure. Clarification 3: Problems involving right rectangular pyramids are limited to cases where the heights of triangles are given. Clarification 4: Dimensions are limited to positive rational numbers.		MAFS.6.G.1.4		
4		MA.6.AR.2	Develop an understanding for solving equations and inequalities. Write and solve one-step equations in one variable.					
4		MA.6.AR.2.1	Given an equation or inequality and a specified set of integer values, determine which values make the equation or inequality true or false.	Clarification 1: Problems include the variable in multiple terms or on either side of the equal sign or inequality symbol.		MAFS.6.EE.2.5 MAFS.6.EE.2.8		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
4		MA.6.AR.2.2	Write and solve one-step equations in one variable within a mathematical or real-world context using addition and subtraction, where all terms and solutions are integers.	Clarification 1: Instruction includes using manipulatives, drawings, number lines and inverse operations. are any integer. Clarification 2: Instruction includes equations in the forms $x + p = q$ and $p + x = q$, where x , p and q Clarification 3: Problems include equations where the variable may be on either side of the equal sign.		MAFS.6.EE.2.6 MAFS.6.EE.3.9		
4		MA.6.AR.2.3	Write and solve one-step equations in one variable within a mathematical or real-world context using multiplication and division, where all terms and solutions are integers.	Clarification 1: Instruction includes using manipulatives, drawings, number lines and inverse operations. Clarification 2: Instruction includes equations in the forms $x/p = q$, where $p \neq 0$, and $px = q$. Clarification 3: Problems include equations where the variable may be on either side of the equal sign.		MAFS.6.EE.2.6 MAFS.6.EE.2.7 MAFS.6.EE.3.9		
4		MA.6.AR.2.4	Determine the unknown decimal or fraction in an equation involving any of the four operations, relating three numbers, with the unknown in any position.	Clarification 1: Instruction focuses on using algebraic reasoning, drawings, and mental math to determine unknowns. Clarification 2: Problems include the unknown and different operations on either side of the equal sign. All terms and solutions are limited to positive rational numbers.		MAFS.6.EE.3.9		
4	Data Analysis and Probability	MA.6.DP.1	Develop an understanding of statistics and determine measures of center and measures of variability. Summarize statistical distributions graphically and numerically.					
4		MA.6.DP.1.1	Recognize and formulate a statistical question that would generate numerical data.			MAFS.6.SP.1.1 MAFS.6.SP.1.2		
4		MA.6.DP.1.2	Given a numerical data set within a real-world context, find and interpret mean, median, mode and range.	Clarification 1: Numerical data is limited to positive rational numbers.		MAFS.6.SP.1.3		
4		MA.6.DP.1.3	Given a box plot within a real-world context, determine the minimum, the lower quartile, the median, the upper quartile and the maximum. Use this summary of the data to describe the spread and distribution of the data.	Clarification 1: Instruction includes describing range, interquartile range, halves and quarters of the data.		MAFS.6.SP.2.4		

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4		MA.6.DP.1.4	Given a histogram or line plot within a real-world context, qualitatively describe and interpret the spread and distribution of the data, including any symmetry, skewness, gaps, clusters, outliers and the range.	Clarification 1: Refer to K-12 Mathematics Glossary (Appendix C).		MAFS.6.SP.2.4		
4		MA.6.DP.1.5	Create box plots and histograms to represent sets of numerical data within real-world contexts.	Clarification 1: Instruction includes collecting data and discussing ways to collect truthful data to construct graphical representations. Clarification 2: Within this benchmark, it is the expectation to use appropriate titles, labels, scales and units when constructing graphical representations. Clarification 3: Numerical data is limited to positive rational numbers.		MAFS.6.SP.2.4		
4		MA.6.DP.1.6	Given a real-world scenario, determine and describe how changes in data values impact measures of center and variation.	Clarification 1: Instruction includes choosing the measure of center or measure of variation depending on the scenario. Clarification 2: The measures of center are limited to mean and median. The measures of variation are limited to range and interquartile range. Clarification 3: Numerical data is limited to positive rational numbers.		MAFS.6.SP.2.4		

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1	Number Sense and Operations	MA.7.NSO.1	Rewrite numbers in equivalent forms					
1		MA.7.NSO.1.1	Know and apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to whole-number exponents and rational bases.	Clarification 1: Instruction focuses on building the Laws of Exponents from specific examples. Refer to the K-12 Formulas (Appendix E) for the Laws of Exponents. Clarification 2: Problems in the form $a^n \cdot a^m = a^p$ must result in a whole-number value for p .				
1		MA.7.NSO.1.2	Rewrite rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals and percentages to solve mathematical real-world problems.			MAFS.7.NS.1.3		
1		MA.6.NSO.2	Add, subtract, multiply and divide positive rational numbers.	Integer Operations.				
1		MA.7.NSO.2	Add, subtract, multiply and divide rational numbers		3	MAFS.7.NS.1.1, 1.2		
1		MA.7.NSO.2.1	Solve mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents and absolute value .	Clarification 1: Multi-step expressions are limited to 6 or fewer steps.		MAFS.7.NS.1.3		
1		MA.7.NSO.2.2	Add, subtract, multiply and divide rational numbers with fluency			MAFS.7.NS.1.1, 1.2		
1		MA.7.NSO.2.3	Solve real world problems involving any of the four operations with rational numbers	Clarification 1: Instruction includes using one or more operations to solve problems.		MAFS.7.NS.1.3		
1	Algebraic Reasoning	MA.7.AR.1	Rewrite algebraic expressions in equivalent forms			MAFS.7.EE.1.1, 1.2		
1		MA.7.AR.1.1	Apply properties of operations to add and subtract linear expressions with rational coefficients	Clarification 1: Instruction includes linear expressions in the form $ax \pm b$ or $b \pm ax$, where a and b are rational numbers. Clarification 2: Refer to Properties of Operations, Equality and Inequality (Appendix D).		MAFS.7.EE.1.1, 1.2		
1		MA.7.AR.1.2	Determine whether two linear expressions are equivalent	Clarification 1: Instruction includes linear expressions in the form $ax \pm b$ or $b \pm ax$, where a and b are rational numbers. Clarification 2: Refer to Properties of Operations, Equality and Inequality (Appendix D).		MAFS.7.EE.1.1, 1.2		
2		MA.7.AR.2	Write and solve equations and inequalities in one variable			MAFS.7.EE.2.3, 2.4		
2		MA.7.AR.2.1	Write and solve one-step inequalities in one variable within a mathematical context and represent solutions algebraically or graphically.	Clarification 1: Instruction focuses on the properties of inequality. Refer to Properties of Operations, Equality and Inequality (Appendix D). Clarification 2: Instruction includes inequalities in the forms $px > q$; $x > q$; $x \pm p > q$ and $p \pm x > q$, where p and q are specific rational numbers and any inequality symbol can be represented. Clarification 3: Problems include inequalities where the variable may be on either side of the inequality symbol.		MAFS.7.EE.2.4		

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2		MA.7.AR.2.2	Write and solve two-step equations in one variable within a mathematical or real-world context, where all terms are rational numbers.	Clarification 1: Instruction focuses the application of the properties of equality. Refer to Properties of Operations, Equality and Inequality (Appendix D). Clarification 2: Instruction includes equations in the forms $px \pm q = r$ and $p(x \pm q) = r$, where p , q and r are specific rational numbers. Clarification 3: Problems include linear equations where the variable may be on either side of the equal sign.		MAFS.7.EE.2.4		
2		MA.7.AR.3	Use percentages and proportional reasoning to solve problems			MAFS.7.RP.1.1, 1.2, 1.3		
2		MA.7.AR.3.1	Apply previous understanding of percentages and ratios to solve multi-step real-world percent problems.	Clarification 1: Instruction includes discounts, markups, simple interest, tax, tips, fees, percent increase, percent decrease and percent error.		MAFS.7.RP.1.3		
2		MA.7.AR.3.2	Apply previous understanding of ratios to solve real-world problems involving proportions.			MAFS.7.RP.1.2		
2		MA.7.AR.3.3	Solve mathematical and real-world problems involving the conversion of units across different measurement systems.	Clarification 1: Problem types are limited to length, area, weight, mass, volume and money.				
2		MA.7.AR.4	Analyze and represent two-variable proportional relationships.			MAFS.7.RP.1.1, 1.2, 1.3		
2		MA.7.AR.4.1	Determine whether two quantities have a proportional relationship by examining a table, graph, or written description.	Clarification 1: Instruction focuses on the connection to ratios and on the constant of proportionality, which is the ratio between two quantities in a proportional relationship.		MAFS.7.RP.1.2		
2		MA.7.AR.4.2	Determine the constant of proportionality within a mathematical or real-world context given a table, graph or written description of a proportional relationship.			MAFS.7.RP.1.1, 1.2, 1.3		
2		MA.7.AR.4.3	Given a mathematical or real-world context, graph proportional relationships from a table, equation, or a written description.	Clarification 1: Instruction includes equations of proportional relationships in the form of $y = px$, where p is the constant of proportionality.		MAFS.7.RP.1.2		
2		MA.7.AR.4.4	Given any representation of a proportional relationship, translate the representation to a written description, table or equation	Clarification 1: Given representations are limited to a written description, graph, table or equation. Clarification 2: Instruction includes equations of proportional relationships in the form of $y = px$, where p is the constant of proportionality.		MAFS.7.RP.1.2		
3	Data Analysis and Probability	MA.7.DP.2	Develop an understanding of probability. Find and compare experimental and theoretical probabilities.					
3		MA.7.DP.2.1	Determine the sample space for a simple experiment.	Clarification 1: Given representations are limited to a written description, graph, table or equation. Clarification 2: Instruction includes equations of proportional relationships in the form of $y = px$, where p is the constant of proportionality.		MAFS.SP.3.5		

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3		MA.7.DP.2.2	Given the probability of a chance event, interpret the likelihood of it occurring. Compare the probabilities of chance events.	Clarification 1: Instruction includes representing probability as a fraction, percentage or decimal between 0 and 1 with probabilities close to 1 corresponding to highly likely events and probabilities close to 0 corresponding to highly unlikely events. Clarification 2: Instruction includes $P(event)$ notation. Clarification 3: Instruction includes representing probability as a fraction, percentage or decimal.		MAFS.7.SP.3.5, 3.6, 3.7		
3		MA.7.DP.2.3	Find the theoretical probability of an event related to a simple experiment.	Clarification 1: Instruction includes representing probability as a fraction, percentage or decimal. Clarification 2: Simple experiments include tossing a fair coin, rolling a fair die, picking a card randomly from a deck, picking marbles randomly from a bag and spinning a fair spinner.		MAFS.7.SP.3.5, 3.6, 3.7		
3		MA.7.DP.2.4	Use a simulation of a simple experiment to find experimental probabilities and compare them to theoretical probabilities.	Clarification 1: Instruction includes representing probability as a fraction, percentage or decimal. Clarification 2: Instruction includes recognizing that experimental probabilities may differ from theoretical probabilities due to random variation. As the number of repetitions increases experimental probabilities will typically better approximate the theoretical probabilities. Clarification 3: Experiments include tossing a fair coin, rolling a fair die, picking a card randomly from a deck, picking marbles randomly from a bag and spinning a fair spinner.		MAFS.7.SP.3.7		
3	Geometric Reasoning	MA.7.GR.1	<i>Solve problems involving two-dimensional figures including circles.</i>			MAFS.7.G.2.4,2.6		
3		MA.7.GR.1.1	Apply formulas to find the areas of trapezoids, parallelograms and rhombi	Clarification 1: Instruction focuses on the connection from the areas of trapezoids, parallelograms and rhombi to the areas of rectangles or triangles. Clarification 2: Within this benchmark, the expectation is not to memorize area formulas for trapezoids, parallelograms and rhombi.		MAFS.7.G.2.4,2.6		
3		MA.7.GR.1.2	Solve mathematical or real-world problems involving the area of polygons or composite figures by decomposing them into triangles or quadrilaterals.	Clarification 1: Within this benchmark, the expectation is not to find areas of figures on the coordinate plane or to find missing dimensions.		MAFS.7.G.2.4,2.6		
3		MA.7.GR.1.3	Explore the proportional relationship between circumferences and diameters of circles . Apply a formula for the circumference of a circle to solve mathematical and real-world problems.	Clarification 1: Instruction includes the exploration and analysis of circular objects to examine the proportional relationship between circumference and diameter and arrive at an approximation of pi (π) as the constant of proportionality. Clarification 2: Solutions may be represented in terms of pi (π) or approximately		MAFS.7.G.2.4		
3		MA.7.GR.1.4	Explore and apply a formula to find the area of a circle to solve mathematical real-world problems.	Clarification 1: Instruction focuses on the connection between formulas for the area of a rectangle and the area of a circle. Clarification 2: Problem types include finding areas of fractional parts of a circle. Clarification 3: Solutions may be represented in terms of pi (π) or approximately.		MAFS.7.G.2.4		

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3		MA.7.GR.1.5	Solve mathematical and real-world problems involving dimensions and areas of geometric figures, including scale drawings and scale factors.			MAFS.7.G.1.1		
4		MA.7.GR.2	Solve problems involving three-dimensional figures, including right circular cylinders.			MAFS.7.G.2.6		
4		MA.7.GR.2.1	Given a mathematical or real-world context, find the surface area of a right circular cylinder using the figure's net.	Clarification 1: Instruction focuses on representing a right circular cylinder with its net and on the connection between surface area of a figure and its net. Clarification 2: Within this benchmark, the expectation is to find the surface area when given a net or when given a three-dimensional figure. Clarification 3: Within this benchmark, the expectation is not to memorize the surface area formula for a right circular cylinder. Clarification 4: Solutions may be represented in terms of pi (π) or approximately.		MAFS.7.G.2.6		
4		MA.7.GR.2.2	Solve real-world problems involving surface area of right circular cylinders.	Clarification 1: Within this benchmark, the expectation is not to memorize the surface area formula for a right circular cylinder or to find radius as a missing dimension. Clarification 2: Solutions may be represented in terms of pi (π) or approximately.		MAFS.7.G.2.6		
4		MA.7.GR.2.3	Solve mathematical and real-world problems involving volume of right circular cylinders.	Clarification 1: Within this benchmark, the expectation is not to memorize the volume formula for a right circular cylinder or to find radius as a missing dimension. Clarification 2: Solutions may be represented in terms of pi (π) or approximately.		MAFS.7.G.2.6		
4	Data Analysis and Probability	MA.DP.1	Represent and interpret numerical and categorical data.			MAFS.7.SP.1.2, 2.3, 2.4		
4		MA.7.DP.1.1	Determine an appropriate measure of center or measure of variation to summarize numerical data, represented numerically or graphically, taking into consideration the context and any outliers	Clarification 1: Instruction includes recognizing whether a measure of center or measure of variation is appropriate and can be justified based on the given context or the statistical purpose. Clarification 2: Graphical representations are limited to histograms, line plots, box plots and stem-and-leaf plots. Clarification 3: The measure of center is limited to mean and median. The measure of variation is limited to range and interquartile range.		MAFS.7.SP.2.3, 2.4		
4		MA.7.DP.1.2	Given two numerical or graphical representations of data, use the measure(s) of center and measure(s) of variability to make comparisons, interpret results and draw conclusions about the two populations. Include stem and leaf plots.	Clarification 1: Graphical representations are limited to histograms, line plots, box plots and stem-and-leaf plots. Clarification 2: The measure of center is limited to mean and median. The measure of variation is limited to range and interquartile range.		MAFS.7.SP.2.3, 2.4		
4		MA.7.DP.1.3	Given categorical data from a random sample, use proportional relationships to make predictions about a population.			MAFS.7.SP.2.3, 2.4		
4		MA.7.DP.1.4	Use proportional reasoning to construct, display and interpret data in circle graphs.	Clarification 1: Data is limited to no more than 6 categories.				

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4		MA.7.DP.1.5	Given a real-world numerical or categorical data set, choose and create an appropriate graphical representation.	Clarification 1: Graphical representations are limited to histograms, bar charts, circle graphs, line plots, box plots and stem-and-leaf plots.		MAFS.7.SP.2.3, 2.4		
4		<i>MA.7.DP.2</i>	Develop an understanding of probability. Find and compare experimental and theoretical probabilities.			MAFS.7.SP.3.5, 3.6, 3.7		

Red text - new to grade 7

Highlighted in yellow - gap in year one, must be taught

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1	Number Sense and Operations	MA.8.NSO.1	Solve problems involving rational numbers, including numbers in scientific notation, and extend the understanding of rational numbers to irrational numbers					
1		MA.8.NSO.1.1	Extend previous understanding of rational numbers to define irrational numbers within the real number system. Locate an approximate value of a numerical expression involving irrational numbers on a number line.	Clarification 1: Instruction includes the use of number line and rational number approximations, and recognizing pi (π) as an irrational number. Clarification 2: Within this benchmark, the expectation is to approximate numerical expressions involving one arithmetic operation and estimating square roots or pi (π).		MAFS.8.NS.1.1		
1		MA.8.NSO.1.2	Plot, order and compare rational and irrational numbers, represented in various forms	Clarification 1: Within this benchmark, it is not the expectation to work with the number e . Clarification 2: Within this benchmark, the expectation is to plot, order and compare square roots and cube roots. Clarification 3: Within this benchmark, the expectation is to use symbols ($<$, $>$ or $=$).		MAFS.8.NS.1.2		
1		MA.8.NSO.1.3	Extend previous understanding of the Laws of Exponents to include integer exponents. Apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to integer exponents and rational number bases, with procedural fluency	7th Grade Standard for Florida BEST				
1		MA.8.NSO.1.4	Express numbers in scientific notation to represent and approximate very large or very small quantities. Determine how many times larger or smaller a number as compared to a second number.			MAFS.8.EE.1.4		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1		MA.8.NSO.1.5	Add, subtract, multiply and divide numbers expressed in scientific notation with procedural fluency.	Clarification 1: Within this benchmark, for addition and subtraction with numbers expressed in scientific notation, exponents are limited to within 2 of each other.		MAFS.8.EE.1.4		
1		MA.8.NSO.1.6	Solve real-world problems involving operations with numbers expressed in scientific notation.	Clarification 1: Instruction includes recognizing the importance of significant digits when physical measurements are involved. Clarification 2: Within this benchmark, for addition and subtraction with numbers expressed in scientific notation, exponents are limited to within 2 of each other.		MAFS.8.EE.1.2		
1		MA.8.NSO.1.7	Solve multi-step mathematical and real-world problems involving the order of operations with rational numbers including exponents and radicals	Clarification 1: Multi-step expressions are limited to 6 or fewer steps. Clarification 2: Within this benchmark, the expectation is to simplify radicals by factoring square roots of perfect squares up to 225 and cube roots of perfect cubes from -125 to 125.		MAFS.8.EE.1.2		
1	Algebraic Reasoning	MA.8.AR.1	Generate equivalent algebraic expressions.			MAFS.8.EE.1.1		
1		MA.8.AR.1.1	Apply the Laws of Exponents to generate equivalent algebraic expressions, limited to integer exponents and monomial bases.					
1		MA.8.AR.1.2	Apply properties of operations to multiply two linear expressions with rational coefficients.			MAFS.8.EE.3.7		
1		MA.8.AR.1.3	Rewrite the sum of two algebraic expressions having a common monomial factor as a common factor multiplied by the sum of two algebraic expressions.			MAFS.8.EE.3.7		
1		MA.8.AR.2	Solve multi-step one-variable equations and inequalities.			MAFS.8.EE.3.7		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
1		MA.8.AR.2.1	Solve multi-step linear equations in one variable, with rational number coefficients. Include equations with variables on both sides.	Clarification 1: Problem types include examples of one-variable linear equations that generate one solution, infinitely many solutions or no solution.		MAFS.8.EE.3.7		
1		MA.8.AR.2.2	Solve two-step linear inequalities in one variable and represent solutions algebraically and graphically.	Clarification 1: Instruction includes inequalities in the forms $px \pm q > r$ and $p(x \pm q) > r$, where p , q and r are specific rational numbers and where any inequality symbol can be represented. Clarification 2: Problems include inequalities where the variable may be on either side of the inequality.				
1		MA.8.AR.2.3	Given an equation in the form of $x^2 = p$ and $x^3 = q$, where p is a whole number and q is an integer, determine the real solutions.	Clarification 1: Instruction focuses on understanding that when solving $x^2 = p$, there is both a positive and negative solution. Clarification 2: Within this benchmark, the expectation is to calculate square roots of perfect squares up to 225 and cube roots of perfect cubes from -125 to 125.		MAFS.8.EE.1.2		
2		MA.8.AR.3	Extend understanding of proportional relationships to two-variable linear equations.			MAFS.8.EE.3.8		
2		MA.8.AR.3.1	Determine if a linear relationship is also a proportional relationship.	Clarification 1: Instruction focuses on the understanding that proportional relationships are linear relationships whose graph passes through the origin. Clarification 2: Instruction includes the representation of relationships using tables, graphs, equations and written descriptions.		MAFS.8.EE.2.5		

Quarter	Strand	BEST Standard	Skills/Concepts	Clarifications/Transition Guide	Mathematical Thinking and Reasoning (MTR)	MAFS Standard	Text Correlation	Date
2		MA.8.AR.3.2	Given a table, graph or written description of a linear relationship, determine the slope	Clarification 1: Problem types include cases where two points are given to determine the slope. Clarification 2: Instruction includes making connections of slope to the constant of proportionality and to similar triangles represented on the coordinate plane.		MAFS.8.EE.2.5		
2		MA.8.AR.3.3	Given a table, graph or written description of a linear relationship, write an equation in slope-intercept form.			MAFS.8.EE.2.5		
2		MA.8.AR.3.4	Given a mathematical or real-world context, graph a two-variable linear equation from a written description, a table or an equation in slope-intercept form.			MAFS.8.EE.2.6		
2		MA.8.AR.3.5	Given a real-world context , determine and interpret the slope and y-intercept of a two-variable linear equation from a written description, a table, a graph or an equation in slope-intercept form.	Clarification 1: Problems include conversions with temperature and equations of lines of fit in scatter plots.				
2		MA.8.AR.4	Develop an understanding of two-variable systems of equations.			MAFS.8.EE.3.8		
2		MA.8.AR.4.1	Given a system of two linear equations and a specified set of possible solutions, determine which ordered pairs satisfy the system of linear equations.	Clarification 1: Instruction focuses on the understanding that a solution to a system of equations satisfies both linear equations simultaneously		MAFS.8.EE.3.7		
2		MA.8.AR.4.2	Given a system of two linear equations represented graphically on the same coordinate plane, determine whether there is one solution, no solution or infinitely many solutions.			MAFS.8.EE.3.7		

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2		MA.8.AR.4.3	Given a mathematical or real-world context, solve systems of two linear equations by graphing.	Clarification 1: Instruction includes approximating non-integer solutions. Clarification 2: Within this benchmark, it is the expectation to represent systems of linear equations in slope-intercept form only. Clarification 3: Instruction includes recognizing that parallel lines have the same slope.		MAFS.8.EE.3.8		
2	Functions	MA.8.F.1	Define, evaluate and compare functions.			MAFS.8.F.1.1		
2		MA.8.F.1.1	Given a set of ordered pairs, a table, a graph or mapping diagram, determine whether the relationship is a function. Identify the domain and range of the relation.	Clarification 1: Instruction includes referring to the input as the independent variable and the output as the dependent variable. Clarification 2: Within this benchmark, it is the expectation to represent domain and range as a list of numbers or as an inequality.		MAFS.8.F.1.2		
2		MA.8.F.1.2	Given a function defined by a graph or an equation, determine whether the function is a linear function. Given an input-output table, determine whether it could represent a linear function.	Clarification 1: Instruction includes recognizing that a table may not determine a function.		MAFS.8.F.1.2		
2		MA.8.F.1.3	Analyze a real-world written description or graphical representation of a functional relationship between two quantities and identify where the function is increasing, decreasing or constant.	Clarification 1: Problem types are limited to continuous functions. Clarification 2: Analysis includes writing a description of a graphical representation or sketching a graph from a written description.		MAFS.8.F.2.5		
3	Data Analysis and Probability	MA.8.DP.1	Represent and investigate numerical bivariate data.			MAFS.8.SP.1.1		

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3		MA.8.DP.1.1	Given a set of real-world bivariate numerical data, construct a scatter plot or a line graph as appropriate for the context.	Clarification 1: Instruction includes recognizing similarities and differences between scatter plots and line graphs, and on determining which is more appropriate as a representation of the data based on the context. Clarification 2: Sets of data are limited to 20 points.		MAFS.8.SP.1.2		
3		MA.8.DP.1.2	Given a scatter plot within a real-world context , describe patterns of association.	Clarification 1: Descriptions include outliers; positive or negative association; linear or nonlinear association; strong or weak association.		MAFS.8.SP.1.1		
3		MA.8.DP.1.3	Given a scatter plot with a linear association, informally fit a straight line	Clarification 1: Instruction focuses on the connection to linear functions. Clarification 2: Instruction includes using a variety of tools, including a ruler, to draw a line with approximately the same number of points above and below the line.		MAFS.8.SP.1.2		
3	Geometric Reasoning	MA.8.GR.1	Develop an understanding of the Pythagorean Theorem and angle relationships involving triangles			MAFS.8.G.2.6		
3		MA.8.GR.1.1	Apply the Pythagorean Theorem to solve mathematical and real-world problems involving unknown side lengths in right triangles.	Clarification 1: Instruction includes exploring right triangles with natural-number side lengths to illustrate the Pythagorean Theorem. Clarification 2: Within this benchmark, the expectation is to memorize the Pythagorean Theorem. Clarification 3: Radicands are limited to whole numbers up to 225.		MAFS.8.G.2.7		

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3		MA.8.GR.1.2	Apply the Pythagorean Theorem to solve mathematical and real-world problems involving the distance between two points in a coordinate plane	Clarification 1: Instruction includes making connections between distance on the coordinate plane and right triangles. Clarification 2: Within this benchmark, the expectation is to memorize the Pythagorean Theorem. It is not the expectation to use the distance formula. Clarification 3: Radicands are limited to whole numbers up to 225.		MAFS.8.G.2.8		
3		MA.8.GR.1.3	Use the Triangle Inequality Theorem to determine if a triangle can be formed from a given set of sides. Use the converse of the Pythagorean Theorem to determine if a right triangle can be formed from a given set of sides.					
3		MA.8.GR.1.4	Solve mathematical problems involving the relationships between supplementary, complementary, vertical or adjacent angles.					
3		MA.8.GR.1.5	Solve problems involving the relationships of interior and exterior angles of a triangle.	Clarification 1: Problems include using the Triangle Sum Theorem and representing angle measures as algebraic expressions.				
3		MA.8.GR.1.6	Develop and use formulas for the sums of the interior angles of regular polygons by decomposing them into triangles.	Clarification 1: Problems include representing angle measures as algebraic expressions		MAFS.8.G.1.5		
3		MA.8.GR.2	Understand similarity and congruence using models and transformations			MAFS.8.G.1.4		

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3		MA.8.GR.2.1	Given a preimage and image generated by a single transformation, identify the transformation that describes the relationship.	Clarification 1: Within this benchmark, transformations are limited to reflections, translations or rotations of images. Clarification 2: Instruction focuses on the preservation of congruence so that a figure maps onto a copy of itself.		MAFS.8.G.1.2		
3		MA.8.GR.2.2	Given a preimage and image generated by a single dilation, identify the scale factor that describes the relationship.	Clarification 1: Instruction includes the connection to scale drawings and proportions. Clarification 2: Instruction focuses on the preservation of similarity and the lack of preservation of congruence when a figure maps onto a scaled copy of itself, unless the scaling factor is 1.		MAFS.8.G.1.2		
3		MA.8.GR.2.3	Describe and apply the effect of a single transformation on two-dimensional figures using coordinates and the coordinate plane.	Clarification 1: Within this benchmark, transformations are limited to reflections, translations, rotations or dilations of images. Clarification 2: Lines of reflection are limited to the x -axis, y -axis or lines parallel to the axes. Clarification 3: Rotations must be about the origin and are limited to 90° , 180° , 270° or 360° . Clarification 4: Dilations must be centered at the origin.		MAFS.8.G.1.3		
3		MA.8.GR.2.4	Solve mathematical and real-world problems involving proportional relationships between similar triangles.			MAFS.8.G.1.4		
4		MA.8.DP.2	Represent and find probabilities of repeated experiments					

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4		MA.8.DP.2.1	Determine the sample space for a repeated experiment.	Clarification 1: Instruction includes recording sample spaces for repeated experiments using organized lists, tables or tree diagrams. Clarification 2: Experiments to be repeated are limited to tossing a fair coin, rolling a fair die, picking a card randomly from a deck with replacement, picking marbles randomly from a bag with replacement and spinning a fair spinner. Clarification 3: Repetition of experiments is limited to two times except for tossing a coin.				
4		MA.8.DP.2.2	Find the theoretical probability of an event related to a repeated experiment.	Clarification 1: Instruction includes representing probability as a fraction, percentage or decimal. Clarification 2: Experiments to be repeated are limited to tossing a fair coin, rolling a fair die, picking a card randomly from a deck with replacement, picking marbles randomly from a bag with replacement and spinning a fair spinner. Clarification 3: Repetition of experiments is limited to two times except for tossing a coin.				

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4		MA.8.DP.2.3	Solve real-world problems involving probabilities related to single or repeated experiments, including making predictions based on theoretical probability.	Clarification 1: Instruction includes making connections to proportional relationships and representing probability as a fraction, percentage or decimal. Clarification 2: Experiments to be repeated are limited to tossing a fair coin, rolling a fair die, picking a card randomly from a deck with replacement, picking marbles randomly from a bag with replacement and spinning a fair spinner. Clarification 3: Repetition of experiments is limited to two times except for tossing a coin				
			New to standards for Florida BEST, will need to transition					

Edited by the Math Standards Committee

Kathy Balboa, Curriculum Specialist, St. Michael the Archangel
Julie Espino, Math Lead Teacher, St. John Neumann
Karen Fitzpatrick, Advanced Math Teacher, St. Gregory
Maria Jebian, Principal, Annunciation
Sylvia Kenna, Curriculum Specialist/Enrichment Math Teacher, Blessed Sacrament
Maylin Leon, ESE Director/MS Math Teacher, St. Bartholomew
Julie Perdomo, Principal, St. Louis Covenant
Colleen Ramroth, Religion and Academic Coordinator, St. Jerome
Heidi Suero, Principal, Nativity
Jeanette Victoria, MS Math/DE Teacher, St. Mark

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