

# Kinder – 5<sup>th</sup> Math Vertical Alignment

Kindergarten	1 <sup>st</sup> Grade	2 <sup>nd</sup> Grade	3 <sup>rd</sup> Grade	4 <sup>th</sup> Grade	5 <sup>th</sup> Grade
<p><b>K.1 Number, operation, and quantitative reasoning.</b> The student uses numbers name quantities.</p> <p>(B) Use sets of concrete objects to represent quantities given in verbal or written form (through 20).</p>	<p><b>1.1 Number, operation, and quantitative reasoning.</b> The student uses whole numbers to describe and compare quantities.</p> <p>(B) Create sets of tens and ones using concrete objects to describe, compare, and order whole numbers.</p>	<p><b>2.1 Number, operation, and quantitative reasoning.</b> The student understands how place value is used to represent whole numbers.</p> <p>(A) Use concrete models of hundreds, tens, and ones to represent a given whole number (up to 999) in various ways</p>	<p><b>3.1 Number, operation, and quantitative reasoning.</b> The student uses place value to communicate about increasingly large whole numbers in verbal and written form, including money.</p> <p>(A) Use place value to read, write (in symbols and words), and describe the value of whole numbers through 999,999.</p>	<p><b>4.1 Number, operation, and quantitative reasoning.</b> The student uses place value to represent whole numbers and decimals.</p> <p>(A) Use place value to read, write, compare, and order whole numbers through the 999,999,999</p>	<p><b>5.1 Number, operation, and quantitative reasoning.</b> The student uses place value to represent whole numbers and decimals.</p> <p>(A) Use place value to read, write, compare, and order whole numbers through the 999,999,999,999.</p>
<p><b>K.1 Number, operation, and quantitative reasoning.</b> The student uses numbers name quantities.</p> <p>(C) Use numbers to describe how many objects are in a set (through 20) using verbal and symbolic description.</p>	<p><b>1.1 Number, operation, and quantitative reasoning.</b> The student uses whole numbers to describe and compare quantities.</p> <p>(D) Read and write numbers to 99 to describe sets of concrete objects.</p>	<p><b>2.1 Number, operation, and quantitative reasoning.</b> The student understands how place value is used to represent whole numbers.</p> <p>(B) Use place value to read, write, and describe the value of whole numbers to 999.</p>			
<p><b>K.1 Number, operation, and quantitative reasoning.</b> The student uses numbers name quantities.</p> <p>(A) Use one-to-one correspondence and language such as more than, same number as, or two less than to describe relative sizes of sets of concrete objects.</p>	<p><b>1.1 Number, operation, and quantitative reasoning.</b> The student uses whole numbers to describe and compare quantities.</p> <p>(A) Compare and order whole numbers up to 99 (less than, greater than, or equal to) using sets of concrete objects and pictorial models</p>	<p><b>2.1 Number, operation, and quantitative reasoning.</b> The student understands how place value is used to represent whole numbers.</p> <p>(C) Use place value to compare and order whole numbers to 999 and record the comparisons using numbers and symbols (&lt;, =, &gt;)</p>	<p><b>3.1 Number, operation, and quantitative reasoning.</b> The student uses place value to communicate about increasingly large whole numbers in verbal and written form, including money.</p> <p>(B) Use place value to compare and order whole numbers through 9,999.</p>	<p><b>4.1 Number, operation, and quantitative reasoning.</b> The student uses place value to represent whole numbers and decimals.</p> <p>(B) Use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models.</p>	<p><b>5.1 Number, operation, and quantitative reasoning.</b> The student uses place value to represent whole numbers and decimals.</p> <p>(B) Use place value to read, write, compare, and order decimals through the thousandths place.</p>
	<p><b>1.1 Number, operation, and quantitative reasoning.</b> The student uses whole numbers to describe and compare quantities.</p> <p>(C) Identify individual coins by name and value and describe relationships among them</p>	<p><b>2.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts whole numbers to solve problems.</p> <p>(D) Determine the value of a collection of coins up to one dollar.</p>	<p><b>3.1 Number, operation, and quantitative reasoning.</b> The student uses place value to communicate about increasingly large whole numbers in verbal and written form, including money</p> <p>(C) Determine the value of a collection of coins and bills.</p>		
<p><b>K.2 Number, operation, and quantitative reasoning.</b> The student describes order of events or objects.</p> <p>(A) Use language such as before or after to describe relative position in a sequence of events or objects.</p>					
<p><b>K.2 Number, operation, and quantitative reasoning.</b> The student describes order of events or objects.</p> <p>(B) Name the ordinal positions in a sequence including first, second, third, etc.</p>					

<p><b>K.3 Number, operation, and quantitative reasoning.</b> The student recognizes that there are quantities less than a whole.</p> <p>(A) Share a whole by separating it into two equal parts.</p>	<p><b>1.2 Number, operation, and quantitative reasoning.</b> The student uses pairs of whole numbers to describe fractional parts of whole objects or sets of objects.</p> <p>(A) Separate a whole into two, three, or four equal parts and use appropriate language to describe the parts such as three out of four equal parts</p>	<p><b>2.2 Number, operation, and quantitative reasoning.</b> The student describes how fractions are used to name parts of whole objects or sets of objects.</p> <p>(A) Use concrete models to represent and name fractional parts of a whole object (with denominators of 12 or less)</p>	<p><b>3.2 Number, operation, and quantitative reasoning.</b> The student uses fraction names and symbols (<b>with denominators of 12 or less.</b>) to describe fractional parts of whole objects or sets of objects.</p> <p>(A) Construct concrete models of fractions.</p>		
<p><b>K.3 Number, operation, and quantitative reasoning.</b> The student recognizes that there are quantities less than a whole.</p> <p>(B) Explain why a given part is half of the whole.</p>					
	<p><b>1.2 Number, operation, and quantitative reasoning.</b> The student uses pairs of whole numbers to describe fractional parts of whole objects or sets of objects.</p> <p>(B) Use appropriate language to describe part of a set such as three out of the eight crayons is red.</p>	<p><b>2.2 Number, operation, and quantitative reasoning.</b> The student describes how fractions are used to name parts of whole objects or sets of objects.</p> <p>(B) Use concrete models to represent and name fractional parts of a set of objects (with denominators of 12 or less).</p>	<p><b>3.2 Number, operation, and quantitative reasoning.</b> The student uses fraction names and symbols (<b>with denominators of 12 or less.</b>) to describe fractional parts of whole objects or sets of objects.</p> <p>(B) Compare fractional parts of whole objects or sets of objects in a problem situation using concrete models</p>	<p><b>4.2 Number, operation, and quantitative reasoning.</b> The student describes and compares fractional parts of whole objects or sets of objects.</p> <p>(C) Compare and order fractions using concrete objects and pictorial models</p>	<p><b>5.2 Number, operation, and quantitative reasoning.</b> The student uses fractions in problem-solving situations.</p> <p>(C) Compare two fractional quantities in problem-solving situations using a variety of methods, including common denominators.</p>
			<p><b>3.2 Number, operation, and quantitative reasoning.</b> The student uses fraction names and symbols (<b>with denominators of 12 or less.</b>) to describe fractional parts of whole objects or sets of objects.</p> <p>(C) Use fraction names and symbols to describe fractional parts of whole objects or sets of objects.</p>	<p><b>4.2 Number, operation, and quantitative reasoning.</b> The student describes and compares fractional parts of whole objects or sets of objects.</p> <p>(B) Model fraction quantities greater than one using concrete objects and pictorial models</p>	<p><b>5.2 Number, operation, and quantitative reasoning.</b> The student uses fractions in problem-solving situations.</p> <p>(B) Generate a mixed number equivalent to a given improper fraction or generate an improper fraction equivalent to a given mixed number</p>
		<p><b>2.2 Number, operation, and quantitative reasoning.</b> The student describes how fractions are used to name parts of whole objects or sets of objects.</p> <p>(C) Use concrete models to determine if a fractional part of a whole is closer to 0, <math>\frac{1}{2}</math> or 1.</p>			
			<p><b>3.2 Number, operation, and quantitative reasoning.</b> The student uses fraction names and symbols (<b>with denominators of 12 or less.</b>) to describe fractional parts of whole objects or sets of objects.</p> <p>(D) Construct concrete models of equivalent fractions for fractional parts of whole objects.</p>	<p><b>4.2 Number, operation, and quantitative reasoning.</b> The student describes and compares fractional parts of whole objects or sets of objects.</p> <p>(A) Use concrete objects and pictorial models to generate equivalent fractions.</p>	<p><b>5.2 Number, operation, and quantitative reasoning.</b> The student uses fractions in problem-solving situations.</p> <p>(A) Generate a fraction equivalent to a given fraction such as <math>\frac{1}{2}</math> and <math>\frac{3}{6}</math> or <math>\frac{4}{12}</math> and <math>\frac{1}{3}</math>.</p>

				<p><b>4.2 Number, operation, and quantitative reasoning.</b> The student describes and compares fractional parts of whole objects or sets of objects.</p> <p>(D) Relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models.</p>	<p><b>5.2 Number, operation, and quantitative reasoning.</b> The student uses fractions in problem-solving situations.</p> <p>(D) Use models to relate decimals to fractions that name tenths, hundredths, and thousandths.</p>
<p><b>K.4 Number, operation and quantitative reasoning.</b> The student models addition (joining) and subtraction (separating).</p> <p>(A) Model and create addition and subtraction problems in real situations with concrete objects.</p>	<p><b>1.3 Number, operation, and quantitative reasoning.</b> The student recognizes and solves problems in addition and subtraction situations.</p> <p>(A) Model and create addition and subtraction problem situations with concrete objects and write corresponding number sentences.</p>	<p><b>2.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts whole numbers to solve problems.</p> <p>(B) Model addition and subtraction of two-digit numbers with objects, pictures, words, and numbers</p>	<p><b>3.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts to solve meaningful problems involving whole numbers.</p> <p>(A) Model addition and subtraction using pictures, words, and numbers.</p>	<p><b>4.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts to solve meaningful problems involving whole numbers and decimals.</p> <p>(A) Use addition and subtraction to solve problems involving whole numbers</p>	<p><b>5.3 Number, operation, and quantitative reasoning.</b> The student adds, subtracts, multiplies, and divides to solve meaningful problems.</p> <p>(A) Use addition and subtraction to solve problems involving whole numbers and decimals.</p>
				<p><b>4.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts to solve meaningful problems involving whole numbers and decimals.</p> <p>(B) Add and subtract decimals to the hundredths place using concrete objects and pictorial models.</p>	
	<p><b>1.3 Number, operation, and quantitative reasoning.</b> The student recognizes and solves problems in addition and subtraction situations.</p> <p>(B) Use concrete objects and pictorial models to apply basic addition and subtraction facts (up to <math>9 + 9 = 18</math> and <math>18 - 9 = 9</math>).</p>	<p><b>2.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts whole numbers to solve problems.</p> <p>(A) Recall and apply basic addition and subtraction facts to (18)</p>			
		<p><b>2.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts whole numbers to solve problems.</p> <p>(C) Select addition or subtraction to solve problems using two-digit numbers, whether or not regrouping is necessary.</p>	<p><b>3.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts to solve meaningful problems involving whole numbers.</p> <p>(B) Select addition or subtraction and use the operation to solve problems involving whole numbers through 999.</p>		
		<p><b>2.3 Number, operation, and quantitative reasoning.</b> The student adds and subtracts whole numbers to solve problems.</p> <p>(E) Describe how the cent symbol, dollar symbol, and the decimal point are used to name the value of a collection of coins.</p>			
				<p><b>4.4 Number, operation, and quantitative reasoning.</b> The student multiplies and divides to solve meaningful problems involving whole numbers.</p> <p>(A) Model factors and products using arrays and area models.</p>	<p><b>5.3 Number, operation, and quantitative reasoning.</b> The student adds, subtracts, multiplies, and divides to solve meaningful problems.</p> <p>(D) Identify common factors of a set of whole numbers</p>

				<p><b>4.4 Number, operation, and quantitative reasoning.</b> The student multiplies and divides to solve meaningful problems involving whole numbers.</p> <p>(B) Represent multiplication and division situations in picture, word, and number form</p>	
		<p><b>2.4 Number, operation, and quantitative reasoning.</b> The student models multiplication and division.</p> <p>(A) Model, create, and describe multiplication situations in which equivalent sets of concrete objects are joined.</p>	<p><b>3.4 Number, operation, and quantitative reasoning.</b> The student recognizes and solves problems in multiplication and division situations.</p> <p>(A) Learn and apply multiplication facts 12 x 12 using concrete models and objects.</p>	<p><b>4.4 Number, operation, and quantitative reasoning.</b> The student multiplies and divides to solve meaningful problems involving whole numbers.</p> <p>(C) Recall and apply multiplication facts through 12 x 12</p>	
			<p><b>3.4 Number, operation, and quantitative reasoning.</b> The student recognizes and solves problems in multiplication and division situations.</p> <p>(B) Solve and record multiplication problems (up to 2 digits by 1 digit).</p>	<p><b>4.4 Number, operation, and quantitative reasoning.</b> The student multiplies and divides to solve meaningful problems involving whole numbers.</p> <p>(D) Use multiplication to solve problems (no more than two digits, times two digits, without technology).</p>	<p><b>5.3 Number, operation, and quantitative reasoning.</b> The student adds, subtracts, multiplies, and divides to solve meaningful problems.</p> <p>(B) Use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology)</p>
		<p><b>2.4 Number, operation, and quantitative reasoning.</b> The student models multiplication and division.</p> <p>(B) Model, create, and describe division situations in which a set of concrete objects is separated into equivalent sets.</p>	<p><b>3.4 Number, operation, and quantitative reasoning.</b> The student recognizes and solves problems in multiplication and division situations.</p> <p>(C) Use models to solve division problems and use number sentences to record the solutions.</p>	<p><b>4.4 Number, operation, and quantitative reasoning.</b> The student multiplies and divides to solve meaningful problems involving whole numbers.</p> <p>(E) Use division to solve problems involving one-digit divisors (no more than one digit divisors and three digit dividends without technology).</p>	<p><b>5.3 Number, operation, and quantitative reasoning.</b> The student adds, subtracts, multiplies, and divides to solve meaningful problems.</p> <p>(C) Use division to solve problems involving whole numbers (no more than two-digit divisors and three-digit dividends without technology) including interpreting the remainder within a given context.</p>
					<p><b>5.3 Number, operation, and quantitative reasoning.</b> The student adds, subtracts, multiplies, and divides to solve meaningful problems.</p> <p>(E) Model situations using addition and/or subtraction involving fractions with like denominators using concrete objects, pictures, words, and numbers</p>
			<p><b>3.5 Number, operation, and quantitative reasoning.</b> The student estimates to determine reasonable results.</p> <p>(A) Round whole numbers to the nearest ten or hundred to approximate reasonable results in problem situations.</p>	<p><b>4.5 Number, operation, and quantitative reasoning.</b> The student estimates to determine reasonable results.</p> <p>(A) Round whole numbers to the nearest ten, hundred, or thousand to approximate reasonable results in problem situations.</p>	
			<p><b>3.5 Number, operation, and quantitative reasoning.</b> The student estimates to determine reasonable results.</p> <p>(B) Use strategies including rounding and compatible numbers to estimate solutions to addition and subtraction problems.</p>	<p><b>4.5 Number, operation, and quantitative reasoning.</b> The student estimates to determine reasonable results.</p> <p>(B) Use strategies including rounding and compatible numbers to estimate solutions to multiplication and division problems.</p>	<p><b>5.4 Number, operation, and quantitative reasoning.</b> The student estimates to determine reasonable results.</p> <p>(A) Use strategies including rounding and compatible numbers to estimate solutions to multiplication, division, addition and subtraction problems</p>

<p><b>K.5 Patterns, relationships, and algebraic thinking.</b> The student identifies, extends, and creates patterns.</p> <p>(A) Identify, extend, and create patterns of sounds, physical movement, and concrete objects.</p>					
	<p><b>1.5 Patterns, relationships, and algebraic thinking.</b> The student recognizes patterns in numbers and operations.</p> <p>(A) Use patterns to skip count by twos, fives, and tens.</p>				
	<p><b>1.5 Patterns, relationships, and algebraic thinking.</b> The student recognizes patterns in numbers and operations.</p> <p>(B) Find patterns in numbers, including odd and even.</p>	<p><b>2.5 Patterns, relationships, and algebraic thinking.</b> The student uses patterns in numbers and operations.</p> <p>(A) Find patterns in numbers such as in a 100s chart.</p>			
	<p><b>1.5 Patterns, relationships, and algebraic thinking.</b> The student recognizes patterns in numbers and operations.</p> <p>(C) Compare and order whole numbers using place value.</p>	<p><b>2.5 Patterns, relationships, and algebraic thinking.</b> The student uses patterns in numbers and operations.</p> <p>(B) Use patterns in place value to compare and order whole numbers through 999.</p>			
	<p><b>1.5 Patterns, relationships, and algebraic thinking.</b> The student recognizes patterns in numbers and operations.</p> <p>(D) Use patterns to develop strategies to solve basic addition and basic subtraction problems.</p>	<p><b>2.5 Patterns, relationships, and algebraic thinking.</b> The student uses patterns in numbers and operations.</p> <p>(C) Use patterns and relationships to develop strategies to remember basic addition and subtraction facts. Determine patterns in related addition and subtraction number sentences (including fact families) such as <math>8 + 9 = 17</math>, <math>9 + 8 = 17</math>, <math>17 - 8 = 9</math>, <math>17 - 9 = 8</math>.</p>	<p><b>3.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns to solve problems.</p> <p>(C) Identify patterns in related multiplication and division sentences (fact families) such as <math>2 \times 3 = 6</math>, <math>3 \times 2 = 6</math>, <math>6 \div 2 = 3</math>, <math>6 \div 3 = 2</math>.</p>	<p><b>4.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns in multiplication and division.</p> <p>(A) Use patterns and relationships to develop strategies to remember basic multiplication and division facts such as the patterns in related multiplication and division number sentences (fact families) such as <math>9 \times 9 = 81</math> and <math>81 \div 9 = 9</math></p>	<p><b>5.5 Patterns, relationships, and algebraic thinking.</b> The student makes generalizations based on observed patterns and relationships.</p> <p>(A) Describe the relationship between sets of data in graphic organizers such as lists, tables, charts, and diagram</p>
	<p>1.5 Patterns, relationships, and algebraic thinking. The student recognizes patterns in numbers and operations.</p> <p>(E) Identify patterns in related addition and subtraction sentences (fact families for sums to 18) such as <math>2 + 3 = 5</math>, <math>3 + 2 = 5</math>, <math>5 - 2 = 3</math>, and <math>5 - 3 = 2</math>.</p>				
<p><b>K.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns to make predictions.</p> <p>(A) Use patterns to predict what comes next, including cause-and-effect relationships.</p>	<p><b>1.4 Patterns, relationships, and algebraic thinking.</b> The student uses repeating patterns and additive patterns to make predictions.</p> <p>(A) Identify, describe, and extend concrete and pictorial patterns in order to make predictions and solve problems.</p>	<p><b>2.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns to describe relationships and make predictions</p> <p>(B) Identify patterns in a list of related number pairs based on a real-life situation and extend the list.</p>	<p><b>3.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns to solve problems.</p> <p>(B) Identify patterns in multiplication facts using concrete objects, pictorial models, or technology.</p>	<p><b>4.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns in multiplication and division.</p> <p>(B) Use patterns to multiply by 10 and 100</p>	<p><b>5.5 Patterns, relationships, and algebraic thinking.</b> The student makes generalizations based on observed patterns and relationships.</p> <p>(B) Identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs.</p>
		<p><b>2.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns to describe relationships and make predictions.</p> <p>(C) Identify, describe, and extend repeating and additive patterns to make predictions and solve problems</p>	<p><b>3.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns to solve problems.</p> <p>(A) Identify and extend whole-number and geometric patterns to make predictions and solve problems.</p>		

<p><b>K.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns to make predictions.</p> <p>(B) Count by ones to 100.</p>					
		<p><b>2.6 Patterns, relationships, and algebraic thinking.</b> The student uses patterns to describe relationships and make predictions.</p> <p>(A) Generate a list of paired numbers based on a real-life situation such as number of tricycles related to number of wheels.</p>	<p><b>3.7 Patterns, relationships, and algebraic thinking.</b> The student uses lists, tables, and charts to express patterns and relationships.</p> <p>(A) Generate a table of paired numbers based on a real-life situation such as insects and legs</p>		
			<p><b>3.7 Patterns, relationships, and algebraic thinking.</b> The student uses lists, tables, and charts to express patterns and relationships.</p> <p>(B) Identify and describe patterns in a table of related number pairs based on a meaningful problem and extend the table.</p>	<p><b>4.7 Patterns, relationships, and algebraic thinking.</b> The student uses organizational structures to analyze and describe patterns and relationships.</p> <p>(A) Describe the relationship between two sets of related data such as ordered pairs in a table.</p>	<p><b>5.6 Patterns, relationships, and algebraic thinking.</b> The student describes relationships mathematically.</p> <p>(A) Select from and use diagrams and equations such as <math>y = 5 + 3</math> to represent meaningful problem situations.</p>
<p><b>K.7 Geometry and spatial reasoning.</b> The student describes the relative position of objects.</p> <p>(A) Describe one object in relation to another using informal language such as over, under, above, and below.</p>					
<p><b>K.7 Geometry and spatial reasoning.</b> The student describes the relative position of objects.</p> <p>(B) Place an object in a specified position.</p>					
<p><b>K.8 Geometry and spatial reasoning.</b> The student uses attributes to determine how objects are alike and different.</p> <p>(A) Describe and identify an object by its attributes using informal language.</p>					
<p><b>K.8 Geometry and spatial reasoning.</b> The student uses attributes to determine how objects are alike and different.</p> <p>(B) Compare two objects based on their attributes.</p>					
<p><b>K.8 Geometry and spatial reasoning.</b> The student uses attributes to determine how objects are alike and different.</p> <p>(C) Sort a variety of objects including two- and three-dimensional geometric figures according to their attributes and describe how the objects are sorted.</p>					

<p><b>K.9 Geometry and spatial reasoning.</b> The student recognizes attributes of two- and three-dimensional geometric figures.</p> <p>(A) Describe and compare the attributes of real-life objects such as balls, boxes, cans and cones or models of three-dimensional geometric figures</p>	<p><b>1.6 Geometry and spatial reasoning.</b> The student uses attributes to identify two-and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both.</p> <p>(C) Describe and identify two- and three-dimensional geometric figures in order to sort them according to a given attribute using informal and formal language</p>	<p><b>2.7 Geometry and spatial reasoning.</b> The student uses attributes to identify two and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both.</p> <p>(A) Describe attributes (the number of vertices, faces, edges, sides) of two- and three dimensional geometric figures such as circles, polygons, spheres, cones, cylinders, prisms and pyramids, etc.</p>			
		<p><b>2.7 Geometry and spatial reasoning.</b> The student uses attributes to identify two and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both.</p> <p>(B) Use attributes to describe how 2 two-dimensional or 2 three-dimensional geometric figures are alike or different.</p>	<p><b>3.8 Geometry and spatial reasoning.</b> The student uses formal geometric vocabulary.</p> <p>(A) Identify, classify, and describe two- and three-dimensional geometric figures by their attributes. The student compares two-dimensional figures, three dimensional figures, or both by their attributes using formal geometric vocabulary.</p>	<p><b>4.8 Geometry and spatial reasoning.</b> The student identifies and describes attributes of geometric figures using formal and geometric language.</p> <p>(C) Use essential attributes to define two-and three-dimensional geometric figures</p>	<p><b>5.7 Geometry and spatial reasoning.</b> The student generates geometric definitions using critical attributes.</p> <p>(A) Identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures</p>
<p><b>K.9 Geometry and spatial reasoning.</b> The student recognizes attributes of two- and three-dimensional geometric figures.</p> <p>(B) Recognize shapes in real life three-dimensional geometric figures or models of three dimensional geometric figures.</p>	<p><b>1.6 Geometry and spatial reasoning.</b> The student uses attributes to identify two-and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both.</p> <p>(B) Describe and identify three-dimensional geometric figures, including spheres, rectangular prisms (including cubes), cylinders, and cones.</p>				
<p><b>K.9 Geometry and spatial reasoning.</b> The student recognizes attributes of two- and three-dimensional geometric figures.</p> <p>(C) Describe, identify, and compare circles, triangles, rectangles, including squares.</p>	<p><b>1.6 Geometry and spatial reasoning.</b> The student uses attributes to identify two-and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both.</p> <p>(A) Describe and identify two dimensional geometric figures including circles, triangles, rectangles, and squares (a special type of rectangle)</p>				
				<p><b>4.8 Geometry and spatial reasoning.</b> The student identifies and describes attributes of geometric figures using formal and geometric language.</p> <p>(A) Identify and describe right, acute, and obtuse angles.</p>	
				<p><b>4.8 Geometry and spatial reasoning.</b> The student identifies and describes attributes of geometric figures using formal and geometric language.</p> <p>(B) Identify and describe parallel and intersecting (including perpendicular) lines using concrete objects and pictorial models</p>	

				<p><b>4.9 Geometry and spatial reasoning.</b> The student connects transformations to congruence and symmetry.</p> <p>(A) Demonstrate translations, reflections, and rotations using concrete models.</p>	<p><b>5.8 Geometry and spatial reasoning.</b> The student models transformations.</p> <p>(A) Sketch the results of translations, rotations, and reflections on a Quadrant I coordinate grid.</p>
			<p><b>3.9 Geometry and spatial reasoning.</b> The student recognizes congruence and symmetry.</p> <p>(A) Identify congruent two-dimensional figures</p>	<p><b>4.9 Geometry and spatial reasoning.</b> The student connects transformations to congruence and symmetry.</p> <p>(B) Use translations, reflections, and rotations to verify that two shapes are congruent.</p>	<p><b>5.8 Geometry and spatial reasoning.</b> The student models transformations.</p> <p>(B) Identify the transformation that generates one figure from the other when given two congruent figures on a Quadrant I coordinate grid.</p>
	<p><b>1.6 Geometry and spatial reasoning.</b> The student uses attributes to identify two-and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both.</p> <p>(D) Use concrete models to combine two-dimensional geometric figures to make new geometric figures.</p>	<p><b>2.7 Geometry and spatial reasoning.</b> The student uses attributes to identify two and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both.</p> <p>(C) Cut two-dimensional geometric figures apart and identify the new geometric figures formed.</p>	<p><b>3.9 Geometry and spatial reasoning.</b> The student recognizes congruence and symmetry.</p> <p>(B) Create two-dimensional figures with lines of symmetry using concrete models and technology.</p>	<p><b>4.9 Geometry and spatial reasoning.</b> The student connects transformations to congruence and symmetry.</p> <p>(C) Use reflections to verify that a shape has symmetry</p>	
			<p><b>3.9 Geometry and spatial reasoning.</b> The student recognizes congruence and symmetry.</p> <p>(C) Identify lines of symmetry in two-dimensional geometric figures</p>		
		<p><b>2.8 Geometry and spatial reasoning.</b> The student recognizes that a line can be used to represent a set of numbers and its properties.</p> <p>(A) Use whole numbers to locate and name points on a number line</p>	<p><b>3.10 Geometry and spatial reasoning.</b> The student recognizes that a line can be used to represent numbers and fractions and their properties and relationships.</p> <p>(A) Locate and name points on a number line using whole numbers and fractions, including halves and fourths.</p>	<p><b>4.10 Geometry and spatial reasoning.</b> The student recognizes the connection between numbers and their properties and points on a number line.</p> <p>(A) Locate and name points on a number line using whole numbers, fractions such as halves and fourths, and decimals such as tenths</p>	<p><b>5.9 Geometry and spatial reasoning.</b> The student recognizes the connection between ordered pairs of numbers and locations of points on a plane.</p> <p>(A) Locate and name points on a coordinate grid using ordered pairs of whole numbers.</p>
<p><b>K.10 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity and/or relative temperature. The student uses comparative language, to solve problems and answer questions.</p> <p>(A) Compare and order two or three concrete objects according to length (longer/shorter than, or the same)</p>	<p><b>1.7 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length.</p> <p>(A) Estimate and measure length using nonstandard units such as paper clips and sides of color tiles.</p> <p><b>1.7 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length.</p>	<p><b>2.9 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric and customary systems) of length, weight/mass, capacity, and time.</p> <p>(A) Identify concrete models that approximate standard units and use them to measure length.</p>	<p><b>3.11 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language, to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass.</p> <p>(A) Use linear measurement tools to estimate and measure lengths using standard Units</p>	<p><b>4.11 Measurement.</b> The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length, (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.</p> <p>(A) Estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units, SI (metric) and customary.</p>	<p><b>5.10 Measurement.</b> The student applies measurement concepts involving length, (including perimeter), area, capacity/volume, and weight/mass to solve problems.</p> <p>(C) Select and use appropriate units and formulas to measure length, perimeter, area, and volume.</p>

	(B) Compare and order two or more concrete objects according to length (from longest to shortest)				
			<p><b>3.11 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language, to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass.</p> <p>(B) Use standard units to find the perimeter of a shape.</p>		
				<p><b>4.11 Measurement.</b> The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length, (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.</p> <p>(B) Perform simple conversions between different units of length, between different units of capacity, and between different units of weight within the customary measurement system.</p>	<p><b>5.10 Measurement.</b> The student applies measurement concepts involving length, (including perimeter), area, capacity/volume, and weight/mass to solve problems.</p> <p>(A) Perform simple conversions within the same measurement system SI (metric) or customary</p>
	<p><b>1.7 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length.</p> <p>(C) Describe the relationship between the size of the unit and the number of units needed to measure the length of an object.</p>				
<p><b>K.10 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity and/or relative temperature. The student uses comparative language, to solve problems and answer questions.</p> <p>(B) Compare the area of two flat surfaces of two-dimensional figures (covers more, covers less or covers the same).</p>	<p><b>1.7 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length.</p> <p>(D) Compare and order two or more two-dimensional surfaces (from covers the most to covers the least)</p>	<p><b>2.9 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric and customary systems) of length, weight/mass, capacity, and time.</p> <p>(B) Select a non-standard unit of measure, such as square tiles or triangles to determine the area of a two-dimensional surface.</p>	<p><b>3.11 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language, to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass.</p> <p>(C) Use concrete and pictorial models of square units to determine the area of two-dimensional surfaces.</p>		

<p><b>K.10 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity and/or relative temperature. The student uses comparative language, to solve problems and answer questions.</p> <p>(C) Compare two containers according to capacity (hold more, holds less, or holds the same)</p>	<p><b>1.7 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length.</p> <p>(E) Compare and order two or more containers according to capacity (from holds the most to holds the least)</p>	<p><b>2.9 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric and customary systems) of length, weight/mass, capacity, and time</p> <p>(C) Select a non-standard unit of measure, such as a bathroom cup or a jar, to determine the capacity of a given container.</p>	<p><b>3.11 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language, to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass</p> <p>(E) Identify concrete models that approximate standard units for capacity and use them to measure capacity</p>	<p><b>4.11 Measurement.</b> The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length, (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.</p> <p>(C) Use concrete models of standard cubic units to measure volume</p>	
<p><b>K.10 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity and/or relative temperature. The student uses comparative language, to solve problems and answer questions.</p> <p>(D) Compare two objects according to weight/mass (heavier than, lighter than, or equal to).</p>	<p><b>1.7 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length.</p> <p>(F) Compare and order two or more objects according to weight/mass (from heaviest to lightest)</p>	<p><b>2.9 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length, area, capacity, and weight/mass. The student recognizes and uses models that approximate standard units (from both SI, also known as metric and customary systems) of length, weight/mass, capacity, and time.</p> <p>(D) Select a non-standard unit of measure such as beans or marbles to determine the weight/mass of a given object.</p>	<p><b>3.11 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language, to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass</p> <p>(D) Identify concrete models that approximate standard units of weight/mass and use them to measure weight/mass.</p>	<p><b>4.11 Measurement.</b> The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length, (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.</p> <p>(E) Explain the difference between weight and mass</p>	
			<p><b>3.11 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language, to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass</p> <p>(F) Use concrete models that approximate cubic units to determine the volume of a given container or other three-dimensional geometric figures</p>	<p><b>4.11 Measurement.</b> The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length, (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.</p> <p>(D) Estimate volume in cubic units</p>	
					<p><b>5.10 Measurement.</b> The student applies measurement concepts involving length, (including perimeter), area, capacity/volume, and weight/mass to solve problems.</p> <p>(B) Connect models for perimeter, area, and volume with their respective formulas</p>

<p><b>K.10 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity and/or relative temperature. The student uses comparative language, to solve problems and answer questions.</p> <p>(E) Compare situations or objects according to relative temperature (hotter/colder than, or the same as).</p>	<p><b>1.7 Measurement.</b> The student directly compares the attributes of length, area, weight/mass, capacity, and temperature. The student uses comparative language to solve problems and answer questions. The student selects and uses nonstandard units to describe length.</p> <p>(G) Compare and order two or more objects according to relative temperature (from hottest to coldest).</p>	<p><b>2.10 Measurement.</b> The student uses standard tools to estimate and measure time and temperature (in degrees Fahrenheit).</p> <p>(A) Read a thermometer to gather data.</p>	<p><b>3.12 Measurement.</b> The student reads and writes time and measures temperature in degrees Fahrenheit to solve problems.</p> <p>(A) Use a thermometer to measure temperature</p>	<p><b>4.12 Measurement.</b> The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).</p> <p>(A) Use a thermometer to measure temperature and changes in temperature</p>	<p><b>5.11 Measurement.</b> The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).</p> <p>(A) Solve problems involving changes in temperature</p>
<p><b>K.11 Measurement.</b> The student uses time to describe, compare, and order events and situations.</p> <p>(A) Compare events according to duration such as more time than or less time than.</p>	<p><b>1.8 Measurement.</b> The student understands that time can be measured. The student uses time to describe and compare situations</p> <p>(A) Order three or more events according to duration.</p>				
<p><b>K.11 Measurement.</b> The student uses time to describe, compare, and order events and situations.</p> <p>(B) Sequence events (up to three)</p>					
<p><b>K.11 Measurement.</b> The student uses time to describe, compare, and order events and situations.</p> <p>(C) Read a calendar using days, weeks, and months</p>					
	<p><b>1.8 Measurement.</b> The student understands that time can be measured. The student uses time to describe and compare situations</p> <p>(B) Read time to the hour and half-hour using analog and digital clocks.</p>	<p><b>2.10 Measurement.</b> The student uses standard tools to estimate and measure time and temperature (in degrees Fahrenheit).</p> <p>(B) Read and write times shown on an analog and digital clock using five-minute increments</p>	<p><b>3.12 Measurement.</b> The student reads and writes time and measures temperature in degrees Fahrenheit to solve problems.</p> <p>(B) Tell and write time shown on analog and digital clocks.</p>	<p><b>4.12 Measurement.</b> The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).</p> <p>(B) Use tools, such as a clock with gears or a stopwatch, to solve problems involving elapsed Time</p>	<p><b>5.11 Measurement.</b> The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).</p> <p>(B) Solve problems involving elapsed time</p>
		<p><b>2.10 Measurement.</b> The student uses standard tools to estimate and measure time and temperature (in degrees Fahrenheit).</p> <p>(C) Describe activities that take approximately one second, one minute, and one hour.</p>			
<p><b>K.12 Probability and statistics.</b> The student constructs and uses graphs of real objects or pictures to answer questions.</p> <p>(A) Construct graphs using real objects or pictures in order to answer questions.</p>	<p><b>1.9 Probability and statistics.</b> The student displays data in an organized form.</p> <p>(A) Collect and sort data.</p> <p><b>1.9 Probability and statistics.</b> The student displays data in an organized form.</p> <p>(B) Use organized data to construct real object graphs, picture graphs, and bar-type graphs.</p>	<p><b>2.11 Probability and statistics.</b> The student organizes data to make it useful for interpreting information.</p> <p>(A) Construct picture graphs and bar-type graphs.</p>	<p><b>3.13 Probability and statistics.</b> The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>(A) Collect, organize, records, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data.</p>		<p><b>5.13 Probability and statistics.</b> The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>(C) Graph a given set of data using an appropriate graphical representation such as a picture or line graph</p>

					<p><b>5.13 Probability and statistics.</b> The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>(B) Describe characteristics of data presented in tables and graphs including median, mode, and range</p>
					<p><b>5.12 Probability and statistics.</b> The student describes and predicts the results of a probability experiment.</p> <p>(A) Use fractions to describe the results of an experiment</p>
					<p><b>5.12 Probability and statistics.</b> The student describes and predicts the results of a probability experiment.</p> <p>(B) Use experimental results to make predictions.</p>
				<p><b>4.13 Probability and statistics.</b> The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>(A) Use concrete objects or pictures to make generalizations about determining all possible combinations of a given set of data or of objects in a problem situation</p>	<p><b>5.12 Probability and statistics.</b> The student describes and predicts the results of a probability experiment.</p> <p>(C) List all possible outcomes of a probability experiment such as tossing a coin</p>
<p><b>K.12 Probability and statistics.</b> The student constructs and uses graphs of real objects or pictures to answer questions.</p> <p>(B) Use information from a graph of real objects or pictures in order to answer questions.</p>	<p><b>1.10 Probability and statistics.</b> The student uses information from organized data.</p> <p>(A) Draw conclusions and answer questions using information organized in real object graphs, picture graphs, and bar-type graphs.</p>	<p><b>2.11 Probability and statistics.</b> The student organizes data to make it useful for interpreting information.</p> <p>(B) Draw conclusions and answer questions based on picture graphs and bar-type graphs.</p>	<p><b>3.13 Probability and statistics.</b> The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>(B) Interpret information from pictographs and bar graphs.</p>	<p><b>4.13 Probability and statistics.</b> The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>(B) Interpret bar graphs</p>	<p><b>5.13 Probability and statistics.</b> The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>(A) Use tables of related number pairs to make line graphs</p>
	<p><b>1.10 Probability and statistics.</b> The student uses information from organized data.</p> <p>(B) Identify events as certain or impossible such as drawing a red crayon from a bag of green crayons.</p>	<p><b>2.11 Probability and statistics.</b> The student organizes data to make it useful for interpreting information.</p> <p>(C) Use data to describe events as more likely or less likely such as drawing a certain color crayon from a bag of seven red crayons and three green crayons.</p>	<p><b>3.13 Probability and statistics.</b> The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>(C) Use data to describe events as more likely than, less likely than, or equally likely as.</p>		
<p><b>K.13 Underlying processes and mathematical tools.</b> The student applies Kindergarten mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>(A) Identify mathematics in everyday situations.</p>	<p><b>1.11 Underlying processes and mathematical tools.</b> The student applies Grade 1 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>(A) Identify mathematics in everyday situations.</p>	<p><b>2.12 Underlying processes and mathematical tools.</b> The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>(A) Identify the mathematics in everyday situations.</p>	<p><b>3.14 Underlying processes and mathematical tools.</b> The student applies Grade 3 mathematics to solve problems connected to everyday experiences and activities in and outside of school</p> <p>(A) Identify the mathematics in everyday situations.</p>	<p><b>4.14 Underlying processes and mathematical tools.</b> The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>(A) Identify the mathematics in everyday situations.</p>	<p><b>5.14 Underlying processes and mathematical tools.</b> The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>(A) Identify the mathematics in everyday situations.</p>



(A) Justify his or her thinking using objects, words, pictures, numbers, and technology	(A) Justify his or her thinking using objects, words, pictures, numbers, and technology	(A) Justify his or her thinking using objects, words, pictures, numbers, and technology			
			<p><b>3.16 Underlying processes and mathematical tools.</b> The student uses logical reasoning.</p> <p>(B) Justify why an answer is reasonable and explain the solution process.</p>	<p><b>4.16 Underlying processes and mathematical tools.</b> The student uses logical reasoning to make sense of his or her world</p> <p>(B) Justify why an answer is reasonable and explain the solution process.</p>	<p><b>5.16 Underlying processes and mathematical tools.</b> The student uses logical reasoning to make sense of his or her world.</p> <p>(B) Justify why an answer is reasonable and explain the solution process.</p>