`Student Personal Learning Goals – Mathematics Edition

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Standard	**Emerging (1)**	**Developing (2)**	**Proficient (3)**	**Distinguished (4)**
G.A.1 (GRR, MCR, MIR, MSR)	I can identify points, lines, line segments, rays, angles, and lines in two-dimensional figures.	I can identify points, lines, line segments, rays, angles, and lines in two-dimensional figures.	I can draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. I can identify these in two-dimensional figures.	I can explain characteristics that define points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.
G.A.2 (GRR, MCR, MIR, MSR)	I can identify two-dimensional figures based on the presence or absence of parallel or perpendicular lines.	I can identify 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.	I can 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 (e.g., understand right triangles as a category, and identify right triangles).	I can classify two-dimensional figures into more than one category based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size (e.g., understand right triangles as a category, and identify right triangles).
G.A.3 (EQR, GRR, MCR, MIR, MSR)	I can identify a line of symmetry for a two-dimensional figure.	I can identify line-symmetric figures. I can draw lines of symmetry.	I can 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. I can identify line-symmetric figures and draw lines of symmetry.	I can explain that a line of symmetry for a two-dimensional figure is a line across the figure such that the figure can be folded along the line into matching parts. I can draw line-symmetric figures.
MD.A.1 (EQR, GRR, MCR, MIR, MSR,TBR)	I can identify the relative sizes of measurement units within one system of units which could include km, m, cm; kg,	I can identify the relative sizes of measurement units within one system of units which could include km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec.	I can know relative sizes of measurement units within one system of units which could include km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec.	I can explain how different sizes of measurement units within one system of units relate to each other. Within a single system of measurement, I can explain how to convert measurements

	g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, I can identify measurements in a larger unit in terms of a smaller unit.	Within a single system of measurement, I can identify measurements in a larger unit in terms of a smaller unit and in a smaller unit in terms of a larger unit.	Within a single system of measurement, I can express measurements in a larger unit in terms of a smaller unit and in a smaller unit in terms of a larger unit. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1,12), (2,24), (3,36).*	from a larger unit to a smaller unit and from a smaller unit to a larger unit. I can generate a conversion table for measurements within one system of units.
MD.A.2 (EQR, GRR)	I can use the four operations to identify solutions to word problems and problems in real-world context involving distances, intervals of time (hr, min, sec), liquid volumes, masses of objects, and money, including decimals.	I can use the four operations to identify solutions to word problems and problems in real-world context involving distances, intervals of time (hr, min, sec), liquid volumes, masses of objects, and money, including decimals and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	I can use the four operations to solve word problems and problems in real-world context involving distances, intervals of time (hr, min, sec), liquid volumes, masses of objects, and money, including decimals and problems involving fractions with like denominators, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	I can explain how to use the four operations to solve word problems and problems in real-world context involving distances, intervals of time (hr, min, sec), liquid volumes, masses of objects, and money, including decimals and problems involving fractions with like denominators, and problems that require expressing measurements given in a smaller unit in terms of a larger unit.
		Represent measurement quantities using a variety of representations, including number lines that feature a measurement scale.		
MD.A.3 (EQR, GRR, MSR)	I can identify the area and perimeter for rectangles in mathematical problems.	I can identify the area and perimeter for rectangles in mathematical problems and problems in real-world contexts.	I can apply the area and perimeter formulas for rectangles in mathematical problems and problems in real-world contexts including problems with unknown side lengths.	I can explain the difference between the area and perimeter formulas for rectangles. Use the area and perimeter formulas to determine unknown side lengths of a rectangle.

MD.B.4 (EQR, GRR)	I can identify a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). I can solve problems involving addition of fractions by using information presented in line plots.	I can identify a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). I can solve problems involving addition and subtraction of fractions by using information presented in line plots.	I can make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). I can solve problems involving addition and subtraction of fractions by using information presented in line plots.	I can make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). I can create problems involving addition and subtraction of fractions by using information presented in line plots.
MD.C.5, MD.C.5a, MD.C.5b (GRR, MCR, MIR, MSR)	I can recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. I can understand concepts of angle measurement: a. I can recognize that a "one-degree angle" turns through 1/360 of a circle. b. I can recognize that an "*n* degree angle" turns through *n*/360 of a circle.	I can recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. I can understand concepts of angle measurement: a. I can identify a one-degree angle, with its common endpoint at the center of a circle, as being 1/360 of the circle. b. I can identify an "*n* degree angle," with its common endpoint at the center of a circle, as being *n*/360 of the circle.	I can recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. I can understand concepts of angle measurement: a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. b. An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	I can recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: a. I can explain how an angle is measured with reference to a circle with its center at the common endpoint of the rays and how the angle measure is the same as the fraction of the circular arc between the points where the two rays intersect the circle. b. I can explain why an angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.

MD.C.6 (EQR, GRR)	I can identify angles measured in whole-number degrees using a protractor, when one of the rays is horizontal.	I will identify angles measured in whole-number degrees using a protractor. I can add a second ray to sketch angles of specified measure when given a horizontal ray.	I can measure angles in whole-number degrees using a protractor. I can sketch angles of specified measure.	I can measure angles in whole-number degrees using a protractor, including when the angle does not have a horizontal ray.
MD.C.7 (EQR, MCR, MIR, MSR)	I can solve addition problems to find unknown angles on a diagram within mathematical problems. I can solve addition problems to find unknown angles on a diagram within problems in real-world contexts.	I can solve addition and subtraction problems to find unknown angles on a diagram within mathematical problems. I can solve addition and subtraction problems to find unknown angles on a diagram within problems in real-world contexts.	I can understand angle measures as additive. (When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts.) I can solve addition and subtraction problems to find unknown angles on a diagram within mathematical problems as well as problems in real-world contexts.	I can understand angle measures as additive. (When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts.) I can create addition and subtraction problems, mathematical problems as well as problems in real-world contexts, for angles represented on a diagram.

Standard	Emerging (1)	Developing (2)	Proficient (3)	Distinguished (4)
NF.A.1 (EQR, GRR, MCR, MIR, MSR)	I can identify equivalent fractions.	I can generate equivalent fractions.	I can explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. I can use this principle to understand and generate equivalent fractions.	I can explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models. I can explain why the number and size of the parts is important in determining if two fractions are the same size. I can use this principle to explain and generate equivalent fractions.
NF.A.2, NF.A.2a, NF.A.2b (EQR, GRR, MCR, MIR, MSR)	I can compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators and by comparing to a benchmark fraction). a. I can determine whether or not two fractions refer to the same size whole. b. I can compare two fractions.	I can compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators and by comparing to a benchmark fraction). a. I can determine whether or not comparing two fractions is valid based on whether or not the fractions refer to the same size whole. b. I can compare two fractions using the symbols >, =, or <.	I can compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators and by comparing to a benchmark fraction). a. I can understand that comparisons are valid only when the two fractions refer to the same size whole. b. I can record the results of comparisons with symbols >, =, or <, and justify the conclusions.	I can compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators and by comparing to a benchmark fraction). a. I can explain why comparisons are valid only when two fractions refer to the same size whole. b. I can record the results of comparing multiple fractions with symbols >, =, or <, and justify the conclusions.
NF.B.3, NF.B.3a, NF.B.3b, Nf.B.3c, NF.B.3d	I can understand a fraction a/b with $a > 1$ as a sum of unit fractions $(1/b)$. a. I can recognize addition of fractions	I can understand a fraction a/b with $a > 1$ as a sum of unit fractions $(1/b)$. a. I can recognize addition and subtraction of fractions as	I can understand a fraction a/b with $a > 1$ as a sum of unit fractions $(1/b)$. a. I can understand addition and subtraction of fractions as	I can understand a fraction a/b with $a > 1$ as a sum of unit fractions $(1/b)$. a. I can explain how addition and subtraction of fractions is joining and separating parts referring to the same whole.

(EQR, GRR, MCR, MIR, MSR)	as joining parts referring to the same whole. b. I can identify a correct decomposition of a fraction into a sum of fractions with the same denominator in one way (e.g., 3/8 = 1/8 + 1/8+1/8). c. I can add mixed numbers with like denominators, where regrouping is not necessary. d. I can identify the solution to word problems involving addition of fractions referring to the same whole and having like denominators.	joining and separating parts referring to the same whole. b. I can identify a correct decomposition of a fraction into a sum of fractions with the same denominator in more than one way (e.g., 3/8 = 1/8 + 1/8+1/8; 3/8 = 2/8 + 1/8; 2 1/8 = 1 + 1 + 1/8 + or 2 1/8 = 8/8 + 8/8 + 1/8). c. I can add and subtract mixed numbers with like denominators where regrouping is not necessary. d. I can identify the solution to word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.	joining and separating parts referring to the same whole. b. I can decompose a fraction into a sum of fractions with the same denominator in more than one way (e.g., 3/8 = 1/8 + 1/8+1/8; 3/8 = 2/8 + 1/8; 2 1/8 = 1 + 1 + 1/8 + or 2 1/8 = 8/8 + 8/8 + 1/8). c. I can add and subtract mixed numbers with like denominators (e.g., by using properties of operations and the relationship between addition and subtraction and/or by replacing each mixed number with an equivalent fraction). d. I can solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.	b. I can explain how to decompose a fraction into a sum of fractions with the same denominator in more than one way (e.g., 3/8 = 1/8 + 1/8+1/8; 3/8 = 2/8 + 1/8; 2 1/8 = 1 + 1 + 1/8 + or 2 1/8 = 8/8 + 8/8 + 1/8). c. I can explain how to add and subtract mixed numbers with like denominators (e.g., by using properties of operations and the relationship between addition and subtraction and/or by replacing each mixed number with an equivalent fraction). d. I can solve word problems involving addition and subtraction of fractions referring to the same whole but having different denominators.
NF.B.4, NF.B.4a, NF.B.4b, NF.B.4c (EQR, GRR, MCR, MSR)	I can build fractions from unit fractions. a. I can identify the product when a whole number is multiplied by a unit fraction. In general, $a/b = a \times 1/b$. b. I can identify the product when a whole number is multiplied by a fraction. In general, $n \times a/b = (n \times a)/b$. c. I can identify the solution to word	I can build fractions from unit fractions. a. I can determine the product when a whole number is multiplied by a unit fraction. In general, $a/b = a \times 1/b$. b. I can determine the product when a whole number is multiplied by a fraction. In general, $n \times a/b = (n \times a)/b$. c. I can determine the solution to word problems involving multiplication of a whole number by a fraction.	I can build fractions from unit fractions. a. I can understand a fraction a/b as a multiple of a unit fraction $1/b$. In general, $a/b = a \times 1/b$. b. I can understand a multiple of a/b as a multiple of a unit fraction $1/b$, and use this understanding to multiply a whole number by a fraction. In general, $n \times a/b = (n \times a)/b$. c. I can solve word problems involving multiplication of a whole number by a fraction.	I can build fractions from unit fractions. a. I can explain why a fraction a/b is a multiple of a unit fraction $1/b$. b. I can understand a multiple of a/b as a multiple of a unit fraction $1/b$, and use this understanding to multiply a whole number by a fraction. In general, $n \times a/b = (n \times a)/b$. c. I can create word problems involving multiplication of a whole number by a fraction.

	problems involving multiplication of a whole number by a fraction.		*For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*	
NF.C.5 (EQR, MCR, MIR, MSR)	I can identify equivalent fractions, one with denominator 10 and one with denominator 100. *For example, identify 3/10 as equivalent to 30/100.*	I can identify equivalent fractions, one with denominator 10 and one with denominator 100. I can identify the sum of two fractions with respective denominators 10 (tenths) and 100 (hundredths). *For example, identify 3/10 as equivalent to 30/100, and identify that 3/10 + 4/100 = 34/100.*	I can express a fraction with denominator 10 as an equivalent fraction with denominator 100. I can use this technique to add two fractions with respective denominators 10 (tenths) and 100 (hundredths). *For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.* (Note: Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators, in general, is not a requirement at this grade.)	I can express a fraction with denominator 10 as an equivalent fraction with denominator a multiple of 10. I can use this technique to add two fractions with the respective denominators. *For example, express 3/10 as 300/1000, and add 3/10 + 40/1000 = 340/1000.*
NF.C.6 (EQR, GGR, MCR, MIR, MSR)	I can identify decimal notation for fractions with denominators 10 (tenths) or 100 (hundredths).	I can identify decimal notation for fractions with denominators 10 (tenths) or 100 (hundredths). I can locate these decimals on a number line.	I can use decimal notation for fractions with denominators 10 (tenths) or 100 (hundredths). I can locate these decimals on a number line.	I can use decimal notation for fractions and mixed numbers with denominators a multiple of 10. I can explain the location of these decimals on a number line.
NF.C.7 (EQR, GRR, MCR, MIR, MSR, TBR)	I can compare two decimals, referring to the same whole, to hundredths.	I can compare two decimals, referring to the same whole, to hundredths.	I can compare two decimals to hundredths by reasoning about their size.	I can compare two decimals to hundredths by reasoning about their size.

		I can record the results of comparisons with the symbols >, =, or <.	I can understand that comparisons are valid only when the two decimals refer to the same whole. I can record the results of comparisons with the symbols >, =, or <.	I can explain why comparisons are valid only when the two decimals refer to the same whole. I can reecord the results of comparisons with the symbols >, =, or <.
NBT.A.1 (EQR)	I can identify which place value in a multi-digit whole number represents ten times the value of a given place value.	Given two multi-digit whole numbers, with a digit in different place values in each number, I can identify how many times the value of the digit is in one number compared to the other number.	I can apply concepts of place value, multiplication, and division to understand that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.	I can apply concepts of place value, multiplication, and division to explain why a digit in one place represents ten times what it represents in the place to its right.
NBT.A.2 (EQR, GRR, MCR, MIR, MSR)	I can identify three-digit whole numbers using base-ten numerals and number names. I can compare two three-digit numbers based on meanings of the digits in each place.	I can identify multi-digit whole numbers using base-ten numerals, number names, and expanded form. I can compare two multi-digit numbers based on meanings of the digits in each place.	I can read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. I can compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	I can read, write, and order multi-digit whole numbers using base-ten numerals, number names, and expanded form. I can compare more than two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
NBT.A.3 (EQR, MIR, MSR, TBR)	I can use place value understanding to round three-digit whole numbers to the hundreds place.	I can use place value understanding to round multi-digit whole numbers to the largest place.	I can use place value understanding to round multi-digit whole numbers to any place.	I can explain how to round multi-digit whole numbers to any place.
NBT.B.4 (EQR)	I can fluently add and subtract multi-digit whole numbers using strategies and algorithms based on the relationship	I can fluently add and subtract multi-digit whole numbers using strategies and algorithms based on place value and/or the relationship between addition and subtraction.	I can fluently add and subtract multi-digit whole numbers using a standard algorithm.	I can recognize and explain an error made while finding a sum or a difference, and give the correct answer.

	between addition and subtraction.			
NBT.B.5 (EQR, MSR)	I can multiply a whole number of up to four digits by a one-digit whole number. I can multiply two two-digit numbers, using strategies based on place value and visual models.	I can multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. I can illustrate the calculation by using rectangular arrays and/or area models.	I can multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. I can illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	I can multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers. I can explain the calculation by using equations.
NBT.B.6 (EQR, MSR)	I can identify whole-number quotients with up to four-digit dividends and one-digit divisors.	I can demonstrate my understanding of division by identifying whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.	I can demonstrate my understanding of division by finding whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.	I can demonstrate my understanding of division by explaining the meaning of whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.
OA.A.1 (EQR, MCR, MIR, MSR)	I can identify multiplication equations that represent verbal statements of multiplicative comparisons with visual support.	I can interpret multiplication equations that represent verbal statements of multiplicative comparisons with visual support. I can recognize that a multiplication equation is a comparison.	I can represent verbal statements of multiplicative comparisons as multiplication equations. I can interpret a multiplication equation as a comparison (e.g., 35 is the number of objects in 5 groups, each containing 7 objects, and is also the number of objects in 7 groups, each containing 5 objects).	I can create verbal statements of multiplicative comparisons to represent a given multiplication equation. I can explain how a multiplication equation is a comparison.
OA.A.2 (EQR, MCR)	I can identify products and quotients within 1000 to solve word problems involving multiplicative	I can multiply or divide within 1000 to solve word problems involving multiplicative comparison when a visual model is given.	I can multiply or divide within 1000 to solve word problems involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown	I can identify a word problem involving multiplicative comparison within 1000 that is solved by a given multiplication or division expression.

	comparison when a visual model is given.		number to represent the problem, distinguishing multiplicative comparison from additive comparison).	
OA.A.3 (EQR, MCR, MSR)	I can solve two-step word problems using the four operations with visual support. I can identify the remainder as a fraction of the divisor. I can identify equations with a letter standing for the unknown quantity that represents these problems.	I can solve multistep word problems using the four operations. I can identify the remainder as a fraction of the divisor. I can identify equations with a letter standing for the unknown quantity that represents these problems.	I can solve multistep word problems using the four operations, including problems in which remainders must be interpreted. I can understand how the remainder is a fraction of the divisor. I can represent these problems using equations with a letter standing for the unknown quantity.	I can solve multistep word problems using the four operations, including problems in which remainders must be interpreted. I can explain why the remainder is a fraction of the divisor. I can create word problems that can be solved using equations with a letter standing for the unknown quantity.
OA.B.4 (EQR, GRR, MCR, MIR, MSR, TBR)	I can identify a factor pair for a whole number in the range 1 to 100.	I can identify all factor pairs for a whole number in the range 1 to 100. I can identify whole numbers that are a multiple of a given factor.	I can find all factor pairs for a whole number in the range 1 to 100. I can understand that a whole number is a multiple of each of its factors.	I can explain why a whole number is a multiple of each of its factors.
OA.C.5 (EQR, GRR, MCR, MSR, TBR)	I can identify a number pattern that follows a given rule.	I can identify a number pattern that follows a given rule. I can identify apparent features of the pattern that were not explicit in the rule itself.	I can generate a number pattern that follows a given rule. I can identify apparent features of the pattern that were not explicit in the rule itself. I can explain the pattern informally (e.g., given the rule	I can create a rule for a given number pattern. I can explain features of the pattern that are not explicit in the rule. I can explain the rule informally.

			"add 3" and the starting number 1. I can generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers).	
OA.C.6 (EQR, MCR, ETR)	I can recognize whether an answer is reasonable or not when rounding.	I can use rounding to determine the reasonableness of answers when using the four operations to solve problems.	When solving problems, I can assess the reasonableness of answers using mental computation and estimation strategies including rounding.	I can recognize the reasonableness of answers using different types of estimation strategies when using the four operations to solve problems. I can choose the best estimation strategy for a specific purpose.