Grade 5 Math Performance Rubric

Math Content Areas

Operations and Algebraic Thinking

Numbers and Operations in Base Ten

Numbers and Operations – Fractions

Measurement and Data

Geometry

Operations and Algebraic Thinking
Writes and interprets numerical expressions (5.OA.1 & 5.OA.2)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1 2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • brace, bracket, calculation, evaluate, express, expression, simplify, numerical, parentheses, symbol, sum, difference, product, quotient **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** • Evaluate expressions with parentheses, brackets, or braces (**5.OA.1**) • Write verbally-expressed calculations using symbols (for example, expressing 'add eight and seven, then multiply by two' as 2 x [8 + 7] (**5.OA.2**) • Interpret numerical expressions without evaluating them (for example, 3 x [183 + 921] is three times as large as 183 + 921) (**5.OA.2**)	**The student will independently and consistently** be able to demonstrate all criteria for a "Meets" and **extend cognitively beyond.** For example: • **Create** and solve real-world scenarios to represent an expression. • **Evaluate** expressions with exponents.

Operations and Algebraic Thinking
Analyzes patterns and relationships (5.OA.3)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2				
3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • number sequence, corresponding terms, coordinate grid, y-axis, x-axis, origin, ordered pair, x-coordinate, y-coordinate **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** • generate two numerical patterns using two given rules (**5.OA.3**) • identify relationships between corresponding terms (**5.OA.3**) • form ordered pairs consisting of corresponding terms from the two patterns terms (**5.OA.3**) • graph the ordered pairs on a coordinate plane (**5.OA.3**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: • **Extends** graphing of patterns into all 4 quadrants.

Numbers and Operations in Base Ten
Recognizes and explains patterns in the place value system (5.NBT.1 & 5.NBT.2)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1 2 3	**With significant teacher support, limited progress or is unable** to perform at a Progressing or Meets level.	**The student will recognize and recall specific vocabulary, such as:** • base-ten numeral, digit, place value, exponent, powers of 10, base, value **The student will have partial success** at a Meets level.	**The student will independently:** ● Recognize a digit in one place represents 10 times or 1/10 of the value of the place next to it. (**5.NBT.1**) ● Explain **patterns** in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. (**5.NBT.2**) ● Use whole-number exponents to denote powers of 10. (**5.NBT.2**)	**Independently and consistently** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •**Develops** a rule for the placement of decimals when multiplied or divided in a multi-step problem.

Numbers and Operations in Base Ten
Reads, writes, compares and rounds decimals to the thousandths (5.NBT.3 & 5.NBT.4)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1 2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • decimal point, place value, tenths, hundredths, thousandths, rounding, estimate, less than <, greater than >, equal to, equivalent decimals, whole number **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Read and write decimals to the thousandths using base-ten numerals. (**5.NBT.3**) ● Read and write decimals to the thousandths using number names. (**5.NBT.3**) ● Read and write decimals to the thousandths using expanded form. (**5.NBT.3**) ● Compare two decimals to the thousandths using >, =, and < symbols to record the comparisons. (**5.NBT.3**) ● Round decimals to any place using place value understanding. (**5.NBT.4**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •Reads, writes, compares, and rounds decimals beyond the thousandths.

Numbers and Operations in Base Ten
Multiplies with multi-digit whole numbers (5.NBT.5)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1 2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • factor, product, compute, evaluate, algorithm, commutative property, reasonableness, estimate, annex zero, multiplier, partial products, equation **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Fluently multiply three-digit factors by two-digit factors using the **standard algorithm** (**5.NBT.5**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: • Can multiply by three-digit multipliers or more.

Numbers and Operations in Base Ten
Divides with multi-digit whole numbers (5.NBT.6)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1 2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • dividend, divisor, quotient, estimate, reasonableness, remainder, inverse, compute, evaluate, equation **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Divide whole numbers up to two-digit divisors and four-digit dividends using strategies based on place value. (**5.NBT.6**) ● Illustrate and explain the calculation using equations, rectangular arrays and/or area models. (**5.NBT.6**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •Can divide whole numbers by three-digit or more divisors.

Numbers and Operations in Base Ten
Performs operations with decimals to the hundredths (5.NBT.7)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1 2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • compatible numbers, reasonableness, commutative property of addition, place value, underestimate, overestimate, algorithm, partial product, variable • addends, sum, difference, vertical, horizontal, annex zero • factors, product, divisor, dividend, quotient **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Add, subtract, multiply, and divide decimals to the hundredths using concrete models/drawings and strategies based on place value and/or properties of operations. (**5.NBT.7**) ● Relate the strategy to a written method and explain the reasoning used. (**5.NBT.7**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •Add, subtract, multiply, and divide decimals to the thousandths or greater.

Numbers and Operations – Fractions
Uses equivalent fractions as a strategy to add and subtract fractions (5.NF.1)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • numerator, denominator, equivalent fraction, improper fraction, mixed number, factor, sum, difference **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Add and subtract fractions with unlike denominators (including mixed numbers) by using equivalent fractions. (**5.NF.1**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: • **Supplies** the missing addend or subtrahend in problems involving mixed numbers with unlike denominators.

Numbers and Operations – Fractions
Solves word problems involving addition and subtraction of fractions (5.NF.2)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • numerator, denominator, equivalent fraction, improper fraction, mixed number, factor, sum, difference, estimate, reasonable **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Solve word problems involving adding and subtracting fractions and mixed numbers including unlike denominators. (**5.NF.2**) ● Use benchmark fractions to estimate computations and check for reasonableness of answers. (**5.NF.2**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: • **Creates** and solves real-world scenarios involving adding and subtracting mixed numbers with unlike denominators.

Numbers and Operations – Fractions
Applies previous understandings of multiplication and division of fractions (5.NF.3, 5.NF.4 & 5.NF.7)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • numerator, denominator, equivalent fraction, improper fraction, mixed number, factor, product, quotient, reciprocal, dividend, divisor, unit fraction **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Interpret a fraction as division of the numerator by the denominator (a/b = a÷b). (**5.NF.3**) ● Solve word problems involving division of whole numbers leading to answers in the fraction and mixed number form. (**5.NF.3**) ● Multiply fractions by whole numbers using visual fraction models and sequence of operations. (**5.NF.4a**) ● Multiply fractions using visual fraction models to find area. (**5.NF.4b**) ● Divide a unit fraction by a whole number and a whole number by a unit fraction (**5.NF.7**) ● Interpret division of a unit fraction by a non-zero whole	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •**Models** division of a non-unit fraction by a whole number and a whole number by a non-unit fraction.

Numbers and Operations – Fractions
Extends previous understandings of multiplication and division of fractions (5.NF.5, 5.NF.6, & 5NF.7)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • numerator, denominator, equivalent fraction, improper fraction, mixed number, factor, product, quotient, reciprocal, dividend, divisor, unit fraction, greater than, less than **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Compare the size of a product to the size of one factor based on the size of the second factor without multiplying. (**5.NF.5a**) ● Explain scaling using multiplication of fractions smaller than one whole and larger than one whole and how those factors affect the product. (**5.NF.5b**) ● Solve real world problems involving multiplication of fractions and mixed numbers using visual fraction models and equations. (**5.NF.6**) ● Solve real world problems involving division of unit fractions and whole numbers by using visual fraction models and equations. (**5.NF.7c**	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: • **Applies** understanding of the relationship between fractions and decimals to the meeting criteria.

Measurement and Data
Converts like measurement units within a given measurement system (5.MD.1)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • units of length, units of capacity, units of mass, convert, metric system, customary system **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Convert among different sized measurement units within a given measurement system (**5.MD.1**) ● Use measurement conversions to solve multi-step word problems (**5.MD.1**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •**Uses** multiple unit conversions to solve real-world multi-step problems

Measurement and Data
Represents and interprets data (5.MD.2)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2				
3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • line plot, number line, category, frequency, data, outlier **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Make a line plot to display a set of measurements in fractions of a unit (½, ¼, ⅛) including mixed numbers. (**5.MD.2**) ● Use fractional operations to solve problems involving information from line plots. (**5.MD.2**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •**Extends** line plot measurements to include intervals other than ½, ¼, ⅛.

Measurement and Data
Solves problems involving volume concepts (5.MD.3 & 5.MD.4 & 5.MD.5)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2 3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • formula, volume, composite figure, gaps and overlaps, three-dimensional figure, cubic unit, unit cube, rectangular prism, length, width, height, base, area, layer **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** Solve real world and mathematical problems involving volume: ● explain volume as the space an object takes up, composed of unit cubes with no gaps or overlaps (**5.MD.3**) ● count unit cubes-with no gaps or overlaps (**5.MD.4)** ● relate the counting of unit cubes to side length dimensions that can be used to multiply edge lengths or layering areas. **(5.MD.5a**) ● apply the formulas (V=l×w×h and V=B×h) (**5.MD.5b**) ● find the additive volume of composite 3D figures. (**5.MD.5c**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •**Determines** volume of rectangular prisms with fractional or decimal dimensions.

Geometry
Graphs points on the coordinate plane to solve real-world and mathematical problems (5.G.1 & 5.G.2)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2				
3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • coordinate grid, y-axis, x-axis, origin, ordered pair, x-coordinate, y-coordinate **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Define the coordinate system using perpendicular lines, called axes and the intersection as the origin. (**5.G.1**) ● Graph points in the first quadrant of the coordinate plane. (**5.G.1**) ● Represent real world and mathematical problems by graphing points in the first quadrant. (**5.G.2**) ● Interpret coordinate values of points in the context of real world problems. (**5.G.2**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •**Develops** ordered pairs to design a four-quadrant image.

Geometry
Classifies two-dimensional figures into categories based on their properties (5.G.3 & 5.G.4)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2				
3	**With significant teacher support, the student will make limited progress or is unable** to perform at a "Progressing" or "Meets" level.	**The student will recognize and recall specific vocabulary, such as:** • classify, hierarchy, properties/attributes, equilateral, isosceles, right, acute, obtuse, parallel, congruent, adjacent, polygon, quadrilateral, parallelogram, rhombus, square, rectangle, trapezoid **The student will have partial success** at a "Meets" level independently. OR **with teacher prompting and support** the student will have success at a "Meets" level.	**The student will independently:** ● Describe the properties of two-dimensional figures as attributes belonging to a category also belong to all subcategories of that category. (**5.G.3**) ● Classify two- dimensional figures in a hierarchy based on properties. (**5.G.4**)	**The student will independently and consistently be** able to demonstrate all criteria for a "Meets" and **extends cognitively beyond.** For example: •**Designs** a plan to investigate based on the hierarchy of properties of two-dimensional figures.