Grade 3 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 Represents and solves problems involving multiplication and division (3.OA.1; 3.OA.2; 3.OA.3; 3.OA.4)

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 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 products of whole numbers (for example: understanding 5x7 as the total number of objects in 5 groups of 7 objects each). (3.OA.1) Interpret whole-number quotients of whole numbers (for example: understanding 56÷8 as the number of objects in each share when 56 objects are divided into equal shares of 8 objects each). (3.OA.2) Use multiplication and division within 100 to solve word problems (for example: using drawings and equations with a symbol for the unknown number to represent the problem). (3.OA.3) Determine the unknown whole number in a multiplication or division equation relating three whole numbers (for example: 8x_=45, 5==÷3). (3.OA.4) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: Lesson 4 Engage NY (4.OA.1, 4.OA.2) •Multiply or divide to solve word problems involving multiplicative comparisons using a symbol for the unknown number. •Represent answer as a verbal statement of a multiplicative comparison. •Example: Write the answer as 35 is 5 times as many as 7.

Operations and Algebraic Thinking

Understands properties of multiplication and the relationship between multiplication and division, and identifies and explains patterns in arithmetic (3.OA.5; 3.OA.6; 3.OA.9)

Trimester 1: Needs Improvement	2: Progressing	3: Meets	4: Excels
With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level. 1 2 3	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: Apply properties of operations as strategies to multiply and divide (for example, commutative, associative, identity, zero and distributive). (3.OA.5) Solve division problems as unknown-factor problems (for example, finding 32 ÷ 8 by finding the number that makes 32 when multiplied by 8). (3.OA.6) Identify arithmetic patterns in the addition and multiplication tables. (3.OA.9) Explain arithmetic patterns (addition or multiplication table) using the properties of operations. (3.OA.9) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For Example: • Use properties to find all the factor pairs for a whole number in the range of 1-100 For Example: Lesson 23 Engage NY (4.OA.4, 4.OA.5) • Generates a number pattern that follows a given rule. Identify features of the pattern that were not explicit in the rule itself. Explain why the numbers will continue in this way. For Example: Illustrative Math

Operations and Algebraic Thinking
Fluently multiply and divide within 100 (3.OA.7)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Excels
1				
2	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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 and divide within 100. (3.OA.7)	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For Example: •Fluently writes multiples of a number at any given starting point •Use mental math to identify the factors of any number For example: Lesson 24
3			The student will independently: •By the end of 3 rd grade, know from memory all products of two one-digit numbers. (3.OA.7)	Engage NY (4.OA.4)

Operations and Algebraic Thinking Estimates and solves problems involving the four operations using rounding and estimation strategies (3.OA.8; 3.NBT.1)

3.ND1.1)				
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 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 two-step word problems using the four operations. (3.OA.8) Represent two-step word problems using equations with a letter standing for the unknown quantity. (3.OA.8) Assess the reasonableness of answers using mental computation and estimation strategies. (3.OA.8) Use place value understanding to round whole numbers to the nearest 10 and 100. (3.NBT.1) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: Lesson 10 Engage NY (4.NBT.3) • Applies knowledge of place value to round numbers to any place within a word problem. and • Justifies their reasoning within a real world setting

Numbers and Operations in Base Ten Fluently adds and subtracts within 1,000 using multiple strategies (3.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 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 add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (3.NBT.2)	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: Lesson 17 Engage NY (4.NBT.4) • Create real-world word problems involving addition and subtraction beyond 1,000.

Numbers and Operations in Base Ten Multiplies by a multiple of 10 (3.NBT.3)

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 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: •Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of whole numbers. (3.NBT.3)	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: Lesson 8 Engage NY (4.NBT.5) • Multiply a whole number up to 4 digits by a one-digit number and explain their process using strategies based on place value.

Numbers and Operations – Fractions Develops understanding of fractions as numbers (3.NF.1; 3.NF.2; 3.G.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 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 a fraction 1/b as the quantity formed by one part when a whole is divided into b equal parts. (3.NF.1) Describe a fraction a/b as the quantity formed by a parts of size 1/b. (3.NF.1) Represent fractions 1/b and a/b on a number line. (3.NF.2) Partition shapes into parts with equal areas. (3.G.2) Express the area of each part of a partitioned shape as a unit fraction of the whole. (3.G.2) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: Lesson 22 Engage NY (4.NF.3) • Decomposes fractions into unit fractions and/or any combination of fractions. 1/8 + 1/8 + 1/8 = 3/8 or 2/8 + 1/8 = 3/8 • Creates fraction models for mixed numbers (G.2)

Numbers and Operations – Fractions Finds Equivalent Fractions and Compares Fractions (3.NF.3)

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 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: Recognize & generate simple equivalent fractions, and explain why they are equivalent using visual fraction models and number lines. (3.NF.3a,b) Recognize & Express whole numbers as fractions. (3.NF.3c) Use comparison symbols (<, =, >) and visual models to compare fractions, and justify the comparison of two fractions with the same numerator or same denominator. (3.NF.3d) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: •Recognize and generate equivalent fractions with unlike numerators and denominators •Compares 2 fractions with unlike numerators and denominators and denominators and denominators and denominators and explains through models.

Measurement and Data Solves problems involving measurement & estimation (3.MD.1; 3.MD.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 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: Tell and write time to the nearest minute. (3.MD.1) Measure time intervals in minutes (elapsed time). (3.MD.1) Solve word problems involving addition and subtraction of time intervals in minutes. (3.MD.1) Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters. (3.MD.2) Solve one-step word problems involving masses or volumes that are given in the same units (3.MD.2) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: Lesson 5 Engage NY (4.MD.1), For Example: Lesson 9 Engage NY (4.MD.2) •Solves word problems involving time intervals beyond 60 minutes and converts time to hours and minutes. •Solves one step mass/volume word problems that have 2 different units within one system of measurement.

Measurement and Data Represents and interprets data (3.MD.3 & 3.MD.4)

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 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: Draw a scaled picture graph and a scaled bar graph to represent a data set. (3.MD.3) Solve one-step and two-step problems using information in scaled bar graphs. (3.MD.3) Generate data by measuring lengths to the half and fourth of an inch. (3.MD.4) Represent measurement data in halves and fourths of an inch on a line plot. (3.MD.4) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: Lesson 40 Engage NY (4.MD.4) •Solves problems involving addition and subtraction of fractions by using information presented in line plots.

Measurement and Data Understands concepts of area and relates area to multiplication and addition (3.MD.5, 3.MD.6 & 3.MD.7)

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 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: Explain concepts of area measurement using the unit square and gaps/overlaps. (3.MD.5) Measure area by counting square units (cm, m, in., ft. & improvised units). (3.MD.6) Demonstrate that area can be found by tiling a rectangular area and by multiplying side lengths produces the same area. (3.MD.7a) Solve real-world problems involving area of rectangular figures. (3.MD.7b) Use tiling to demonstrate the distributive property by showing that the area of a rectangle with side lengths a and b + c is the sum of a x b and a x c. (3.MD.7c) Solve real-world problems, by calculating areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the area. (3.MD.7d) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: (4.MD.3) • Create real-world word problems, by calculating areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the area.

Measurement and Data

Solves problems involving area and perimeter (3.MD.8)

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 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: Find the perimeter of polygons give the side lengths. (3.MD.8) Solve real-world and mathematical problems involving perimeters of polygons. (3.MD.8) Compare rectangles with the same area and different perimeters, as well as rectangles with the same perimeters and different areas. (3.MD.8) Solve for an unknown side length given the perimeter of a polygon. (3.MD.8) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: (4.MD.3) •Creates and solves perimeter word problem involving finding the unknown side of a figure. For example: a rectangular table has a total perimeter of 20, one side is 6, what are the other sides?

Geometry

Reasons with shapes and their attributes (3.G.1)

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 have partial success at a Meets level independently. OR With teacher prompting and support the student will have success at a Meets level.	 *Classify quadrilaterals into categories based on their attributes. (3.G.1) *Recognize rhombuses, rectangles, and squares as examples of quadrilaterals. (3.G.1) *Draw examples of quadrilaterals that do not belong to the subcategories listed above. (3.G.1) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: •Explain and justify the hierarchy of quadrilaterals. •All squares are rectangles, but are all rectangles squares? Explain your reasoning.

	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds
1 2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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: Apply properties of operations as strategies to multiply and divide (for example, commutative, associative, identity, zero and distributive). (3.OA.5) Use tiling to demonstrate the distributive property by showing that the area of a rectangle with side lengths a and b + c is the sum of a x b and a x c. (3.MD.7c) Solve real-world problems, by calculating areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the area. (3.MD.7d) 	For Example: •Create real-world word problems, by calculating areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the area.

Operations and Algebraic Thinking Represents and solves problems involving multiplication and division (3.OA.1; 3.OA.3; 3.OA.4)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds
1 2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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 products of whole numbers (for example: understanding 5x7 as the total number of objects in 5 groups of 7 objects each). (3.OA.1) Use multiplication and division within 100 to solve word problems (for example: using drawings and equations with a symbol for the unknown number to represent the problem). (3.OA.3) Determine the unknown whole number in a multiplication or division equation relating three whole numbers (for example: 8x_=45, 5=_÷3). (3.OA.4) 	 •Multiply or divide to solve word problems involving multiplicative comparisons using a symbol for the unknown number. •Represent answer as a verbal statement of a multiplicative comparison. •Example: Write the answer as 35 is 5 times as many as 7.

Measurement and Data Understands concepts of area and relates area to multiplication and addition (3.MD.5, 3.MD.6 & 3.MD.7)

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Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds
1 2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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: Explain concepts of area measurement using the unit square and gaps/overlaps. (3.MD.5) Measure area by counting square units (cm, m, in., ft. & improvised units). (3.MD.6) Demonstrate that area can be found by tiling a rectangular area and by multiplying side lengths produces the same area. (3.MD.7a) Solve real-world problems involving area of rectangular figures. (3.MD.7b) 	For example: (4.MD.3) • Create real-world word problems, by calculating areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the area.

Numbers and Operations in Base Ten Multiplies by a multiple of 10 (3.NBT.3)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds
1				
	With significant teacher support,	Partial success at a Meets level	The student will independently: •Multiply one-digit whole	•4.NBT.5 Multiply a whole number up to 4
2	limited progress or is	independently. OR	numbers by multiples of 10 in	digits by a one-digit
2 3	unable to perform at a Progressing or Meets	With teacher prompting and	the range of 10 to 90 using strategies based on place value	number and explain their process using
	level.	support the student will have success at a Meets level.	and properties of whole numbers. (3.NBT.3)	strategies based on place value.

Numbers and Operations in Base Ten Multiplies by a multiple of 10 (3.NBT.3)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds
1				
2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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: •Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of whole numbers. (3.NBT.3)	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond.

Numbers and Operations in Base Ten Multiplies by a multiple of 10 (3.NBT.3)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds
1				
2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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.	•Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of whole numbers. (3.NBT.3)	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. For example: Lesson 8 Engage NY (4.NBT.5) • Multiply a whole number up to 4 digits by a one-digit number and explain their process using strategies based on place value.

Operations and Algebraic Thinking

Estimates and solves problems involving the four operations using rounding and estimation strategies (3.OA.8; 3.NBT.1)

	Strategies (S.OA.O, S.NDT.I)				
Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds	
1					
2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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: •Use place value understanding to round whole numbers to the nearest 10 and 100. (3.NBT.1)	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. • Applies knowledge of place value to round numbers to any place within a word problem. and justifies their reasoning within a real world setting	

Numbers and Operations in Base Ten

Fluently adds and subtracts within 1,000 using multiple strategies (3.NBT.2) Identifies and explains patterns in arithmetic (3.OA.9)

Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds
1				
2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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 add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (3.NBT.2) •Identify arithmetic patterns in the addition and multiplication tables. (3.OA.9) •Explain arithmetic patterns (addition or multiplication table) using the properties of operations. (3.OA.9)	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. • Create real-world word problems involving addition and subtraction beyond 1,000.

Operations and Algebraic Thinking

Represents and solves problems involving division (3.OA.2) Understands properties of multiplication

	and the relationship between multiplication and division (3.0A.6)						
Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds			
1 2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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 whole-number quotients of whole numbers (for example: understanding 56÷8 as the number of objects in each share when 56 objects are divided into equal shares of 8 objects each). (3.OA.2) Solve division problems as unknown-factor problems (for example, finding 32 ÷ 8 by finding the number that makes 32 when multiplied by 8). (3.OA.6) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. •Multiply or divide to solve word problems involving multiplicative comparisons using a symbol for the unknown number.			

Operations and Algebraic Thinking Represents and solves problems involving division (3.0A.3; 3.0A.4)

Represents and solves problems involving division (5.0A.3, 5.0A.4)							
Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds			
1 2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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 whole-number quotients of whole numbers (for example: understanding 56÷8 as the number of objects in each share when 56 objects are divided into equal shares of 8 objects each). (3.OA.2) Use multiplication and division within 100 to solve word problems (for example: using drawings and equations with a symbol for the unknown number to represent the problem). (3.OA.3) Determine the unknown whole number in a multiplication or division equation relating three whole numbers (for example: 8x_=45, 5=_÷3). (3.OA.4) 	<pre>Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. •Multiply or divide to solve word problems involving multiplicative comparisons using a symbol for the unknown number.</pre>			

Operations and Algebraic Thinking

Estimates and solves problems involving the four operations using rounding and estimation strategies (3.OA.8; 3.NBT.1)

strategies (3.OA.8; 3.NBT.1)							
Trimester	1: Needs Improvement	2: Progressing	3: Meets	4: Exceeds			
1							
2 3	With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level.	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 two-step word problems using the four operations. (3.OA.8) Represent two-step word problems using equations with a letter standing for the unknown quantity. (3.OA.8) Assess the reasonableness of answers using mental computation and estimation strategies. (3.OA.8) Use place value understanding to round whole numbers to the nearest 10 and 100. (3.NBT.1) 	Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. • Applies knowledge of place value to round numbers to any place within a word problem. & Justifies their reasoning within a real world setting			