## 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

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Geometry
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## Operations and Algebraic Thinking

## Represents and solves problems involving multiplication and division (3.0A.1; 3.0A.2; 3.0A.3; 3.0A.4)

| Trimester | 1: Needs <br> Improvement | 2: Progressing |
| :--- | :--- | :--- |


| 3: Meets |
| :--- | :--- |
| The student will independently: |
| - Interpret products of whole numbers (for |
| example: understanding $5 \times 7$ 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 $56 \div 8$ as the number of objects in each share when 56 objects are divided into equal shares of 8 objects each). (3.0A.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: $8 x \ldots 45,5=\ldots \div 3$ ). (3.0A.4)


## 4: Excels

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 (3.0A.5; 3.0A.6; 3.OA.9)

| Trimester | 1: Needs Improvement | Progressing |
| :---: | :---: | :---: |
|  |  |  |

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 $32 \div 8$ by finding the number that makes 32 when multiplied by 8). (3.0A.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)


## 4: Excels

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)
$\bullet$ 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 (3.0A.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. <br> OR <br> With teacher prompting and support the student will have success at a Meets level. | The student will independently: -Fluently multiply and divide within 100. (3.0A.7) | Independently and consistently able to demonstrate all criteria for a "Meets" AND extends cognitively beyond. <br> For Example: <br> - Fluently writes multiples of a number at any given starting point <br> - Use mental math to identify the factors of any number <br> For example: Lesson 24 |
|  |  |  | The student will independently: -By the end of $3^{\text {rd }}$ grade, know from memory all products of two one-digit numbers. (3.0A.7) | Engage NY (4.OA.4) |

## Operations and Algebraic Thinking

Estimates and solves problems involving the four operations using rounding and estimation strategies (3.0A.8; 3.NBT.1)

| Trimester | 1: Needs Improvement | 2: Progressing | 3: Meets | 4: Excels |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |
| $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 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: <br> -Solve two-step word problems using the four operations. (3.0A.8) <br> -Represent two-step word problems using equations with a letter standing for the unknown quantity. (3.OA.8) <br> -Assess the reasonableness of answers using mental computation and estimation strategies. (3.0A.8) <br> -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. <br> For example: Lesson 10 Engage NY (4.NBT.3) <br> - Applies knowledge of place value to round numbers to any place within a word problem. and <br> - Justifies their reasoning |

## Numbers and Operations in Base Ten

Fluently adds and subtracts within 1,000 using multiple strategies (3.NBT.2)


## 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 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## 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 |  |  |  |  |
| $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 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. <br> OR <br> With teacher prompting and support the student will have success at a Meets level. | The student will independently: <br> - Describe a fraction $\mathbf{1 / b}$ as the quantity formed by one part when a whole is divided into $b$ equal parts. (3.NF.1) <br> - Describe a fraction $\boldsymbol{a} / \boldsymbol{b}$ as the quantity formed by a parts of size $\mathbf{1 / b}$. (3.NF.1) <br> -Represent fractions $\mathbf{1 / b}$ and $a / b$ on a number line. (3.NF.2) <br> - Partition shapes into parts with equal areas. (3.G.2) <br> - 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 <br> a "Meets" AND extends cognitively beyond. <br> For example: Lesson 22 <br> Engage NY (4.NF.3) <br> - Decomposes fractions into unit fractions and/or any combination of fractions. $\begin{aligned} & 1 / 8+1 / 8+1 / 8=3 / 8 \text { or } 2 / 8+1 / 8 \\ & =3 / 8 \end{aligned}$ <br> - 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 |  |  |  |  |
| $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 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. <br> OR <br> With teacher prompting and support the student will have success at a Meets level. | The student will independently: <br> - Recognize \& generate simple equivalent fractions, and explain why they are equivalent using visual fraction models and number lines. (3.NF.3a,b) <br> -Recognize \& Express whole numbers as fractions. (3.NF.3c) <br> - 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 <br> a "Meets" AND extends cognitively beyond. <br> For example: <br> -Recognize and generate equivalent fractions with unlike numerators and denominators <br> -Compares 2 fractions with unlike numerators 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 |
| :---: | :--- | :--- |
| $\mathbf{1}$ |  |  |
|  | With significant teacher <br> support, limited progress or is is <br> unable to perform at a <br> Progressing or Meets level. | The student will have <br> partial success at a Meets <br> level independently. <br> OR <br> With teacher prompting <br> and support the student <br> will have success at a Meets <br> level. |

## 2

3

## The student will have <br> partial success at a Meets level independently. <br> With teacher prompting <br> and support the student level.

3: Meets

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)


## 4: Excels

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. <br> OR <br> With teacher prompting and support the student will have success at a Meets level. | The student will independently: <br> -Draw a scaled picture graph and a scaled bar graph to represent a data set. <br> (3.MD.3) <br> -Solve one-step and two-step problems using information in scaled bar graphs. <br> (3.MD.3) <br> - Generate data by measuring lengths to the half and fourth of an inch. (3.MD.4) <br> -Represent measurement data in halves and fourths of an inch on a line plot. <br> (3.MD.4) | Independently and consistently able to demonstrate all criteria for a <br> "Meets" AND extends <br> cognitively beyond. <br> For example: Lesson 40 <br> Engage NY (4.MD.4) <br> -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

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.

## 3: Meets

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 $\boldsymbol{a}$ and $\boldsymbol{b}+\boldsymbol{c}$ is the sum of $\boldsymbol{a} \times \boldsymbol{b}$ and $\boldsymbol{a} \times \boldsymbol{c}$. (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)


## 4: Excels

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 |
| :--- | :--- | :--- | :--- |


| 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. <br> OR <br> With teacher prompting and support the student will have success at a Meets level. | The student will independently: <br> -Find the perimeter of polygons give the side lengths. (3.MD.8) <br> -Solve real-world and mathematical problems involving perimeters of polygons. (3.MD.8) <br> -Compare rectangles with the same area and different perimeters, as well as rectangles with the same perimeters and different areas. (3.MD.8) <br> -Solve for an unknown side length given the perimeter of a polygon. (3.MD.8) |

## Geometry

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

## Operations and Algebraic Thinking

Identifies and explains patterns in arithmetic (3.OA.9)

|  | 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: <br> - Apply properties of operations as strategies to multiply and divide (for example, commutative, associative, identity, zero and distributive). <br> (3.OA.5) <br> - Use tiling to demonstrate the distributive property by showing that the area of a rectangle with side lengths $\boldsymbol{a}$ and $\boldsymbol{b}+\boldsymbol{c}$ is the sum of $\boldsymbol{a} \times \boldsymbol{b}$ and $\boldsymbol{a} \times \boldsymbol{c}$. <br> (3.MD.7c) <br> -Solve real-world problems, by calculating areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the area. <br> (3.MD.7d) | For Example: <br> -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 (3.0A.1; 3.0A.3; 3.OA.4)

| Trimester | $1:$ Needs <br> Improvement |
| :--- | :---: |

With significant
teacher support,
limited progress
or is unable to
perform at a
Progressing or
Meets level.

2: Progressing
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.

## 3: Meets

The student will independently:

- Interpret products of whole numbers (for example: understanding $5 \times 7$ as the total number of objects in 5 groups of 7 objects each). (3.0A.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: $8 x \ldots=45,5=\ldots \div 3$ ). (3.0A.4)

4: Exceeds
-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 <br> 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: Exceeds |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1 \\ & 2 \\ & 3 \end{aligned}$ | 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 <br> Meets level <br> independently. <br> OR <br> With teacher prompting and support the student will have success at a Meets level. | The student will independently: <br> - Explain concepts of area measurement using the unit square and gaps/overlaps. <br> (3.MD.5) <br> - Measure area by counting square units ( $\mathrm{cm}, \mathrm{m}$, in., ft. \& improvised units). <br> (3.MD.6) <br> - Demonstrate that area can be found by tiling a rectangular area and by multiplying side lengths produces the same area. (3.MD.7a) <br> - Solve real-world problems involving area of rectangular figures. (3.MD.7b) | For example: (4.MD.3) <br> - 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 |  |  |  |  |
| $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | With significant teacher support, limited progress or is unable to perform at a Progressing or Meets level. | Partial success at a <br> Meets level <br> independently. OR <br> With teacher <br> prompting and support the student will have success at a Meets level. | The student will independently: <br> - 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) | -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 in Base Ten

Multiplies by a multiple of 10 (3.NBT.3)

| Trimester | 1: Needs Improvement | 2: Progressing | 3: Meets | 4: Exceeds |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |
| $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 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: <br> - 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 |  |  |  |  |
| $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 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 <br> With teacher prompting and support the student will have success at a Meets level. | The student will independently: <br> - 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. <br> For example: Lesson 8 Engage NY (4.NBT.5) <br> - 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 (3.0A.8; 3.NBT.1)

| Trimester | 1: Needs Improvement | 2: Progressing | 3: Meets | 4: Exceeds |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |
|  | 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. <br> OR <br> 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 <br> "Meets" AND extends cognitively beyond. <br> - Applies knowledge of place value to round numbers to any place within a word problem. <br> 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 (3.0A.9)

| Trimester | 1: Needs Improvement | 2: Progressing | 3: Meets | 4: Exceeds |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |
| $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 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: <br> -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. <br> (3.NBT.2) <br> -Identify arithmetic patterns in the addition and multiplication tables. (3.0A.9) <br> -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. <br> -Create real-world word problems involving addition and subtraction beyond 1,000. |

## Operations and Algebraic Thinking <br> Represents and solves problems involving division (3.0A.2) Understands properties of multiplication

and the relationship between multiplication and division (3.0A.6)

| Trimester | 1: Needs Improvement | 2: Progressing |
| :---: | :---: | :---: |
|  | 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. |

## Operations and Algebraic Thinking

Represents and solves problems involving division (3.OA.3; 3.OA.4)

| Trimester | 1: Needs <br> Improvement |
| :---: | :---: |

2: Progressing
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.

3: Meets
The student will independently:

- Interpret whole-number quotients of whole numbers (for example: understanding $56 \div 8$ as the number of objects in each share when 56 objects are divided into equal shares of 8 objects each). (3.0A.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: $8 x \ldots=45,5=\ldots \div 3$ ). (3.0A.4)


## 4: Exceeds

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

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

| Trimester | 1: Needs Improvement | 2: Progressing | 3: Meets | 4: Exceeds |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |
| $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 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 <br> Meets level <br> independently. OR With teacher prompting and support the student will have success at a Meets level. | The student will independently: <br> -Solve two-step word problems using the four operations. (3.OA.8) <br> -Represent two-step word problems using equations with a letter standing for the unknown quantity. (3.0A.8) <br> -Assess the reasonableness of answers using mental computation and estimation strategies. <br> (3.0A.8) <br> - 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. <br> - Applies knowledge of place value to round numbers to any place within a word problem. \& Justifies their reasoning within a real world setting |

