###### **Grade 3 Performance Rubrics: Math**

###### **Academic Standards Indicators**

EX= Exceeds: Exceeding grade-level standard for trimester

MS= Meets: Meeting grade-level standard for trimester

PR= Progressing: Progressing toward grade-level standard for trimester

NI= Needs Improvement: Demonstrating minimal or no progress and at risk for not meeting grade-level standard for trimester

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| **OPERATIONS AND ALGEBRAIC THINKING** (3.OA.A 1-4)**Represents and solves problems involving multiplication and division** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to interpret products of whole numbers or is inconsistent with use strategies (arrays, fact families, and repeat addition) and/or unable to solve one-step word problems involving multiplication | Able to interpret products of whole numbers **but inconsistent with use of strategies** (arrays, fact families, and repeat addition) and/orattempts to solve one-step word problems involving multiplication  | Able to interpret products of whole numbers **with few errors,** using a variety of strategies (arrays, fact families, and repeated addition) and/or able to solve **one-step** word problems involving multiplication **with some accuracy** | Able to interpret products of whole numbers **with no errors** using a variety of strategies (arrays, fact families, and repeated addition) and/or able to solve **one-step** word problems involving multiplication **with accuracy** |
| 2 | Unable to interpret products and quotients of whole numbers with few errors using a variety of strategies; unable to solve one-step word problems involving multiplication and division within 50 | Able to interpret products and quotients of whole numbers **with some accuracy** using a variety of strategies;able to solve one-step word problems involving multiplication and division within 100 **with some accuracy** | Able to interpret products and quotients of whole numbers **with few errors** using a variety of strategies;able to solve one-step word problems involving multiplication and division within 100 **with few errors** | Able to interpret products and quotients of whole numbers **with no errors** using a variety of strategies; able to solve two-step word problems involving multiplication and division within 100 **with accuracy**  |
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| **Operations and Algebraic Thinking (3.OA.B.5-6)****Understands properties of multiplication and division and the relationship between multiplication and division.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to apply the commutative and associative properties to solve multiplication problems | Able to apply the commutative and associative properties to solve multiplication problems **with some accuracy** | Able to apply the commutative and associative properties to solve multiplication problems **with accuracy** | Able to apply the commutative and associative properties to solve multiplication problems with accuracy; **able to explain** reasoning of why properties are applicable |
| 2 | Unable to apply the commutative, associative, and distributive properties to solve multiplication and division problems; unable to understand division as an unknown-factor problem | Able to apply the commutative, associative, and distributive properties to solve multiplication and division problems **with some accuracy; able to understand division as an unknown-factor problem with some accuracy** | Able to apply the commutative, associative and distributive properties to solve multiplication and division **with accuracy; able to understand division as an unknown-factor problem with accuracy**  | Able to apply the commutative, associative, and distributive properties to solve multiplication and division problems; able to understand division as an unknown-factor problem; **able to explain** reasoning of why properties are applicable |
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| **Operations and Algebraic Thinking (3.OA.C.7)****Multiplies and divides fluently within 100.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to demonstrate accuracy with multiplication facts for 0, 1, 2, and 5 | Able to demonstrate **some accuracy** with multiplication facts for 0, 1, 2, and 5 | Able to demonstrate **accuracy and fluency** with multiplication facts for 0, 1, 2, and 5 | Able to demonstrate accuracy and fluency with multiplication facts **beyond** 0, 1, 2, and 5  |
| 2 | Unable to demonstrate accuracy with multiplication facts for 0-7 and 10; unable to demonstrate accuracy with division facts | Able to demonstrate **some accuracy** with multiplication facts for 0-7 and 10; able to demonstrate **some accuracy** with division facts | Able to demonstrate **accuracy and fluency** with multiplication facts for 0-7 and 10; able to demonstrate **accuracy** with division facts | Able to demonstrate accuracy and fluency with multiplication facts **beyond** 0-7 and 10; able to demonstrate accuracy with division facts |
| 3 | Unable to multiply and divide fluently within 100 | Able to multiply and divide within 100 **with some fluency** | Able to multiply and divide **fluently** within 100 | Able to divide fluently within 100; able to multiply fluently **within 144** |

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| **Operations and Algebraic Thinking (3.OA.D.8)****Solves two-step word problems involving the four operations.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to solve two-step addition and subtraction word problems using numbers and/or equations | Able to solve two-step addition and subtraction word problems using numbers and/or equations **with some accuracy** | Able to solve two-step addition and subtraction word problems using numbers and/or equations **with accuracy** | Able to solve and explain reasoning of two-step addition and subtraction word problems using numbers and/or equations |
| 2 | Unable to solve two-step word problems involving all four operations using numbers and or equations  | Able to solve two-step word problems involving all four operations using numbers and/or equations **with some accuracy**  | Able to solve two-step word problems involving all four operations using numbers and or equations **with accuracy**  | Able to solve and **explain** **multiple step** word problems using all four operations with accuracy  |
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| **Operations and Algebraic Thinking (3.OA.D.9)****Identifies the patterns within multiplication and addition.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to identify arithmetic patterns | Able to identify arithmetic patterns **with some accuracy** | Able to identify arithmetic patterns **with accuracy** | Able to identify arithmetic patterns with accuracy; able to **create and extend**arithmetic patterns or explains them, using properties of operations |
| 2 | Unable to identify or explain arithmetic patterns | Able to identify and explain arithmetic patterns **with some accuracy** | Able to identify and explain arithmetic patterns, **using properties of operations, with accuracy** | Able to identify arithmetic patterns with accuracy; able to create and extendarithmetic patterns **and** explains them, using properties of operations |
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| **NUMBER AND OPERATIONS IN BASE TEN** (3.NBT.A.1)**Rounds whole numbers to the nearest 10 or 100** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to round numbers to nearest 10 and 100 | Able to round numbers to nearest 10 and 100 **with some accuracy** | Able to use place value to round numbers to nearest 10 and 100 **with accuracy**  | Able to use place value to round numbers to nearest 10 and 100 with accuracy **and** **explain** reasoning and/or round to nearest **1,000**  |
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| **Number and Operations in Base Ten (3.NBT.A.2)****Demonstrates understanding of place value to add and subtract within 1,000.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to add or subtract within 1000 with regrouping  | Able to add and subtract within 1000 with regrouping **with some accuracy** | Able to add and subtract within 1000 with regrouping **using strategies and algorithms with accuracy** | Able to add and subtract within 1000 with regrouping using strategies and algorithms, **and communicate how the problem is solved** |
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| **Number and Operations in Base Ten (3.NBT.A.3)****Multiplies one-digit whole numbers by multiples of 10.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 | Unable to multiply one-digit whole numbers by multiples of ten (eg., 9 x 80)  | Able to multiply one-digit whole numbers by multiples of ten (eg., 9 x 80) **with some accuracy** | Able to multiply one-digit whole numbers by multiples of ten (eg., 9 x 80) **with accuracy** | Able to multiply one-digit whole numbers by multiples of ten (eg., 9 x 80) with accuracy **and communicates** justification for answers and/or extends understanding to multiply one-digit numbers by 100 or 1,000 |
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| Number and Operations - Fractions (3.NF.A.1)**Understands numerators and denominators and how they relate to parts and wholes.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 | Unable to label and identify fractions as parts of a whole on a number line | Able to label and identify fractions as parts of a whole on a number line **with some accuracy**  | Able to label and identify fractions as parts of a whole on a number line **with accuracy**  | Able to label and identify fractions as parts of a whole on a number line with accuracy **and able to create and extend models that represent parts of a whole** |
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| **Number and Operations - Fractions (3.NF.A.2)****Interprets and plots fractions on a number line.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 | Unable to identify and plot a fractional amount on a number line between 0 and numbers beyond 1 with little error | Able to identify and plot a fractional amount on a number line between 0 and numbers beyond 1 **with little error** | Able to identify and plot a fractional amount on a numberline between 0 and numbers beyond 1 **with accuracy** | Able to identify and plot a fractional amount on a numberline between 0 and numbers beyond 1 with accuracy **and communicate the reasoning for each fraction’s location** |
| 3 | Unable to identify and plot a fractional amount on a number line between 0 and numbers beyond 1 with little error | Able to identify and plot a fractional amount on a number line between 0 and numbers beyond 1 **with little error** | Able to identify and plot a fractional amount on a numberline between 0 and numbers beyond 1 **with accuracy** | Able to identify and plot a fractional amount on a numberline between 0 and numbers beyond 1 with accuracy **and communicate the reasoning for each fraction’s location** |

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| **Number and Operations - Fractions (3.NF.A.3)****Compares fractions based on their size.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 | Unable to compare fractions with same numerator or same denominator using visual models | Able to compare fractions with same numerator or same denominator using visual models **with some accuracy** | Able to compare fractions with same numerator or samedenominator with accuracy **and explain** using visual models | Able to compare fractions **with** **different numerators and different denominators** and explain using visual models  |
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| **Number and Operations - Fractions (3.NF.A.3)****Creates and understands equivalent fractions.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 | Unable to generate equivalent fractions to benchmark fractions using visual models and explain why fractions are equivalent; unable to express whole numbers as fractions, recognizing fractions that are equivalent to whole numbers | Able to generate equivalent fractions to benchmark fractions using visual models and explain why fractions are equivalent **with some accuracy, and/or** express whole numbers as fractions, recognizing fractions that are equivalent to whole numbers **with some accuracy** | Able to generate equivalent fractions to benchmark fractions using visual models and explain why fractions are equivalent with accuracy, **and** express whole numbers as fractions, recognizing fractions that are equivalent to whole numbers with accuracy | Able to generate equivalent fractions to benchmark fractions **and beyond** **benchmark fractions** using visual models and explain why fractions are equivalent with accuracy; able toexpress whole numbers as fractions, recognizing fractions that are equivalent to whole numbers with accuracy |
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| **MEASUREMENT AND DATA** (3.MD.A.1)**Tells and manipulates intervals of time to the nearest minute.**  |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 | Unable to tell and write time to the nearest minute and solve word problems that measure time intervals in minutes (within 60 minutes) | Able to tell and write time to the nearest minute and solve word problems that measure time intervals in minutes (within 60 minutes) **with some accuracy** | Able to tell and write time to the nearest minute and solve word problems that measure time intervals in minutes (**within** 60 minutes) **with accuracy** | Able to tell and write time to the nearest minute and solve word problems that measure time in intervals **beyond** 60 minutes |

\*add and subtract

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| **Measurement and Data (3.MD.A.2)****Measures, estimates, and solves problems using volume and mass.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 | Unable to measure and estimate liquid volumes and masses of objects using standard units; unable to solve one-step word problems involving volume and mass that are given in the same units | Able to measure and estimate liquid volumes and masses of objects using standard units **with some accuracy**; able to solves one-step word problems involving volume and mass that are given in the same units **with some accuracy** | Able to measure and estimate liquid volumes and masses of objects using standard units **with accuracy**; able to solves one-step word problems involving volume and mass that are given in the same units **with accuracy** | Able to measure and estimate liquid volumes and masses of objects using standard units with accuracy; able to solves **multi-step** word problems involving volume and mass that are given in the same units with accuracy |

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| **Measurement and Data (3.MD.B.3)****Draws, solves, and interprets picture and bar graphs.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to draw a picture or bar graph to represent data with several categories | Able to draw a picture graph and a bar graph to represent a data set with several categories **with some accuracy;** able to use the information within graphs to solve one and two step word problems about “how many more” or “how many less” **with some accuracy** | Able to draw a picture graph and a bar graph to represent a data set with several categories **with accuracy;** able to use the information within graphs to solve one and two step word problems about “how many more” or “how many less” **with accuracy** | Able to draw a picture graph and a bar graph to represent a data set with several categories with accuracy; able to use the information within graphs to solve one and two step word problems about “how many more” or “how many less” with accuracy **and able to construct their own questions about information within graphs** |
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| **Measurement and Data (3.MD.B.4)****Applies measurement data to create line plots.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 | Unable to draw a line plot to represent data with several categories | Able to draw a line plot to represent a data set with several categories **with some accuracy;** able to use the information within graphs to solve one and two step word problems about “how many more” or “how many less” **with some accuracy** | Able to draw a line plot to represent a data set with several categories **with accuracy;** able to use the information within graphs to solve one and two step word problems about “how many more” or “how many less” **with accuracy** | Able to draw a line plot to represent a data set with several categories with accuracy; able to use the information within graphs to solve one and two step word problems about “how many more” or “how many less” with accuracy **and able to construct their own questions about information within graphs** |
| 2 |  |  |  |  |
| 3 | Unable to identify halves and fourths of an inch and use that data to make a line plot represent whole numbers. | Able to identify halves and fourths of an inch and use that data to make a line plot represent whole numbers, **with some accuracy** | Able to identify halves and fourths of an inch and use that data to make a line plot represent whole numbers, **with accuracy** | Able to identify halves and fourths of an inch and use that data to make a line plot represent whole numbers, **and eighths** with accuracy |

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| **Measurement and Data (3.MD.C.5-6)****Recognizes and determines area using multiple strategies.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 | Unable to do the following:* Measure area by counting squares
* Recognize area as an attribute of plane figures
* Understand concepts of area and measurement
 | Able to do one or two of the following:* Measure area by counting squares
* Recognize area as an attribute of plane figures
* Understand concepts of area and measurement
 | Able to do the following:* Measure area by counting squares
* Recognize area as an attribute of plane figures
* Understand concepts of area and measurement
 | Able to do the following:* Measure area by counting squares
* Recognize area as an attribute of plane figures
* Understand concepts of area and measurement
* **Explain attributes of area**
* **Explain area concepts**
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| **Measurement and Data (3.MD.C.7)****Uses multiplication to find area of regular and irregular shapes.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 | Unable to find area using multiplication and addition strategies | Able to find area using multiplication and addition strategies **with some accuracy** | Able to find area using multiplication and addition strategies **with accuracy** | Able to find area using multiplication and addition strategies with accuracy **and explain reasoning** |

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| **Measurement and Data (3.MD.C.8)****Solves word problems involving area and perimeter.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 | Unable to solve one-step word problems involving perimeters of polygons, including:* Finding perimeter given side lengths
* Finding an unknown side length
* Finding area when given known or unknown sides
 | Able to solve one-step word problems **with some accuracy** involving perimeters of polygons, including:* Finding perimeter given side lengths
* Finding an unknown side length
* Finding area when given known or unknown sides
 | Able to solve one-step word problems **with accuracy** involving perimeters of polygons, including:* Finding perimeter given side lengths
* Finding an unknown side length
* Finding area when given known or unknown sides
 | Able to solve **multi-step** word problems with accuracy involving perimeters of polygons, including:* Finding perimeter given side lengths
* Finding an unknown side length
* Finding area when given known or unknown sides
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| **GEOMETRY** (3.G.A.1)**Classifies shapes by properties and attributes.** |
| **Trimester** | **NI** | **PR** | **MS** | **EX** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 | Unable to demonstrate understanding that shapes have different categories and shared attributes **and** unable to partition shapes into parts with equal areas and express area of each part as a unit fraction | Able to demonstrate understanding that shapes have different categories and shared attributes **or** able to partition shapes into parts with equal areas and express area of each part as a unit fraction | Able to demonstrate understanding that shapes have different categories and shared attributes **and** able to partition shapes into parts with equal areas and express area of each part as a unit fraction  | Able to demonstrate understanding that shapes have different categories, able to partition shapes into parts with equal areas and express each part as a unit fraction **and able to explain the hierarchy of quadrilaterals**  |