| Mathematics | | | | | |
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| **Numbers and Operations** | **Emerging (1)** | **Progressing (2)** | **Meets (3)** | **Exceeds (4)** | **Comments/Evidence** |
| Names and understands how whole numbers and decimals are represented in base ten numeration system. (M4N1) | Can do none or one of the following: Identify place value names and places from hundredths through one million. Equate a number's word name, it's standard form, and its expanded form. | Can do two or more, but not all of the following: Identify place value names and places from hundredths through one million. Equate a number's word name, it's standard form, and its expanded form. | Consistently and independently does all of the following: Identify place value names and places from hundredths through one million. Equate a number's word name, it's standard form, and its expanded form. | N/A | Writes and reads numbers in standard, expanded, and word form ; Determines the value of a digit within a number; Determines how many tens, hundreds, thousands, or millions in all of a number. Uses an open number line. GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Numbers and Operations | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Understands and applies concept of rounding numbers in problem solving. M4N2 | Does none or one of the following: Round numbers to the nearest ten, hundred, or thousand; describe situations in which rounding numbers would be appropriate and determine whether to round to the nearest ten, hundred, or thousand; determine to which whole number or tenth a given decimal is closest using tools such as a number line, and/or charts; round a decimal to the nearest whole number or tenth; represent the results of computation as a rounded number when appropriate and estimate a sum or difference by rounding numbers. | Can do two or more, but not all of the following: Round numbers to the nearest ten, hundred, or thousand; describe situations in which rounding numbers would be appropriate and determine whether to round to the nearest ten, hundred, or thousand; determine to which whole number or tenth a given decimal is closest using tools such as a number line, and/or charts; round a decimal to the nearest whole number or tenth; represent the results of computation as a rounded number when appropriate and estimate a sum or difference by rounding numbers. | Consistently and independently does all of the following: Round numbers to the nearest ten, hundred, or thousand; describe situations in which rounding numbers would be appropriate and determine whether to round to the nearest ten, hundred, or thousand; determine to which whole number or tenth a given decimal is closest using tools such as a number line, and/or charts; round a decimal to the nearest whole number or tenth; represent the results of computation as a rounded number when appropriate and estimate a sum or difference by rounding numbers. | N/A | Estimates to check answers; Verifies results of computation using properties. Uses rounding to estimate and solve problems; part-whole thinking, making tens, open number line, other models and strategies. GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Numbers and Operations | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Solves problems involving multiplication of 2-3 digit numbers by 1 or 2 digit numbers. | Can do none of the following: solve 2-3 digit by 1 or 2 digit multiplication problems using strategies. | Can do the following but can not use more than one strategy. Solves problems involving multiplication of 2-3 digit numbers by 1 or 2 digit numbers. | Can do the following using more than one strategy: Solves problems involving multiplication of 2-3 digit numbers by 1 or 2 digit numbers. | Can do all of Meets, and can multiply using more than 2-3 by 1 or 2 digits using mental math strategies. | Number line model, hundreds chart model, part-whole thinking, use of properties of multiplication can all be used to show mastery of this element. GADOE tasks, VandeWalle tasks, Exemplars, math journals |
| Understands the meaning of decimals and uses them in computation. M4N5 | Can do none or one of the following: a. Understand decimals are a part of the base-ten system.<br>b. Understand the relative size of numbers and order two digit decimals.<br>c. Add and subtract both one and two digit decimals.<br>d. Model multiplication and division of decimals by whole numbers.<br>e. Multiply and divide both one and two digit decimals by whole numbers. | Can do two or more, but not all of the following: a. Understand decimals are a part of the base-ten system.<br>b. Understand the relative size of numbers and order two digit decimals.<br>c. Add and subtract both one and two digit decimals.<br>d. Model multiplication and division of decimals by whole numbers.<br>e. Multiply and divide both one and two digit decimals by whole numbers | Consistently and independently does all of the following: a. Understand decimals are a part of the base-ten system.<br>b. Understand the relative size of numbers and order two digit decimals.<br>c. Add and subtract both one and two digit decimals.<br>d. Model multiplication and division of decimals by whole numbers.<br>e. Multiply and divide both one and two digit decimals by whole numbers. | | Uses and demonstrates decimal models. GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Numbers and Operations | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Uses properties of arithmetic operations to solve and check problems. M4N7 | Can do none or one of the following: a. Describe situations in which the four operations may be used and the relationships among them.<br>b. Compute using the order of operations, including parentheses.<br>c. Compute using the commutative, associative, and distributive properties.<br>d. Use mental math and estimation strategies to compute. | Can do two or more, but not all of the following: a. Describe situations in which the four operations may be used and the relationships among them.<br>b. Compute using the order of operations, including parentheses.<br>c. Compute using the commutative, associative, and distributive properties.<br>d. Use mental math and estimation strategies to compute. | Consistently and independently does all of the following: a. Describe situations in which the four operations may be used and the relationships among them.<br>b. Compute using the order of operations, including parentheses.<br>c. Compute using the commutative, associative, and distributive properties.<br>d. Use mental math and estimation strategies to compute. | N/A | Models using manipulatives. GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Numbers and Operations | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Uses division of whole numbers and can divide in problem solving.<br>M4N4 | Can do none or one of the following: a. Know the division facts with understanding and fluency.<br>b. Solve problems involving division by 1 or 2-digit numbers (including those that generate a remainder).<br>c. Understand the relationship between dividend, divisor, quotient, and remainder.<br>d. Understand and explain the effect on the quotient of multiplying or dividing both the divisor and dividend by the same number. (2050 ÷ 50 yields the same answer as 205 ÷ 5). | Does two or more, but not all of the following: a. Know the division facts with understanding and fluency.<br>b. Solve problems involving division by 1 or 2-digit numbers (including those that generate a remainder).<br>c. Understand the relationship between dividend, divisor, quotient, and remainder.<br>d. Understand and explain the effect on the quotient of multiplying or dividing both the divisor and dividend by the same number. (2050 ÷ 50 yields the same answer as 205 ÷ 5). | Consistently and independently does all of the following: a. Know the division facts with understanding and fluency.<br>b. Solve problems involving division by 1 or 2-digit numbers (including those that generate a remainder).<br>c. Understand the relationship between dividend, divisor, quotient, and remainder.<br>d. Understand and explain the effect on the quotient of multiplying or dividing both the divisor and dividend by the same number. (2050 ÷ 50 yields the same answer as 205 ÷ 5). | Does all of Meets and does the following:<br>Solves problems involving division by 3 digit numbers (including those that generate a remainder).<br>. | Models, Number lines, GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Numbers and Operations | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Understand, apply, and compute with decimal and common fractions. (M4N6) | Can do none or one of the following: a. Understand representations of equivalent common fractions and/or decimal fractions.<br>b. Add and subtract fractions and mixed numbers with like denominators. (Denominators should not exceed twelve.)<br>c. Use mixed numbers and improper fractions interchangeably. | Does two or more, but not all of the following: a. Understand representations of equivalent common fractions and/or decimal fractions.<br>b. Add and subtract fractions and mixed numbers with like denominators. (Denominators should not exceed twelve.)<br>c. Use mixed numbers and improper fractions interchangeably. | Consistently and independently does all of the following: a. Understand representations of equivalent common fractions and/or decimal fractions.<br>b. Add and subtract fractions and mixed numbers with like denominators. (Denominators should not exceed twelve.)<br>c. Use mixed numbers and improper fractions interchangeably. | N/A | Models, Number lines, GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Measurement | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Understands concept of weight and can measure weight. M4M1 | Can do none or one of the following: Use standard and metric units to measure the weight of objects.<br>b. Know units used to measure weight (gram, kilogram, ounces, pounds, and tons).<br>c. Compare one unit to another within a single system of measurement. | Can do two of the following: Use standard and metric units to measure the weight of objects.<br>b. Know units used to measure weight (gram, kilogram, ounces, pounds, and tons).<br>c. Compare one unit to another within a single system of measurement. | Can do all of the following: Use standard and metric units to measure the weight of objects.<br>b. Know units used to measure weight (gram, kilogram, ounces, pounds, and tons).<br>c. Compare one unit to another within a single system of measurement. | N/A | GADOE tasks, VandeWalle tasks, Exemplars, math journals |
| Understands concept of angles and can measure angles. M4M2 | Can do none or one of the following: Use tools, such as a protractor or angle ruler, and other methods such as paper folding, drawing a diagonal in a square, to measure angles.<br>b. Understand the meaning and measure of a half rotation (180°) and a full rotation (360°).<br>c. Determine that the sum of the three angles of a triangle is always 180°. | Can do two or more, but not all of the following: Use tools, such as a protractor or angle ruler, and other methods such as paper folding, drawing a diagonal in a square, to measure angles.<br>b. Understand the meaning and measure of a half rotation (180°) and a full rotation (360°).<br>c. Determine that the sum of the three angles of a triangle is always 180°. | Consistently and independently does all of the following: Use tools, such as a protractor or angle ruler, and other methods such as paper folding, drawing a diagonal in a square, to measure angles.<br>b. Understand the meaning and measure of a half rotation (180°) and a full rotation (360°).<br>c. Determine that the sum of the three angles of a triangle is always 180°. | N/A | Start with paper folding and wedges to build understanding before introducing protractors or angle rulers. GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Geometry | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Defines and identifies the characteristics of geometric figures.<br>M4G1 | Does none or one of the following:<br>a. Examine and compare angles in order to classify and identify triangles by their angles.<br>b. Describe parallel and perpendicular lines in plane geometric figures.<br>c. Examine and classify quadrilaterals (including parallelograms, squares, rectangles, trapezoids, and rhombi) by their properties.<br>d. Compare and contrast the relationships among quadrilaterals. | Can do two or more, but not all of the following: a. Examine and compare angles in order to classify and identify triangles by their angles.<br>b. Describe parallel and perpendicular lines in plane geometric figures.<br>c. Examine and classify quadrilaterals (including parallelograms, squares, rectangles, trapezoids, and rhombi) by their properties.<br>d. Compare and contrast the relationships among quadrilaterals. | Consistently and independently does all of the following: a. Examine and compare angles in order to classify and identify triangles by their angles.<br>b. Describe parallel and perpendicular lines in plane geometric figures.<br>c. Examine and classify quadrilaterals (including parallelograms, squares, rectangles, trapezoids, and rhombi) by their properties.<br>d. Compare and contrast the relationships among quadrilaterals. | N/A | Examine and construct models, drawings; use graphic organizers; classify Van de Walle shapes.<br>GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Geometry | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Understands fundamental solid figures. M4G2 | Does none or one of the following: Compare and contrast a cube and a rectangular prism in terms of the number and shape of their faces, edges, and vertices.<br>b. Describe parallel and perpendicular lines and planes in connection with the rectangular prism.<br>c. Build/collect models for solid geometric figures (cubes, prisms, cylinders, pyramids, spheres, and cones) using nets and other representations. | Can do two or more, but not all of the following: Compare and contrast a cube and a rectangular prism in terms of the number and shape of their faces, edges, and vertices.<br>b. Describe parallel and perpendicular lines and planes in connection with the rectangular prism.<br>c. Build/collect models for solid geometric figures (cubes, prisms, cylinders, pyramids, spheres, and cones) using nets and other representations. | Consistently and independently does all of the following: Compare and contrast a cube and a rectangular prism in terms of the number and shape of their faces, edges, and vertices.<br>b. Describe parallel and perpendicular lines and planes in connection with the rectangular prism.<br>c. Build/collect models for solid geometric figures (cubes, prisms, cylinders, pyramids, spheres, and cones) using nets and other representations. | N/A | Examine and construct models, drawings; use graphic organizers; classify Van de Walle shapes. GADOE tasks, VandeWalle tasks, Exemplars, math journals |
| Uses coordinate system. M4G3 | Does none or one of the following: Understand and apply ordered pairs in the first quadrant of the coordinate system.<br>b. Locate a point in the first quadrant in the coordinate plane and name the ordered pair.<br>c. Graph ordered pairs in the first quadrant. | Can do two or more, but not all of the following: Understand and apply ordered pairs in the first quadrant of the coordinate system.<br>b. Locate a point in the first quadrant in the coordinate plane and name the ordered pair.<br>c. Graph ordered pairs in the first quadrant. | Consistently and independently does all of the following: Understand and apply ordered pairs in the first quadrant of the coordinate system.<br>b. Locate a point in the first quadrant in the coordinate plane and name the ordered pair.<br>c. Graph ordered pairs in the first quadrant. | N/A | GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Algebra | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Represents and interprets mathematical relationships in quantitative expressions. M4A1 | Does none or one of the following: Understand and apply patterns and rules to describe relationships and solve problems.<br>b. Represent unknowns using symbols, such as □ and Δ.<br>c. Write and evaluate mathematical expressions using symbols and different values. | Can do two or more, but not all of the following: Understand and apply patterns and rules to describe relationships and solve problems.<br>b. Represent unknowns using symbols, such as □ and Δ.<br>c. Write and evaluate mathematical expressions using symbols and different values. | Consistently and independently does all of the following: Understand and apply patterns and rules to describe relationships and solve problems.<br>b. Represent unknowns using symbols, such as □ and Δ.<br>c. Write and evaluate mathematical expressions using symbols and different values. | N/A | Uses symbols to represent unknowns; finds value of unknowns. GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Data Analysis | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
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| Gathers, organizes, displays, and compares data. **M4D1** | Does none or one of the following: Construct and interpret line graphs, line plot graphs, pictographs, Venn diagrams, and bar graphs.<br>b. Investigate the features and tendencies of graphs.<br>c. Compare different graphical representations for a given set of data.<br>d. Identify missing information and duplications in data.<br>e. Determine and justify the range, mode, and median of a set of data. | Can do two or more, but not all of the following: Construct and interpret line graphs, line plot graphs, pictographs, Venn diagrams, and bar graphs.<br>b. Investigate the features and tendencies of graphs.<br>c. Compare different graphical representations for a given set of data.<br>d. Identify missing information and duplications in data.<br>e. Determine and justify the range, mode, and median of a set of data. | Consistently and independently does all of the following: Construct and interpret line graphs, line plot graphs, pictographs, Venn diagrams, and bar graphs.<br>b. Investigate the features and tendencies of graphs.<br>c. Compare different graphical representations for a given set of data.<br>d. Identify missing information and duplications in data.<br>e. Determine and justify the range, mode, and median of a set of data. | Does all of Meets and the following; Investigate the features and tendencies of graphs | GADOE tasks, VandeWalle tasks, Exemplars, math journals |

| Process Standards | Emerging (1) | Progressing (2) | Meets (3) | Exceeds (4) | Comments/Evidence |
|---|---|---|---|---|---|
| Uses mathematical language to express, connect ideas, record and solve problems**(M3P1, M3P2, M3P3, M3P4, M3P5)** | Minimal ability to solve problems in math and other content areas, evaluates mathematical argument, expresses ideas using precise mathematical language, understands how mathematical ideas connect and applies mathematical techniques in other areas, records mathematical ideas with pictures, words, models and symbols | Inconsistently solves problems in math and other content areas, evaluates mathematical argument, expresses ideas using precise mathematical language, understands how mathematical ideas connect and applies mathematical techniques in other areas, records mathematical ideas with pictures, words, models and symbols | Consistently and independently solves problems in math and other content areas, evaluates mathematical arguments, expresses ideas using precise mathematical language, understands how mathematical ideas connect and applies mathematical techniques in other areas, records mathematical ideas with pictures, words, models and symbols | Consistently and independently Solve problems (using appropriate technology). Reason and evaluate mathematical arguments. Communicate mathematically. Make connections among mathematical ideas and to other disciplines. Represent mathematics in multiple ways. **(PLEASE SEE GPS for elements linked to Process Standards)** | Chooses appropriate strategy to solve problems; Supports an argument for the way they solved a problem (Or how not to solve) ; Uses mathematical language; performance assessments; Summarizing activities; makes connections across content areas; Demonstrates understanding of how mathematical ideas interconnect; demonstrates understanding of mathematical processes with models and representations; Uses a process for problem solving |