**Grade 3 Math Benchmarks**

**1. Use understanding of place value to solve multi-digit problems.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Use addition or subtraction strategies to accurately calculate multi-digit problems within 1000. | With support, uses one addition or subtraction strategy to accurately calculate multi-digit problems within 1000. | Independently:  Uses addition and subtraction strategies to accurately calculate multi-digit problems within 1000. | Independently:  Uses multiple addition or subtraction strategies to accurately calculate multi-digit problems within 1000 and clearly explains their thinking. |
| 2nd | Unable or rarely able to:  Uses one addition or subtraction strategy to accurately calculate multi-digit problems within 1000. | With support, uses one addition and subtraction strategy to accurately calculate multi-digit problems within 1000. | Independently:  Uses addition and subtraction strategies to accurately calculate multi-digit problems within 1000. | Independently:  Uses multiple addition and subtraction strategies to accurately calculate multi-digit problems within 10,000 and clearly explains their thinking. |
| 3rd | Unable or rarely able to:  Use addition or subtraction strategies to accurately calculate multi-digit problems within 1000. | With support, uses one addition and subtraction strategy to accurately calculate multi-digit problems within 1000. | Independently:  Uses addition or subtraction strategies to accurately calculate multi-digit problems within 1000 and clearly explains their thinking. | Independently:  Uses multiple addition and subtraction strategies to accurately calculate multi-digit problems within 10,000 and clearly explains their thinking. |

**2.** **Demonstrate an understanding of fractions.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Recognize that a whole shape can be divided into equal parts and all parts make up the whole shape.  Partition shapes into halves, thirds, and fourths. | Inconsistently:  Recognize that a whole shape can be divided into equal parts and all parts make up the whole shape.  Partition shapes into halves, thirds, and fourths. | Consistently:  Recognize that a whole shape can be divided into equal parts and all parts make up the whole shape.  Partition shapes into halves, thirds, and fourths.  (2.GA.3—use to assess) | Consistently:  Recognizes that a whole shape can be divided into equal parts and all parts make up the whole shape.  Partition shapes into halves, thirds, fourths, sixths, and eighths. |
| 2nd | Unable or rarely able to:  Recognize that a whole shape can be divided into equal parts and all parts make up the whole shape.  Partition shapes into halves, thirds, and fourths. | Inconsistently:  Recognize that a whole shape can be divided into equal parts and all parts make up the whole shape.  Partition shapes into halves, thirds, and fourths. | Consistently:  Recognize that a whole shape can be divided into equal parts and all parts make up the whole shape.  Partition shapes into halves, thirds, and fourths.  (2.GA.3—use to assess) | Consistently:  Recognizes that a whole shape can be divided into equal parts and all parts make up the whole shape.  Partition shapes into halves, thirds, fourths, sixths, and eighths. |
| 3rd | Unable or rarely able to:  Recognize that a fraction is a part of a whole and is made up of a numerator and denominator and understands what each of those terms represents.  Partition shapes and groups of objects into halves, thirds, fourths, sixths and eighths in multiple ways.  Apply this understanding to word problems and performance tasks | Inconsistently:  Recognize that a fraction is a part of a whole and is made up of a numerator and denominator and understands what each of those terms represents.  Partition shapes and groups of objects into halves, thirds, fourths, sixths and eighths in multiple ways.  Attempts to apply this understanding to word problems and performance tasks, but makes errors. | Consistently:  Recognize that a fraction is a part of a whole and is made up of a numerator and denominator and understands what each of those terms represents.  Partition shapes and groups of objects into halves, thirds, fourths, sixths and eighths in multiple ways.  Applies this understanding to word problems and performance tasks. | Consistently:  Recognize that a fraction is a part of a whole and is made up of a numerator and denominator and understands what each of those terms represents. Extends understanding by combining unit fractions to recognize and generate equivalent fractions.  Partition shapes and groups of objects into halves, thirds, fourths, sixths, eighths, tenths, twelfths, and hundredths. |

**3. Compare and order fractions.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Recognizes the difference in size of each part when a rectangle or circle is divided into halves, thirds, and fourths. | Inconsistently:  Recognizes the difference in size of each part when a rectangle or circle is divided into halves, thirds, and fourths. | Consistently:  Recognizes the difference in size of each part when a rectangle or circle is divided into halves, thirds, and fourths.  (2.GA.3—use to assess) | Consistently:  Recognizes the difference in size of each part when a rectangle or circle is divided into halves, thirds, fourths, sixths, and eights. |
| 2nd | Unable or rarely able to:  Recognizes the difference in size of each part when a rectangle or circle is divided into halves, thirds, and fourths. | Inconsistently:  Recognizes the difference in size of each part when a rectangle or circle is divided into halves, thirds, and fourths. | Consistently:  Recognizes the difference in size of each part when a rectangle or circle is divided into halves, thirds, and fourths.  (2.GA.3—use to assess) | Consistently:  Recognizes the difference in size of each part when a rectangle or circle is divided into halves, thirds, fourths, sixths, and eights. |
| 3rd | Unable or rarely able to:  Compares and orders fractions with same numerator, same denominator, and missing part strategies accurately using pictures or manipulatives.  Apply this understanding to word problems and performance tasks. | Inconsistently:  Compares and orders fractions with same numerator, same denominator, and missing part strategies accurately using pictures or manipulatives.  Attempts to apply this understanding to word problems and performance tasks, but makes errors. | Consistently:  Compares and orders fractions with same numerator, same denominator, and missing part strategies accurately using pictures or manipulatives.  Applies this understanding to word problems and performance tasks. | Consistently:  Compares and orders fractions with same numerator, same denominator, and missing part strategies accurately using pictures or manipulatives.  Applies this understanding to word problems and performance tasks. |

**4. Fluently multiply and divide within 100.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Uses strategies to fluently multiply within 100. | Inconsistently:  Uses strategies to fluently multiply within 100. | Consistently:  Uses strategies to fluently multiply within 100. | Consistently:  Uses strategies to fluently multiply within 144. |
| 2nd | Unable or rarely able to:  Uses strategies to fluently multiply or divide within 100. | Inconsistently:  Uses strategies to fluently multiply or divide within 100. | Consistently:  Uses strategies to fluently multiply and divide within 100. | Consistently:  Uses strategies to fluently multiply and divide within 144. |
| 3rd | Unable or rarely able to:  Know from memory all products of two one-digit numbers.  Know from memory all division facts within 100. | Inconsistently:  Know from memory all products of two one-digit numbers.  Know from memory all division facts within 100. | Consistently:  Know from memory all products of two one-digit numbers.  Know from memory all division facts within 100. | Consistently:  Uses strategies to fluently multiply and divide within 144. |

**5. Represents problems using multiplication and division strategies.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. Write a repeated addition equation to express the total number of objects in the array. | Inconsistently:  Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. Write a repeated addition equation to express the total number of objects in the array. | Consistently:  Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. Write a repeated addition equation to express the total number of objects in the array. | Consistently:  Represents a repeated addition equation as a multiplication equation. |
| 2nd | Unable or rarely able to:  Use multiple strategies to interpret products of whole numbers, whole number quotients of whole numbers, and determines the unknown number in a multiplication or division equation relating 3 whole numbers. | Inconsistently:  Uses multiple strategies to interpret products of whole numbers, whole number quotients of whole numbers, and determines the unknown number in a multiplication or division equation relating 3 whole numbers. | Consistently:  Uses multiple strategies to interpret products of whole numbers, whole number quotients of whole numbers, and determines the unknown number in a multiplication or division equation relating 3 whole numbers. | Consistently:  Uses multiple strategies to interpret products of whole numbers, whole number quotients of whole numbers, and determines the unknown number in a multiplication or division equation relating 3 whole numbers. Explains thinking clearly. |
| 3rd | Unable or rarely able to:  Use strategies to interpret products of whole numbers, whole number quotients of whole numbers, and determines the unknown number in a multiplication or division equation relating 3 whole numbers.  Explain their thinking. | Inconsistently:  Uses multiple strategies to interpret products of whole numbers, whole number quotients of whole numbers, and determines the unknown number in a multiplication or division equation relating 3 whole numbers.  Explains their thinking. | Consistently:  Uses multiple strategies to interpret products of whole numbers, whole number quotients of whole numbers, and determines the unknown number in a multiplication or division equation relating 3 whole numbers.  Clearly explains their thinking. | Consistently:  Uses multiple strategies to interpret products of whole numbers, whole number quotients of whole numbers, and determines the unknown number in a multiplication or division equation relating 3 whole numbers.  Represent verbal statements of multiplicative comparisons as multiplication equations.  (i.e. interpret 35= 5x7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5)  Explains thinking clearly. |

**6. Solve one-step and two-step word problems and clearly explain strategies used.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Uses pictures or equations to solve word problems involving addition, subtraction and multiplication. | Inconsistently:  Uses pictures or equations to solve word problems involving addition, subtraction and multiplication. | Consistently:  Uses pictures or equations to solve word problems involving addition, subtraction and multiplication. | Consistently:  Uses pictures or equations to solve two-step word problems involving all operations. |
| 2nd | Unable or rarely able to:  Uses multiple strategies to solve addition, subtraction, multiplication and division word problems and clearly explains their thinking. | Inconsistently:  Uses multiple strategies to solve addition, subtraction, multiplication and division word problems and clearly explains their thinking. | Consistently:  Uses multiple strategies to solve addition, subtraction, multiplication and division word problems and clearly explains their thinking. | Consistently:  Uses multiple strategies to solve two-step addition, subtraction, multiplication and division word problems and clearly explains their thinking. |
| 3rd | Unable or rarely able to:  Uses multiple strategies to solve two-step addition, subtraction, multiplication and division word problems and clearly explains their thinking. | Inconsistently:  Uses multiple strategies to solve two-step addition, subtraction, multiplication and division word problems and clearly explains their thinking. | Consistently:  Uses multiple strategies to solve two-step addition, subtraction, multiplication and division word problems and clearly explains their thinking. | Consistently:  Uses multiple strategies to solve multi-step problems using all four operations. Use a letter to represent an unknown quantity depending on the needs of the problem. |

**7. Recognizes shapes by their attributes.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Identifies two- and three-dimensional shapes. | Inconsistently:  Identifies two- and three-dimensional shapes. | Consistently:  Identifies two- and three-dimensional shapes.  (Use 2nd grade assessment) | Consistently:  Describes the attributes of two- and three-dimensional shapes. |
| 2nd | Unable or rarely able to:  Recognizes and draws two- and three-dimensional shapes. | Inconsistently:  Recognizes and draws two- and three-dimensional shapes. | Consistently:  Recognizes and draws two- and three-dimensional shapes.  (Use 2nd grade assessment) | Consistently:  Recognizes that shapes can be categorized according to the number of sides.  Compare and contrast different quadrilaterals. |
| 3rd | Unable or rarely able to:  Recognize that shapes can be categorized according to the number of sides, angles, and types of lines.  Compare and contrast different quadrilaterals. | Inconsistently:  Recognizes that shapes can be categorized according to the number of sides, angles, and types of lines.  Compare and contrast different quadrilaterals. | Consistently:  Recognizes that shapes can be categorized according to the number of sides, angles, and types of lines.  Compare and contrast different quadrilaterals. | Consistently:  Recognizes that shapes can be categorized according to the number of sides, angles, and types of lines.  Compare and contrast different quadrilaterals.  Recognize right triangles as a category and identifies right triangles. |

**8. Solves money word problems**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Draw picture graphs and bar graphs to represent data.  Answer questions using data presented in a line plot. | Inconsistently:  Draws picture graphs and bar graphs to represent data.  Answer questions using data presented in a line plot. | Consistently:  Draws picture graphs and bar graphs to represent data.  Answer questions using data presented in a line plot. | Consistently:  Draws scaled picture graphs and bar graphs to represent data. Generate measurement data by measuring lengths to the nearest inch. Show the data by making an accurate line plot. |
| 2nd | Unable or rarely able to:  Recognizes and draws two- and three-dimensional shapes. | Inconsistently:  Recognizes and draws two- and three-dimensional shapes. | Consistently:  Recognizes and draws two- and three-dimensional shapes.  (Use 2nd grade assessment) | Consistently:  Recognizes that shapes can be categorized according to the number of sides.  Compare and contrast different quadrilaterals. |
| 3rd | Unable or rarely able to:  Recognize that shapes can be categorized according to the number of sides, angles, and types of lines.  Compare and contrast different quadrilaterals. | Inconsistently:  Recognizes that shapes can be categorized according to the number of sides, angles, and types of lines.  Compare and contrast different quadrilaterals. | Consistently:  Recognizes that shapes can be categorized according to the number of sides, angles, and types of lines.  Compare and contrast different quadrilaterals. | Consistently:  Recognizes that shapes can be categorized according to the number of sides, angles, and types of lines.  Compare and contrast different quadrilaterals.  Recognize right triangles as a category and identifies right triangles. |

**9. Tell and write time to the nearest minute and solve problems using elapsed time.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Tells and writes time to the nearest half hour using analog and digital clocks. | Inconsistently:  Tells and writes time to the nearest half hour using analog and digital clocks. | Consistently:  Tells and writes time to the nearest half hour using analog and digital clocks. | Consistently:  Tells and writes time to the nearest quarter hour using analog and digital clocks. |
| 2nd | Unable or rarely able to:  Tells and writes time to the nearest quarter hour using analog and digital clocks. | Inconsistently:  Tells and writes time to the nearest quarter hour using analog and digital clocks. | Consistently:  Tells and writes time to the nearest quarter hour using analog and digital clocks. | Consistently:  Tells and writes time to the nearest 5 minutes using analog and digital clocks. |
| 3rd | Unable or rarely able to:  Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes. | Inconsistently:  Tells and writes time to the nearest minute and measures time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes. | Consistently:  Tells and writes time to the nearest minute and measures time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes. | Consistently:  Use the four operations to solve word problems involving intervals of time. |

**10. Solve problems using area and perimeter.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trimester** | **1** | **2** | **3** | **4** |
| 1st | Unable or rarely able to:  Solves area and perimeter problems by counting unit squares. | Inconsistently:  Solves area and perimeter problems by counting unit squares. | Consistently:  Solves area and perimeter problems by counting unit squares. | Consistently:  Finds the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares. |
| 2nd | Unable or rarely able to:  Finds the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares. | Inconsistently:  Finds the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares. | Consistently:  Finds the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares. | Consistently:  Finds the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares.  Apply the formulas for area and perimeter in real world and mathematical problems. |
| 3rd | Unable or rarely able to:  Find the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares.  Apply knowledge of area and perimeter to solve one-step and two-step word problems. | Inconsistently:  Finds the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares.  Applies knowledge of area and perimeter to solve one-step and two-step word problems. | Consistently:  Finds the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares.  Applies knowledge of area and perimeter to solve one-step and two-step word problems. | Consistently:  Finds the perimeter of a shape using addition.  Finds the missing length of a side when given the area or perimeter of that shape.  Find the area of rectangles and squares using multiplication or counting unit squares.  Apply the formulas for area and perimeter in real world and mathematical problems. |