**CUMBERLAND COUNTY SCHOOL DISTRICT**  
**BENCHMARK ASSESSMENT CURRICULUM PACING GUIDE**

**School:** Cumberland County Elementary  
**Subject:** Math  
**Grade:** 5th

<table>
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<th><strong>Benchmark Assessment 1</strong></th>
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<tr>
<td><strong>Instructional Timeline:</strong> Weeks 1-9</td>
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<tr>
<td><strong>Topic(s):</strong> Unit 1: Place Value and Decimal Fractions Module 1</td>
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<table>
<thead>
<tr>
<th>KCAS Standards</th>
<th>Learning Target (I Can Statement)</th>
<th>Key Vocabulary</th>
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</thead>
<tbody>
<tr>
<td><strong>NBT.1</strong></td>
<td>I can recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.</td>
<td></td>
</tr>
<tr>
<td><strong>NBT.2</strong></td>
<td>I can express and illustrate powers of 10 using whole number exponents and explain a pattern for how the number of zeros of a product when multiplied by 10 relates to the decimal point.</td>
<td></td>
</tr>
<tr>
<td><strong>NBT.3</strong></td>
<td>I can read and write decimals to the thousandths in word form, base-ten numerals, and expanded form. I can compare decimals using symbols.</td>
<td></td>
</tr>
<tr>
<td><strong>NBT.4</strong></td>
<td>I can use the value of the digit to the right of the place to be rounded to determine whether to round up or down.</td>
<td></td>
</tr>
<tr>
<td><strong>NBT.7</strong></td>
<td>I can add, subtract multiply and divide decimals to hundredths using strategies based on place value, properties of operations, or other strategies.</td>
<td></td>
</tr>
</tbody>
</table>

- Place value
- Tenths
- Hundredths
- Thousandths
- Exponents
- Digit
- Base ten
- Standard form
- Expanded form
- Word form
- Unit form
- Number line
- Equation
- Bundling, regrouping
- <,>, or =
- Number sentence
- Centimeter
- millimeter

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properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

**MD.1** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems

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### Benchmark Assessment 2

**Instructional Timeline:** **Weeks 10-18**

**Topic(s):** **Unit 2: Multi-Digit Whole Number and Decimal Operations: Module 2**

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<thead>
<tr>
<th>KCAS Standards</th>
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</thead>
</table>
| **5.OA.1** Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. | **5.OA.1** I can evaluate (solve) expressions using the order of operations including parenthesis, brackets, or braces. | • Decimal Fraction  
• Multiplier  
• Parentheses  
• Decimal  
• Digit  
• Divisor  
• Equation  
• Equivalence  
• Estimate  
• Exponent  
• Multiple  
• Pattern  
• Product  
• Quotient  
• Remainder  
• Rounding |
| **5.OA.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. | **5.OA.2** I can write and interpret numerical expressions and analyze expressions without solving. | |
| **NBT.1** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. | **5.NBT.1** I can recognize that each place to the left is 10 times larger in a multi-digit number and recognize that each place to the right is 1/10 as much in a multi-digit number. | |
| **NBT.2** Explain the patterns in the number of zeros of the product when multiplying a | **5.NBT.2** I can express and illustrate powers of 10 using | |

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number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole number exponents to denote powers of 10.

**NBT.5** Fluently multiply multi-digit whole numbers using standard algorithm

**NBT.6** Find whole number quotients of whole numbers with up to four digit dividends and two digit divisors, using strategies based on place value, the properties of operations, and/or relationship between multiplication and division. Illustrate and explain by using equations, rectangular arrays, and/or area models.

**NBT.7** Add, subtract, multiply, and divide decimals to hundredths

whole number exponents and explain a pattern for how the number of zeros of a product when multiplied by 10 relates to the decimal point.

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<tr>
<th><strong>Benchmark Assessment 3</strong></th>
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<tr>
<td><strong>Instructional Timeline:</strong> <em>Weeks 19-31</em></td>
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<tr>
<td><strong>Topic(s)</strong> <em>Addition and Subtraction of Fractions: Module 3</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>5.NF.1</strong></td>
<td>Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.</td>
<td><em>Unlike denominators</em></td>
</tr>
<tr>
<td></td>
<td>I can add and subtract fractions with unlike denominators, including mixed numbers.</td>
<td><em>Like denominators</em></td>
</tr>
<tr>
<td></td>
<td>I can create equivalent fractions using common multiples</td>
<td><em>Denominator</em></td>
</tr>
<tr>
<td><strong>5.NF.2</strong></td>
<td>Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases where an unknown quantity is a part of the result.</td>
<td><em>Numerator</em></td>
</tr>
<tr>
<td></td>
<td>I can solve addition and subtraction word problems involving fractions using visual fraction models or equations.</td>
<td><em>Whole unit</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Fractional unit</em></td>
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<tr>
<td></td>
<td></td>
<td><em>Number sentence</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>One tenth of</em></td>
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</tbody>
</table>

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of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and numbers sense of fractions to estimate mentally and assess the reasonableness of answers.

### Instructional Timeline

**Weeks 19-31**

**Topic(s)** Multiplying and Dividing Fractions: Module 4

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<tr>
<td><strong>5.NF.3</strong></td>
<td>I can explain that fractions can be represented as division of the numerator by the denominator.</td>
<td>Equivalent fractions, Tenth, Hundredth, Fraction greater than or equal to 1</td>
</tr>
<tr>
<td><strong>5.NF.4a</strong></td>
<td>I can create story problems involving multiplication of a fraction by a whole number or multiplication of two fractions.</td>
<td>Decimal Divisor, Simplify, Denominator, Decimal fraction, Commutative Property, Distribute, Equation, Expression, Factors, Fractional unit, Hundredth</td>
</tr>
<tr>
<td><strong>5.NF.4b</strong></td>
<td>I can determine the area of rectangles with fractional side lengths by multiplying the side</td>
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</tbody>
</table>
5.NF.4b Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as

5.NF.5 Interpret multiplication as scaling (resizing), by: Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number.

5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

5.NF.5
- I can explain why multiplying a given number or fraction greater than 1 results in a product greater than the given number and I can multiply a given fraction by 1.

5.NF.6
- I can solve real world problems involving multiplication of fractions and mixed numbers and interpret the product in the context of the problem.

5.NF.7
- I can solve real world problems involving division of unit fractions by whole numbers and division of whole numbers by unit fractions.

5.OA.1
- I can evaluate (solve) expressions using the order of operations including parenthesis, brackets, or braces.

5.MD.2
- I can create a line plot with a given set of unit fractions measurements. I can solve problems using data on line plots.

- Line plot
- Mixed number
- Quotient
- Tape Diagram
### KCAS Standards

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<thead>
<tr>
<th><strong>5.OA.1</strong> Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</th>
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<tr>
<td><strong>5.MD.2</strong> Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots.</td>
</tr>
</tbody>
</table>

### Instructional Timeline: **Weeks 19-31**

#### Topic(s) Unit 5: **Volume and Area: Module 5**

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<tr>
<td><strong>5.MD.3</strong> Recognize volume as an attribute of solid figures and understand concepts of volume measurement.</td>
<td>I can recognize that a cube with 1 unit side length is “one cubic unit” of volume and explain a process for finding the volume of a solid figure by filling it with unit cubes without gaps or overlaps</td>
<td>Base, Cubic units, Height, Hierarchy, Unit cube, Volume, Angle, Area, Cube, Face, Parallel sides, Parallelogram, Perpendicular, Plane, Polygon, Quadrilateral, Rhombus, Square units, Trapezoid</td>
</tr>
<tr>
<td><strong>5.MD.4</strong> Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.</td>
<td>I can measure the volume of a hollow three-dimensional figure by filling it with unit cubes without gaps and counting the number of squares.</td>
<td></td>
</tr>
<tr>
<td><strong>5.MD.5</strong> Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.</td>
<td>I can use unit cubes to determine the volume of rectangular prisms. I can explain multiplication of the area of the base (l x w=b) by the height (b x h=V). I can use formulas to determine the volume of rectangular prisms.</td>
<td></td>
</tr>
<tr>
<td><strong>5.NF.4b</strong> Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to</td>
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find areas of rectangles, and represent fraction products as

5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

5.G.4 Classify two-dimensional figures in a hierarchy based on properties.

5.NF.6

- I can determine the area of rectangles with fractional side lengths by multiplying the side lengths.

5.NF.6

- I can solve real world problems involving multiplication of fractions and mixed numbers and interpret the product in the context of the problem.

5.G.3

- I can classify two-dimensional figures by their attributes. I can explain two-dimensional attributes can belong to several two-dimensional figures.

5.G.4

- I can group together all shapes that share a single property, and then among these shapes, group together those that share a second and third property.

Benchmark Assessment 4

Instructional Timeline: Weeks 32-36

Topic(s) Unit 5: Unit 6: Problem Solving with the Coordinate Plane: Module 6/Review

KCAS Standards Learning Target (I Can Statement) Key Vocabulary

5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the

5.G.1

- I can construct a coordinate system and recognize the origin is the point where 0 lies on each of the axis. I can recognize that the horizontal axis is labeled the x-axis, and the vertical axis is labeled as the y-axis. I can identify an ordered pair as an x-coordinate followed by a • Axis • Coordinate • Coordinate pair • Coordinate plane • Ordered pair • Origin • Intersect

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The first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).

**5.G.2** Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

- I can graph points in the first quadrant of a coordinate plane using a set of ordered pairs. I can relate the coordinate values of any graphed point to the context of the problem.

**Review the following standards**

**5.OA.2**
- I can write and interpret numerical expressions. I can analyze expressions without solving.

**5.OA.3**
- I can generate two numerical patterns with the same starting number for two given rules. I can form ordered pairs out of corresponding terms from each pattern and graph them on a coordinate plane.

**5.NF.2**
- I can solve addition and subtraction word problems involving fractions using visual fraction models or equations.

**5.NF.3**
- I can explain that fractions can be represented as division of the numerator by the denominator.

**5.NF.6**
- I can solve real world problems involving multiplication of fractions and mixed numbers and interpret the product in the context of the problem.

- Quadrant
- Degree
- Horizontal
- Vertical
- Perpendicular
- Parallel
- Point
<table>
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<tr>
<th><strong>5.NBT.2</strong></th>
<th>I can express and illustrate powers of 10 using whole number exponents and explain a pattern for how the number of zeros of a product when multiplied by 10 relates to the decimal point.</th>
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<td><strong>5.NBT.7</strong></td>
<td>I can add, subtract multiply and divide decimals to hundredths using strategies based on place value, properties of operations, or other strategies.</td>
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<tr>
<td><strong>5.MD.1</strong></td>
<td>I can convert (change) measurement units within the same measurement system. 5.MD.1</td>
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