Quarter 3 Math Benchmark -4th Grade

***The Georgia Standards of Excellence 4th Grade Math curriculum overview: (pages 6-21)
https://www.georgiastandards.org/Georgia-Standards/Frameworks/4th-Math-Grade-Level-Overview.pdf

***All study guides and parent letters from each quarter are posted on Buford Academy's 4th Grade Math website:
http://4thgradewolves.weebly.com/

- **Place Value**
  (Standard form, expanded form, word form, comparing numbers)
- Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
- Use place value understanding to round multi-digit whole numbers to any place.

- **Addition and Subtraction**
- Fluently add and subtract multi-digit whole numbers using the standard algorithm.

- **Multiplication & Division**
- Interpret a multiplication equation as a comparison e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5.
- Prime and composite numbers
- Factors and multiples
- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- Multiply or divide to solve word problems involving multiplicative comparison. Use drawings and equations with a symbol or letter for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
- Find whole-number quotients and remainders with up to two-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

- **Problem Solving**
- Solve multistep word problems with whole numbers and having whole number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

- **Fractions**
- Explain why fractions are equivalent to a fraction by using visual fraction models
- Compare two fractions with different numerators and different denominators.
- Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
- Decompose a fraction into a sum of fractions with the same denominator in more than one way.
- Add and subtract mixed numbers with like denominators.
- Express fractions with denominators of 10 and 100 as decimals
- Use fractions with denominators of 10 and 100 interchangeably with decimals
- Express a fraction with a denominator 10 as an equivalent fraction with a denominator 100
- Add fractions with denominators of 10 and 100 (including adding tenths and hundredths)
- Compare decimals to hundredths by reasoning their size
- Understand that comparison of decimals is only valid when the two decimals refer to the same whole