Mathematician _____

Concepts on the Fifth Grade End of Grade Test for Math

The list below covers the concepts on the EOG for math. Order the concepts based on the following scale:
4: I have mastered this standard. Evidence includes level 3s and/or 4s on assessments of this standard.
3: I did well with this standard, but I need a brief review.
2: I still have questions on this standard and need additional practice.
1: I have not mastered this standard and would like another lesson on the concepts.

Operations and Algebraic Thinking

Write and interpret numerical expressions.

_____ Write, explain, and evaluate expressions using order of operations

_____ Write, explain, and evaluate expressions using commutative, associative, and distributive properties

Analyze patterns and relationships.

_____ Generate/create two numerical patterns using given rules

_____ Find patterns with ordered pairs

_____ Graph ordered pairs on a coordinate plane (first quadrant only)

Numbers and Operations in Base Ten

Understand the place value system.

_____ Explain that in a multi-digit number, a digit one place to the right represents 10 times as much and 1/10 of what is represents in the place to its left.

_____ Explain patterns in products (answers to multiplication problems) and quotients (answers to division problems) when numbers are multiplied by 1000, 100, 10, .1, .01 and/or divided by 10 and 100.

Perform operations with multi-digit whole numbers.

_____ Multiply whole numbers (up to a three digit number x two digit)

_____ Divide whole numbers (up to four-digit dividends and two digit divisors)

Perform operations with decimals.

_____ Addition of decimals

_____ Subtraction of decimals

_____ Multiplication of decimals

_____ Division of decimals

_____ Use models to solve decimal problems with addition, subtraction, multiplication, and division.

Adding and Subtracting Fractions

Use equivalent fractions as a strategy to add and subtract fractions.

_____ Add fractions and mixed numbers with unlike denominators

_____ Subtract fractions and mixed numbers with unlike denominators

_____ Determine if a solution to a fraction addition or subtraction problem is reasonable

_____ Use models to add fractions

_____ Use models to subtract fractions

_____ Use benchmark fractions to estimate sums (answers to addition problems) and differences (answers to subtraction problems)

_____ Convert mixed numbers to improper fractions

_____ Convert improper fractions to mixed numbers

Multiplying Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide decimals.

_____ Multiply a fraction and a whole number
_____ Multiply a fraction and a mixed number
_____ Explain why multiplying a fraction by a number greater than 1 results in a product greater than the given number
_____ Solve word problems with fraction multiplication (knowing when to multiply)
_____ Find the area of a rectangle with fractional side lengths
_____ Use models to multiply fractions

Dividing Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide decimals.

_____ Interpret a fraction as equal sharing (where a quantity/amount is divided into equal parts)
_____ Model a fraction as a division of the numerator by the denominator
_____ Divide whole numbers by unit fractions
_____ Divide unit fractions by whole numbers
_____ Solve word problems with fraction division
_____ Use models to divide fractions

Measurement and Data

Covert like measurement units within a given measurement system.

_____ When given a conversion chart, solve one-step conversion problems within the given measurement system

Represent and interpret data.

_____ Collect data by asking a question that yields (results in) data that changes over time
_____ Create and interpret line graphs
_____ Categorical versus numerical data

Understand concepts of volume.

_____ Find volume of a rectangular prisms by packing it with unit cubes and show that the volume is the same as length x width x height or B x h
_____ Understand and use the volume formula to solve volume problems
_____ Find the volume of composite figures (more than one rectangular prism)

Geometry

Understand the coordinate plane.

_____ Graph points in the first quadrant
_____ Identify and interpret x and y coordinates to solve problems

Classify quadrilaterals.

_____ Explain that attributes belonging to a category of quadrilaterals also belong to all subcategories of that category
_____ Classify two-dimensional figures on a hierarchy chart

The following chart was published by the Department of Public Instruction (DPI). It shows the percent of each standard that will be included on the End of Grade test.

Table 1: Weight Distributions for Grades 3–5

Domain	Grade 3	Grade 4	Grade 5
Operations and Algebraic Thinking	32-36%	14-18%	9-13%
Number and Operations in Base Ten	9-13%	25-29%	25-29%
Number and Operations - Fractions	28-32%	30-34%	39-43%
Measurement and Data, Geometry	23-27%	23-27%	19-23%
Total	**100%**	**100%**	**100%**