ILLINOIS STATE BOARD OF EDUCATION

MATHEMATICS GRADE 4

Theory of Action: Academic standards represent a collective commitment around what students should learn each year. The state assessment asks students to demonstrate their knowledge, skills, and understanding related to these standards using a common measure. The resulting data allows us to see patterns in performance that should guide school and district improvement, helping identify areas of strength and opportunity.

Role of PLDs in Defining Proficiency: Performance level descriptors bridge the state assessment to classroom instruction and the systems of formative assessments that guide local instruction and choices about individual students. *Academic proficiency represents a range of observable student performance characteristics*. There are multiple pathways to proficiency, and students rely upon their strengths differently within that range of performance.

Proficiency and Difficulty: A student's ability to demonstrate proficiency is influenced by the complexity of the texts or stimuli presented, tasks they're asked to complete, and the contexts in which they are engaged. As student performance improves, students are typically able to handle more challenging texts/stimuli, tasks, and contexts, and are able to demonstrate their skills and knowledge more accurately and consistently.

Claim 1: Operations and Algebraic Thinking [i]   *Student performance indicates the ability to ...*

Above Proficient	Interpret and solve various multistep word problems, including those involving multiplicative comparisons, unknowns, and remainders. Apply all four operations (including addition, subtraction, multiplication, and division), estimation, and pattern recognition to real-world problems. Explain factors, multiples, and prime/composite distinctions for numerical values.
Proficient	Interpret multiplicative comparisons as equations, solve multistep word problems involving all four operations, and represent problems with unknowns. Assess solution reasonableness; explore factor pairs; identify multiples and prime/composite numbers; and generate number and shape patterns, including recognizing unmentioned repetitions.
Approaching Proficient	Recognize and solve multiplicative comparison problems, apply all four operations to word problems, and interpret remainders and unknowns. It also indicates the ability to use estimation to assess solutions, identify factor pairs and multiples, and determine if numbers are prime or composite while identifying patterns in numbers and shapes.
Below Proficient	Recognize multiplication equations as comparisons; solve problems using two operations; recognize remainders in division; and identify factor pairs, multiples, and prime/composite numbers while assessing solution reasonableness without a specific strategy.

Claim 2: Numbers and Operations in Base Ten [ii]   *Student performance indicates the ability to ...*

Above Proficient	Explain the relationship between digits in multi-digit numbers; compare and write numbers in various forms; and round and use algorithms to fluently add, subtract, and multiply multi-digit numbers while comparing different multiplication strategies.
Proficient	Apply place value concepts to read, write, compare, round, and perform operations on multi-digit whole numbers up to 1,000,000 using strategies like standard algorithms, area models, and rectangular arrays for addition, subtraction, multiplication, and division with remainders.
Approaching Proficient	Use place value to read, write, compare, round, and perform operations on multi-digit whole numbers up to 1,000,000.
Below Proficient	Read and round multi-digit numbers using place value and perform basic addition, subtraction, multiplication, and division with various strategies.

Claim 3: Number and Operations – Fractions[iii]   *Student performance indicates the ability to …*

Above Proficient	Analyze equivalent fractions; compare fractions with different numerators and denominators; decompose fractions; solve word problems involving addition, subtraction, and multiplication of fractions; and analyze decimals and use visual models to explain fraction operations.
Proficient	Generate and compare equivalent fractions, decompose fractions, perform operations with fractions and mixed numbers, solve word problems involving fractions, and work with decimals. Convert fractions to decimals, compare decimals, and utilize visual models to explain these concepts.
Approaching Proficient	Perform operations and comparisons with multi-digit whole numbers; apply place value, rounding, and fraction concepts to solve word problems; and relate fractions to visual models.
Below Proficient	Identify equivalent fractions, perform operations with fractions and mixed numbers, and work with decimal notation for fractions with denominators 10 or 100.

Claim 4: Measurement and Data[iv]   *Student performance indicates the ability to …*

Above Proficient	Relate and convert different units of measurement, solve real-world word problems involving various units, analyze area and perimeter of rectangles, interpret and create data using line plots, measure and work with angles, and apply these skills to real-world contexts.
Proficient	Identify and convert measurement units, solve real-world problems involving various units, represent measurements visually, apply area and perimeter formulas, interpret line plots with fractions, measure and work with angles, and solve addition and subtraction problems related to angles.
Approaching Proficient	Identify measurement units; solve real-world problems involving distances, time, volume, mass, and money; calculate area and perimeter of rectangles; measure angles using protractors; and solve basic addition and subtraction problems involving angles.
Below Proficient	Use models to identify measurement units, solve problems involving measurements, locate quantities on number lines, calculate area and perimeter of rectangles, measure angles with a protractor, and solve basic addition problems with angles.

Claim 5: Geometry[v]   *Student performance indicates the ability to …*

Above Proficient	Explain the characteristics of geometric shapes, classify two-dimensional figures based on angles and line properties, and create line-symmetric figures.
Proficient	Draw and identify points, lines, rays, angles, and geometric shapes; classify two-dimensional figures based on line and angle properties; and recognize and draw lines of symmetry for line-symmetric figures.
Approaching Proficient	Identify various geometric elements (points, lines, rays, angles, perpendicular and parallel lines) in 2D figures; recognize figures based on these elements; and identify lines of symmetry in line-symmetric figures.
Below Proficient	Distinguishing points, lines, angles, and various two-dimensional shapes based on their geometric properties, including lines of symmetry.

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[i] Includes standards 4.OA.1, 4.OA.2, 4.OA.3, 4.OA.4, 4.OA.5
[ii] Includes standards 4.NBT.1, 4.NBT.2, 4.NBT.3, 4.NBT.4, 4.NBT.5, 4.NBT.6
[iii] Includes standards 4.NF.1, 4.NF.2, 4.NF.3a, 4.NF.3b, 4.NF.3c, 4.NF.3d, 4.NF.4a, 4.NF.4b, 4.NF.4c, 4.NF.5, 4.NF.6, 4.NF.7
[iv] Includes standards 4.MD.1, 4.MD.2, 4.MD.3, 4.MD.4, 4.MD.5, 4.MD.6, 4.MD.7
[v] Includes standards 4.G.1, 4.G.2, 4.G.3