

**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<sup>i</sup> *Student performance indicates the ability to ...*

<b>Level 4 Above Proficient</b>	Create and evaluate mathematical expressions with grouping symbols to solve problems, generate and analyze numerical patterns, and predict and describe the relationships between coordinates on a graph.
<b>Level 3 Proficient</b>	Evaluate and write expressions with grouping symbols, generate number patterns based on given rules, and plot and analyze ordered pairs on a coordinate plane.
<b>Level 2 Approaching Proficient</b>	Write expressions with single grouping symbols, translate verbal descriptions into symbolic expressions (including those with parentheses), and graph numerical patterns on a number line.
<b>Level 1 Below Proficient</b>	Recognize the order of operations, write simple numerical expressions, extend numerical patterns, and identify graphed relationships between patterns.

### Claim 2: Numbers and Operations in Base Ten<sup>ii</sup> *Student performance indicates the ability to ...*

<b>Level 4 Above Proficient</b>	Analyze place value relationships; describe the impact of multiplying/dividing by powers of 10; represent, compare, and round decimals; and perform multi-digit multiplication/division with justification -- all within the context of base 10 number systems
<b>Level 3 Proficient</b>	Reason numerically with place value, powers of 10, and decimal representation and comparison. Round and perform operations with multi-digit whole numbers and decimals.
<b>Level 2 Approaching Proficient</b>	Recognize concepts related to place value, decimal patterns, powers of 10, multi-operations with whole numbers, and decimals to hundredths.
<b>Level 1 Below Proficient</b>	Recognize place value's role, identify patterns in powers of 10, identify decimal representations and round decimals. Use standard algorithms for performing operations with whole numbers and decimals.

<b>Claim 3: Number and Operations – Fractions<sup>iii</sup></b> <i>Student performance indicates the ability to ...</i>	
<b>Level 4 Above Proficient</b>	Analyze advanced operations with fractions, including understanding equivalent fractions; solve word problems involving fraction addition and subtraction; multiply whole numbers by fractions; and divide fractions.
<b>Level 3 Proficient</b>	Perform operations with fractions, using a variety of representations to solve word problems; represent multiplication as scaling; and interpret and calculate areas of rectangles with fractional side lengths and divide fractions.
<b>Level 2 Approaching Proficient</b>	Identify and solve problems involving addition, subtraction, multiplication, and division of fractions and mixed numbers while utilizing various representations and visual models.
<b>Level 1 Below Proficient</b>	Recognize sums and differences of fractions with like denominators, including through visual models; perform multiplication and division basic fractions; and determine areas of rectangles with fractional dimensions.

<b>Claim 4: Measurement and Data<sup>iv</sup></b> <i>Student performance indicates the ability to ...</i>	
<b>Level 4 Above Proficient</b>	Analyze and convert different measurement units, explain the application of the volume formula, and use the data in real-world contexts.
<b>Level 3 Proficient</b>	Convert and compare measurement units, solve complex problems related to volume using line plots and unit cubes, understand volume as a fundamental attribute of solids, and apply multiplication and addition to find the volume of rectangular prisms through both counting cubes and mathematical formulas.
<b>Level 2 Approaching Proficient</b>	Compare measurement units, solve problems using conversions and line plots with fractions, and calculate the volume of rectangular prisms using unit cubes.
<b>Level 1 Below Proficient</b>	Identify measurement unit sizes, solve fraction-based line plot problems, and calculate rectangular prism volume by identifying dimensions and counting unit cubes in a layer.

<b>Claim 5: Geometry<sup>v</sup></b> <i>Student performance indicates the ability to ...</i>	
<b>Level 4 Above Proficient</b>	Analyze coordinate systems, graph points to solve problems, explain coordinate meanings, and recognize and apply properties of two-dimensional figures.
<b>Level 3 Proficient</b>	Inspect and use coordinate systems, graph points to represent and solve problems, and classify hierarchical relationships of two-dimensional figures based on their properties.
<b>Level 2 Approaching Proficient</b>	Describe a coordinate system, graph and interpret points in the first quadrant, identify ways properties transfer between categories of shapes, and classify shapes based on their sides and angles.
<b>Level 1 Below Proficient</b>	Recognize the components of a coordinate system, identify points in the first quadrant, recognize shape attributes, and identify two-dimensional figures based on their sides and angles.

<sup>i</sup> Includes standards 5.OA.1, 5.OA.2, 5.OA.3

<sup>ii</sup> Includes standards 5.NBT.1, 5.NBT.2, 5.NBT.3a, 5.NBT.3b, 5.NBT.4, 5.NBT.5, 5.NBT.6, 5.NBT.7

<sup>iii</sup> Includes standards 5.NF.1, 5.NF.2, 5.NF.3, 5.NF.4a, 5.NF.4b, 5.NF.5a, 5.NF.5b, 5.NF.6, 5.NF.7a, 5.NF.7b, 5.NF.7c

<sup>iv</sup> Includes standards 5.MD.1, 5.MD.2, 5.MD.3a, 5.MD.3b, 5.MD.4, 5.MD.5a, 5.MD.5b, 5.MD.5c

<sup>v</sup> Includes standards 5.G.1, 5.G.2, 5.G.3, 5.G.4