

Advanced – Performance Level 4 (Score range: 562 to 800)

Students explain properties of numbers; decompose, compose numbers; justify square numbers; order mixed and multi-digit numbers, show equivalent relation of fractions, percents; identify, use linear pattern rule, analyze data, construct displays to support positions; predict results on chance devices; justify conclusions about geometric relationships; locate points on coordinate graphs; draw shapes by attributes; estimate angles; use standard units of measure, scales, and tools to measure, use appropriate math operations, estimation to solve problems with whole numbers, decimals, fractions.

Proficient – Performance Level 3 (Score range: 494 to 561)

Students identify place values; locate decimals on number lines; demonstrate square number meaning; use number properties to solve equations; find relationship between fractions, percents; apply estimate; match graphs to table recognize equation solution; interpret displays of data; predict based on chance devices determine lines of symmetry; recognize relationships in 2-dimensional figures; identify angles, shapes by attributes, measure scaled distances; use computation strategies to solve problems with whole numbers, decimals, and fractions.

Partially Proficient – Performance Level 2 (Score range: 422 to 493)

Students associate pictorial models to represent fractions; recognize, identify growing patterns and sequences; construct displays of data including tables, charts, pictographs, and bar graphs, identify and draw geometric shapes; select appropriate math operations in problem solving.

Unsatisfactory – Performance Level 1 (Score range: 220 to 421)

Students add numbers not in context, determine perimeters of basic shapes; recognize basic shapes using a variety of materials.



| Advanced | Proficient | Partially Proficient | Unsatisfactory |
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| <p>Standard 1</p> <p>Students demonstrate exceptional use of number sense and use of numbers by:</p> <ul style="list-style-type: none"> explaining conjectures using properties and characteristics of whole numbers. recognizing and generating equivalent representations by decomposing and composing numbers. demonstrating and justifying square numbers using pictures. ordering fractions, decimals, and positive rational numbers by place values. demonstrating the equivalent relationship between commonly used fractions and percents. <p>Students may also demonstrate exceptional use of number sense and use of numbers by:</p> <ul style="list-style-type: none"> identifying and describing numbers by their characteristics. analyzing and explaining square numbers using pictures, numbers, and words. using estimation to find the reasonableness of solutions to problems. | <p>Standard 1</p> <p>Students demonstrate use of number sense and use of numbers by:</p> <ul style="list-style-type: none"> reading, writing, and identifying the place value of the digits in whole numbers. locating commonly used terminal decimals on a number line. demonstrating the meaning of square numbers using pictorial or concrete materials. solving equations using number properties. recognizing the equivalent relationship between common fractions and percents. identifying numbers by their characteristics and their number properties. applying estimation to solve problems within ranges. | <p>Standard 1</p> <p>Students demonstrate limited use of number sense and use of numbers by:</p> <ul style="list-style-type: none"> associating pictorial models to represent fractions. | <p>Standard 1</p> <p>Students demonstrate minimal use of number sense and use of numbers by:</p> <ul style="list-style-type: none"> adding numbers not in context. |



| Advanced | Proficient | Partially Proficient | Unsatisfactory |
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| <p>Standard 2</p> <p>Students demonstrate exceptional use of algebraic methods to explore, model, and describe patterns and functions by:</p> <ul style="list-style-type: none"> analyzing, explaining, and extending patterns to complete tables in problem-solving situations. explaining how the change in one quantity results in the change of another quantity in function tables or in problem-solving situations. exploring, describing, and extending growing patterns in tables through the use of algebraic methods. <p>Students may also demonstrate exceptional use of algebraic methods to explore, model, and describe patterns and functions by:</p> <ul style="list-style-type: none"> analyzing, creating, and extending growing geometric patterns and communicating the pattern in words. | <p>Standard 2</p> <p>Students demonstrate use of algebraic methods to explore, model, and describe patterns and functions by:</p> <ul style="list-style-type: none"> connecting number tables with graphs. recognizing, creating, and extending geometric patterns. solving problems with whole numbers using number properties. analyzing patterns in a table to solve problems. demonstrating how the change in one quantity results in the change in another quantity. substituting numbers for variables to solve equations. | <p>Standard 2</p> <p>Students demonstrate limited use of algebraic methods to explore, model, and describe patterns and functions by:</p> <ul style="list-style-type: none"> identifying and recognizing growing patterns and sequences. | <p>Standard 2</p> <p>No evidence of this standard at this performance level.</p> |



| Advanced | Proficient | Partially Proficient | Unsatisfactory |
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| <p>Standard 3</p> <p>Students demonstrate exceptional use of data collection and analysis, statistics, and probability by:</p> <ul style="list-style-type: none"> analyzing and justifying displays of data to support positions or make decisions. analyzing and formulating conclusions from pictographs analyzing and justifying predictions based on given data and chance devices. <p>Students may also demonstrate exceptional use of data collection and analysis, statistics, and probability by:</p> <ul style="list-style-type: none"> constructing, interpreting, and justifying displays of data to support positions or make decisions in problem-solving situations. | <p>Standard 3</p> <p>Students demonstrate use of data collection and analysis, statistics, and probability by:</p> <ul style="list-style-type: none"> constructing, reading, and interpreting displays of data including tables, charts, pictographs, and graphs. making predictions based on given data and chance devices. | <p>Standard 3</p> <p>Students demonstrate limited use of data collection and analysis, statistics, and probability by:</p> <ul style="list-style-type: none"> constructing displays of data including tables, charts, pictographs, and bar graphs. | <p>Standard 3</p> <p>No evidence of this standard at this performance level.</p> |

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| <p>Standard 4</p> <p>Students demonstrate exceptional use of geometric concepts, properties, and relationships by:</p> <ul style="list-style-type: none"> • using geometric concepts, properties, and relationships to solve problems. • locating points on coordinate graphs • identifying and drawing various geometric shapes and describing shapes by attributes. <p>Students may also demonstrate exceptional use of geometric concepts, properties, and relationships by:</p> <ul style="list-style-type: none"> • recognizing and drawing complex figures around lines of symmetry. • recognizing results of flipping, sliding, or turning two-dimensional figures. • utilizing geometric concepts, properties, attributes, and relationships to communicate problem-solving situations. | <p>Standard 4</p> <p>Students demonstrate use of geometric concepts, properties, and relationships by:</p> <ul style="list-style-type: none"> • determining the lines of symmetry in figures. • recognizing geometric concepts, properties, and relationships in two-dimensional figures. • recognizing and drawing geometric shapes by their attributes. • identifying various types of angles. | <p>Standard 4</p> <p>Students demonstrate limited use of geometric concepts, properties, and relationships by:</p> <ul style="list-style-type: none"> • identifying and drawing geometric shapes with given perimeters. | <p>Standard 4</p> <p>Students demonstrate minimal use of geometric concepts, properties, and relationships by:</p> <ul style="list-style-type: none"> • determining perimeters of basic shapes. • recognizing basic shapes using a variety of materials. |



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| <p>Standard 5</p> <p>Students demonstrate exceptional use of a variety of tools and techniques to measure by:</p> <ul style="list-style-type: none"> • estimating the measurement of angles. • selecting and using appropriate standard units of measurement to solve problems. • measuring on scale diagrams to solve problems. • using tools provided to measure and combine lengths to find perimeters. | <p>Standard 5</p> <p>Students demonstrate use of a variety of tools and techniques to measure by:</p> <ul style="list-style-type: none"> • measuring scale diagrams to solve problems. | <p>Standard 5</p> <p>No evidence of this standard at this performance level.</p> | <p>Standard 5</p> <p>No evidence of this standard at this performance level.</p> |



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| <p>Standard 6</p> <p>Students demonstrate exceptional use of computational techniques in problem-solving situations by:</p> <ul style="list-style-type: none"> • using given math operations for computing whole numbers with two- and three-digit numbers. • using graphic representations to demonstrate the conceptual meanings of operations in problem-solving situations. • determining and utilizing estimation and computation strategies to solve problems. • determining and using appropriate math operations for computing whole numbers, decimals, and fractions in problem-solving situations. | <p>Standard 6</p> <p>Students demonstrate use of computational techniques in problem-solving situations by:</p> <ul style="list-style-type: none"> • using pictorial representations to demonstrate the conceptual meaning of operations with fractions, percents, and whole numbers. • computing with whole numbers, decimals, and fractions. • developing appropriate estimation strategies. • recognizing equations that are described by real-world situations. | <p>Standard 6</p> <p>Students demonstrate limited use of computational techniques in problem-solving situations by:</p> <ul style="list-style-type: none"> • selecting appropriate math operations in problem solving. | <p>Standard 6</p> <p>No evidence of this standard at this performance level.</p> |