CMAS Grade 6 Mathematics Evidence Statements
(Based on PARCC)

Colorado will continue to use the Evidence Statements that were developed in collaboration with the Partnership for Assessment of Readiness for College and Careers (PARCC) consortium. Evidence statements describe the knowledge and skills that an assessment item/task elicits from students.

The evidence statement keys for grades 3 through 8 begin with the grade number. Together, the five different types of evidence statements described below provide the foundation for ensuring that the full range and depth of the standards are assessed.

An Evidence Statement might:
1. **Use exact standard language** – For example:

    - 8.EE.1 - Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.* This example uses the exact language as standard 8.EE.1

2. **Be derived by focusing on specific parts of a standard** – For example: 8.F.5-1 and 8.F.5-2 were derived from splitting standard 8.F.5:

    - 8.F.5-1 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear).
    - 8.F.5-2 Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

    Together these two evidence statements are standard 8.F.5:
    > Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or 2 decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

3. **Be integrative (Int)** – Integrative evidence statements allow for the testing of more than one of the standards on a single item/task without going beyond the standards to create new requirements. An integrative evidence statement might be integrated across all content within a grade/course, all standards in a high school conceptual category, all standards in a domain, or all standards in a cluster. For example:

- **Grade/Course – 4.Int.2**[§] (Integrated across Grade 4)
- **Domain – 4.NBT.Int.1**[§] (Integrated across the Number and Operations in Base Ten Domain)
- **Cluster – 3.NF.A.Int.1**[§] (Integrated across the Number and Operations – Fractions Domain, Cluster A)

4. **Focus on mathematical reasoning–** A reasoning evidence statement (keyed with C) will state the type of reasoning that an item/task will require and the content scope from the standard that the item/task will require the student to reason about. For example:

- 3.C.2[§] -- Base explanations/reasoning on the relationship between addition and subtraction or the relationship between multiplication and division.
  - o Content Scope: Knowledge and skills are articulated in 3.OA.6
- 7.C.6.1[§] – Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.
  - o Content Scope: Knowledge and skills are articulated in 7.RP.2

   Note: When the focus of the evidence statement is on reasoning, the evidence statement may also require the student to reason about securely held knowledge from a previous grade.

5. **Focus on mathematical modeling –** A modeling evidence statement (keyed with D) will state the type of modeling that an item/task will require and the content scope from the standard that the item/task will require the student to model about. For example:

- 4.D.2[§] – Solve multi-step contextual problems with degree of difficulty appropriate to Grade 4 requiring application of knowledge and skills articulated in 3.OA.A, 3.OA.8,3.NBT, and/or 3.MD.

   Note: The example 4.D.2 is of an evidence statement in which an item/task aligned to the evidence statement will require the student to model on grade level, using securely held knowledge from a previous grade.

Grade 6 Evidence Statements
Listing by Type 1, Type II, and Type III

The Evidence Statements for Grade 6 Mathematics are provided starting on the next page. The list has been organized to indicate whether items designed are aligned to an Evidence Statement used for Type I items, Type II items (reasoning), or Type III items (modeling).

Evidence Statements are presented in the order shown below and are color coded:

Peach – Evidence Statement is applicable to Type I items.

Lavender – Evidence Statement is applicable to Type II items.

Aqua – Evidence Statement is applicable to the Type III items.

Grade 6 Evidence Statements

Type I   **Type II**   **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
A	6.RP.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*	i) Expectations for ratios in this grade are limited to ratios of non-complex fractions. The initial numerator and denominator should be whole numbers.	MP.2 MP.3 MP.7	No
A	6.RP.2	Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*	i) Expectations for unit rates in this grade are limited to non-complex fractions. The initial numerator and denominator should be whole numbers.	MP.2 MP.3 MP.7	No
A	6.RP.3a	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	i) Expectations for ratios in this grade are limited to ratios of non-complex fractions. The initial numerator and denominator should be whole numbers	MP.2 MP.3 MP.7	Yes
A	6.RP.3b	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*	i) Expectations for unit rates in this grade are limited to non-complex fractions. The initial numerator and denominator should be whole numbers.	MP.2 MP.3 MP.7	Yes
A	6.RP.3c-1	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity).	i) Pool should contain tasks with and without context. ii) Expectations for ratios in this grade are limited to ratios of non-complex fractions. The initial numerator and denominator should be whole numbers.	MP.2 MP.3 MP.7	Yes
A	6.RP.3c-2	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. c. Solve problems involving finding the whole, given a part and the percent.	i) Expectations for ratios in this grade are limited to ratios of non-complex fractions. The initial numerator and denominator should be whole numbers.	MP.2 MP.3 MP.7	Yes

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
A	6.RP.3d	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	i) Pool should contain tasks with and without context. ii) Tasks require students to multiply and/or divide dimensioned quantities. iii) 50% of tasks require students to correctly express the units of the result. iv) Expectations for ratios in this grade are limited to ratios of non-complex fractions. The initial numerator and denominator should be whole numbers.	MP.2 MP.3 MP.7	Yes
A	6.NS.1-2	Solve word problems involving division of fractions by fractions. *For example, How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*	i) Only the answer is required; explanations and representations are not assessed here. For this part of standard 6.NS.1, see 6.C.2 and 6.C.3. ii) Note that the italicized examples correspond to three meanings/uses of division: (1) equal sharing; (2) measurement; (3) unknown factor. These meanings/uses of division should be sampled equally. iii) Tasks may involve fractions and mixed numbers but not decimals.	MP.2 MP.4	No
B	6.NS.2	Fluently divide multi-digit numbers using the standard algorithm.	i) The given dividend and divisor are such as to require an efficient/standard algorithm (e.g., 40584 ÷ 76). Numbers in the task do not suggest any obvious ad hoc or mental strategy (as would be present for example in a case such as 40064 ÷ 16). ii) Tasks do not have a context. iii) Only the answer is required. iv) Tasks are not to exceed five-digit dividends and two-digit divisors, with or without remainder. v) Tasks may or may not have a remainder. Students understand that remainders can be written as fractions or decimals.	MP.6 MP.7	No
B	6.NS.3-1	Fluently add multi-digit decimals using the standard algorithm.	i) Tasks do not have a context. ii) Only the sum is required. iii) Prompts do not include visual models. The answer sought is a number, not a picture. iv) The given addends require an efficient/standard algorithm (e.g., 72.63 + 4.875). Addends in the task do not suggest any obvious ad hoc or mental strategy (as would be present for example in a case such as 16.999 + 3.501). v) Each addend is greater than or equal to 0.001 and less than or equal to 99.999.	MP.6 MP.7	No

Type I　**Type II**　**Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
B	6.NS.3-2	Fluently subtract multi-digit decimals using the standard algorithm.	i) Task do not have context. ii) Only the difference is required. iii) Prompts do not include visual models. The answer sought is a number, not a picture. iv) The given subtrahend and minuend are such as to require an efficient/standard algorithm (e.g., 177.3 − 72.635). The subtrahend and minuend do not suggest any obvious ad hoc or mental strategy (as would be present for example in a case such as 20.5 − 3.501). vi) The subtrahend and minuend are each greater than or equal to 0.001 and less than or equal to 99.999. Positive differences only. (Every included subtraction problem is an unknown-addend problem included in 6.NS.3-1.)	MP.6 MP.7	No
B	6.NS.3-3	Fluently multiply multi-digit decimals using the standard algorithm.	i) Tasks do not have a context. ii) Only the product is required. iii) Prompts do not include visual models. The answer sought is a number, not a picture. iv) The given factors require an efficient/standard algorithm (e.g., 72.3×4.8). Factors in the task do not suggest any obvious ad hoc or mental strategy. v) For purposes of assessment, the possibilities are 1-digit x 2-digit, 1-digit x 3-digit, 2-digit x 3-digit, 2-digit x 4-digit, or 2-digit x 5-digit. (For example, 0.35 x 18.241.)	MP.6 MP.7	No
B	6.NS.3-4	Fluently divide multi-digit decimals using the standard algorithm.	i) Tasks do not have a context. ii) Only the quotient is required. iii) Prompts do not include visual models. The answer sought is a number, not a picture. iv) The given dividend and divisor are such as to require an efficient/standard algorithm (e.g., 177.3 ÷ 0.36). The dividend and divisor do not suggest any obvious ad hoc or mental strategy. v) Problems are effectively 4-digit ÷ 2-digit or 3-digit ÷ 3-digit. (For example, 14.28 ÷ 0.68 or 2.39 ÷ 0.684). vi) Every quotient is a whole number or a decimal terminating at the tenths, hundredths, or thousandths place. Every included division problem is an unknown-factor problem included in 6.NS.3-3.)	MP.6 MP.7	No
B	6.NS.4-1	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12.	i) Tasks do not have a context. ii) Tasks require students to find the greatest common factor or the least common multiple only.	MP.6 MP.7	No
B	6.NS.4-2	Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express 36 + 8 as 4(9 + 2).*	i) Tasks do not have a context. ii) Tasks require writing or finding the equivalent expression with the greatest common factor.	MP.6 MP.7	No

Type I **Type II** **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
A	6.NS.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	i) Tasks do not require students to perform any computations. ii) Students may be asked to recognize the meaning of 0 in the situation, but will not be asked to explain.	MP.2 MP.3 MP.5	No
A	6.NS.6a	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.	i) Tasks have "thin context"[2] or no context.	MP.2 MP.3 MP.5	No

Grade 6 Evidence Statements

Type I **Type II** **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
A	6.NS.6b-1	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane.	i) Tasks have "thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). iii) Coordinates are not limited to integers.	MP.2 MP.3 MP.5	No
A	6.NS.6b-2	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. b. Recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes	i) Tasks have "thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). iii) Coordinates are not limited to integers.	MP.2 MP.3 MP.5	No
A	6.NS.6c-1	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram	i) Tasks have "thin context" or no context. ii) Coordinates are not limited to integers.	MP.2 MP.3 MP.5	No
A	6.NS.6c-2	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. c. Find and position pairs of integers and other rational numbers on a coordinate plane.	i) Tasks have "thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). iii) Coordinates are not limited to integers.	MP.2 MP.3 MP.5	No
A	6.NS.7a	Understand ordering and absolute value of rational numbers. a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.*	i) Tasks do not have a context. ii) Tasks are not limited to integers.	MP.2 MP.3 MP.5	No

Grade 6 Evidence Statements

Type I **Type II** **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
A	6.NS.7b	Understand ordering and absolute value of rational numbers. b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –3 ºC > –7 ºC to express the fact that –3 ºC is warmer than –7 ºC.*	i) Tasks are not limited to integers. ii) Tasks do not require students to explain. (For this part of standard 6.NS.7, see 6.C.4.).	MP.2 MP.3 MP.5	No
A	6.NS.7c-1	Understand ordering and absolute value of rational numbers. c. Understand the absolute value of a rational number as its distance from 0 on the number line.	i) Tasks do not have a context. ii) Tasks are not limited to integers.	MP.2 MP.3 MP.5	No
A	6.NS.7c-2	Understand ordering and absolute value of rational numbers. c. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.*	i) Tasks have a context. ii) Tasks are not limited to integers.	MP.2 MP.3 MP.5	No
A	6.NS.7d	Understand ordering and absolute value of rational numbers. d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.*	i) Pool should contain tasks with and without context. ii) Tasks are not limited to integers. iii) Prompts do not present students with a number line diagram, but students may draw a number line diagram as a strategy.	MP.2 MP.3 MP.5	No
A	6.NS.8	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	i) Pool should contain tasks with and without context. ii) Finding distances is limited to points with integer coordinates.	MP.2 MP.3 MP.5	No

Type I   Type II   Type III

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
A	6.EE.1-1	Write numerical expressions involving whole-number exponents.	i) Tasks involve expressing b-fold products $a \times a \times a \ldots \times a$ in the form a^b, where a and b are non-zero whole numbers ii) Tasks do not require use of the laws of exponents	MP.3 MP.7 MP.8	No
A	6.EE.1-2	Evaluate numerical expressions involving whole-number exponents.	i) Tasks may involve simple fractions raised to small whole-number powers, e.g. $(1/2)^3$, $(2/3)^2$. ii) Tasks may involve nonnegative decimals raised to whole-number powers. iii) Tasks do not have a context.	MP.3 MP.7 MP.8	Yes
A	6.EE.2a	Write, read, and evaluate expressions in which letters stand for numbers. a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.*	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals.	MP.3 MP.7 MP.8	Yes
A	6.EE.2b	Write, read, and evaluate expressions in which letters stand for numbers. b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2(8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.*	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals.	MP.3 MP.7 MP.8	Yes
A	6.EE.2c-1	Write, read, and evaluate expressions in which letters stand for numbers. c. Evaluate expressions at specific values of their variables. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals. iii) Task will not require operations on negative numbers.	MP.3 MP.7 MP.8	Yes
A	6.EE.2c-2	Write, read, and evaluate expressions in which letters stand for numbers. c. Evaluate expressions that arise from formulas used in real-world problems at specific values of their variables. *For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length s = 1/2.*	i) Tasks are simple applications of formulas that are provided in the prompt. ii) Tasks do not require the student to manipulate the formula or isolate variables to solve an equation. iii) Tasks have "thin context" or no context. iv) Numerical values in these expressions may include whole numbers, fractions, and decimals. v) Task will not require operations on negative numbers.	MP.3 MP.7 MP.8	Yes

Grade 6 Evidence Statements

Type I   **Type II**   **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
A	6.EE.4	Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.*	-	MP.3 MP.7 MP.8	No
A	6.EE.5-1	Understand solving an equation as a process of answering a question: which values from a specified set, if any, make the equation true?	-	MP.2 MP.6	Yes
A	6.EE.5-2	Use substitution to determine whether a given number in a specified set makes an inequality true.	i) 80% of tasks involve values from an infinite set of nonnegative numbers (e.g., even numbers; whole numbers; fractions). 20% of tasks involve values from a finite set of nonnegative numbers (e.g., {2, 5, 7, 9}).	MP.2 MP.6	Yes
A	6.EE.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	i) Tasks may require students to write an expression to represent a real-world or mathematical problem. Tasks do not require students to find a solution. ii) Tasks do not require use of the laws of exponents.	MP.2 MP.6	No
A	6.EE.7	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.	i) Problem situations are of "algebraic" type (for example $x + 2 = 3$), not "arithmetic" type (for example: $x = 3 - 2$). ii) 50% of tasks involve whole-number values of p, q, and/or x; 50% of tasks involve fraction or decimal values of p, q, and/or x. Fractions and decimals should not appear together in the same problem. (Cf. 7.EE.3.) iii) These tasks only involve equations with addition and multiplication. iv) A valid equation and the correct answer are both required for full credit.	MP.2 MP.6	Yes
A	6.EE.8	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	i) Constraint values (denoted c in standard 6.EE.8) are not limited to integers. ii) Tasks involve < and >, not "less than or equal to" or "greater than or equal to."	MP.2 MP.6	No

Grade 6 Evidence Statements

Type I   **Type II**   **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
A	6.EE.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.*	i) Tasks that involve writing an equation should not go beyond the equation types described in 6.EE.7 (x+p =q and px = q where p, q, and x are all nonnegative rational numbers).	MP.2 MP.4	Yes
B	6.G.1	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	-	MP.1 MP.4 MP.5	Yes
B	6.G.2-1	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism.	i) Tasks do not have a context. ii) Tasks focus on the connection between packing the solid figure and computing the volume.	MP.1 MP.4 MP.5	No
B	6.G.2-2	Apply the formulas $V = l\,w\,h$ and $V = B\,h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	i) Tasks focus using the formulas in problem-solving contexts.	MP.1 MP.4 MP.5	Yes
B	6.G.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	-	MP.1 MP.4 MP.5	Yes
B	6.G.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	-	MP.1 MP.4 MP.5	Yes

Grade 6 Evidence Statements

Type I **Type II** **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
B	6.SP.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*	i) Tasks do not assess mode and range.	MP.1 MP.2 MP.4	No
B	6.SP.2	Understand that a set of data collected to answer a statistical question has a distribution, which can be described by its center, spread, and overall shape.	i) For example, tasks might present several distributions graphically and ask which two have nearly the same center, nearly the same spread, or nearly the same overall shape. ii) Tasks do not assess mode and range.	MP.1 MP.2 MP.4	No
B	6.SP.3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	i) For example, tasks might ask students to rate statements True/False/Not Enough Information, such as, "The average height of trees in Watson Park is 65 feet. Are there any trees in Watson Park taller than 65 feet?" ii) Tasks do not assess mode and range.	MP.1 MP.2 MP.4	No
B	6.SP.4	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	i) Tasks are technology-enhanced to make creation of the plots as quick and effortless as possible; or tasks ask the student to identify which display corresponds to a given set of data. ii) Tasks do not assess mode and range.	MP.2 MP.4 MP.7	No
B	6.SP.5	Summarize numerical data sets in relation to their context, such as by: a. Reporting the number of observations. b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	i) Tasks provide students with a text-based and graphics-based overview of a numerical data set. This overview includes the necessary information for (a) and (b). Students must extract this information from the overview and enter or identify/select it as part of the task. ii) With reference to the second clause in 6.SP.5c, tasks are technology-enhanced, e.g., to allow students to "tag" outliers, circle the bulk of the observations, etc. iii) With reference to 6.SP.6d, there is no wrong choice of measure of center--only a wrong interpretation of it. For example, students can choose the mean even for a distribution with outliers. However, tasks require students to identify/select from unambiguously true or false statements such as, "About half of the values are greater than the average"; "If this point were deleted from the data set, the median would not change"; etc. iv) Tasks do not assess mode and range.	MP.2 MP.4 MP.7	Yes

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
B	6.Int.1	Solve two-step word problems requiring operations on multi-digit whole numbers or decimals.	i) Operations are no more complex than those specified for 6.NS.2, 6.NS.3-1, 6.NS.3-2, 6.NS.3-3, and 6.NS.3-4. ii) For purposes of assessment, the possibilities for multiplication are 1-digit x 2-digit, 1-digit x 3-digit, 2-digit x 3-digit, 2-digit x 4-digit, 2-digit x 5-digit, or 3-digit x 3-digit (For example, 7.68 x 15.3 or 0.35 x 18.241).	MP.6 MP.7	No

Grade 6 Evidence Statements

Type I   **Type II**   **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
C	6.C.1-1	Base explanations/reasoning on the properties of operations. Content Scope: Knowledge and skills articulated in 6.EE.3, 6.EE.4	i) Tasks should not require students to identify or name properties.	MP.3 MP.6	Yes
C	6.C.2	Base explanations/reasoning on the relationship between addition and subtraction or the relationship between multiplication and division. Content Scope: Knowledge and skills articulated in 6.NS.1	-	MP.3 MP.6	Yes
C	6.C.3	Base arithmetic explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response), connecting the diagrams to a written (symbolic) method. Content Scope: Knowledge and skills articulated in 6.NS.1	-	MP.3 MP.6	Yes
C	6.C.4	Base explanations/reasoning on a number line diagram (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 6.NS.6, 6.NS.7	-	MP.3 MP.6	Yes
C	6.C.5	Base explanations/reasoning on a coordinate plane diagram (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 6.NS.6, 6.NS.8	-	MP.3 MP.6	Yes
C	6.C.6	Given an equation, present the solution steps as a logical argument that concludes with a solution. Content Scope: Knowledge and skills articulated in 6.EE.B	i) Tasks do not require students to write an equation or inequality.	MP.3 MP.6	Yes
C	6.C.7	Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. Content Scope: Knowledge and skills articulated in 6.EE.4	-	MP.3 MP.6	Yes
C	6.C.8-1	Present solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equals signs appropriately (for example, rubrics award less than full credit for the presence of nonsense statements such as 1 + 4 = 5 + 7 = 12, even if the final answer is correct), or identify or describe errors in solutions to multi-step problems and present corrected solutions. Content Scope: Knowledge and skills articulated in 6.RP.A	i) Expectations for ratios in this grade are limited to ratios of non-complex fractions. The initial numerator and denominator should be whole numbers.	MP.3 MP.6	Yes

Type I   Type II   Type III

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
C	6.C.8-2	Present solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equals signs appropriately (for example, rubrics award less than full credit for the presence of nonsense statements such as $1 + 4 = 5 + 7 = 12$, even if the final answer is correct), or identify or describe errors in solutions to multi-step problems and present corrected solutions. Content Scope: Knowledge and skills articulated in 6.EE.9	i) Tasks that involve writing an equation should not go beyond the equation types described in 6.EE.7 ($x+p =q$ and $px = q$ where p, q, and x are all nonnegative rational numbers).	MP.3 MP.6	Yes
C	6.C.9	Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 5.NBT, 5.MD.C	i) Tasks may have scaffolding[1] if necessary in order to yield a degree of difficulty appropriate to Grade 6.	MP.3 MP.6	Yes

Grade 6 Evidence Statements

Type I **Type II** **Type III**

Sub-Claim	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to PGs	Calculator
D	6.D.1	Solve multi-step contextual word problems with degree of difficulty appropriate to Grade 6, requiring application of knowledge and skills articulated in Type I, Sub-Claim A Evidence Statements.	i) Tasks may have scaffolding if necessary in order to yield a degree of difficulty appropriate to Grade 6.	MP.4	Yes
D	6.D.2	Solve multi-step contextual problems with degree of difficulty appropriate to Grade 6, requiring application of knowledge and skills articulated in 5.NBT.B, 5.NF, 5.MD, and 5.G.A.	i) Tasks may have scaffolding if necessary in order to yield a degree of difficulty appropriate to Grade 6.	MP.4	Yes
D	6.D.3	Reasoned estimates: Use reasonable estimates of known quantities in a chain of reasoning that yields an estimate of an unknown quantity. Content Scope: Knowledge and skills articulated in Type I, Sub-Claim A Evidence Statements.	i) Tasks may have scaffolding if necessary in order to yield a degree of difficulty appropriate to Grade 6.	MP.4	Yes

[1] Scaffolding in a task provides the student with an entry point into a pathway for solving a problem. In unscaffolded tasks, the student determines his/her own pathway and process. Both scaffolded and unscaffolded tasks will be included in reasoning and modeling items.

[2] "Thin context" is a sentence or phrase that establishes a concrete referent for the quantity/quantities in the problem, in such a way as to provide meaningful avenues for mathematical intuition to operate, yet without requiring any sort of further analysis of the context. For example, a task could provide a reason for the use of scientific notation such as, "The number represents the distance between two planets."