Publisher/Developer:

Program Title:

Components:

Approved by the State Board of Education January 18, 2024

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# 2025 California Common Core State Standards: Mathematics Adoption[[1]](#footnote-2) Standards Map Template Grade Five

## Organization Around Major Conceptual Ideas

Evaluation criterion statement 1.2 requires that programs be consistent with the content of the 2023 *Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve* (*Mathematics Framework*). In order to be considered suitable for adoption by the State Board of Education, a publisher's or developer’s program must present content organized around major conceptual ideas, as demonstrated in chapters 6, 7, and 8, and as described in the Publishers and Content Developers Guide to the Mathematics Framework, found in chapter 13 of the *Mathematics Framework*.

1. Publishers/developers should use the first column of this table to list the major conceptual ideas used to organize the instructional program.
2. In the second column, publishers/developers should show how these relate to the Framework’s Big Ideas.
3. In the third column, publishers/developers should show the organization of the program by showing how the content standards are mapped to each of the major conceptual ideas or Big Ideas used by the program.

| **Major conceptual ideas in the program** | **How do the program’s major conceptual ideas map to the framework’s Big Ideas?** | **How are standards covered under the major conceptual ideas?** | **Met Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
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Publishers/developers should be aware of how major conceptual ideas develop from one grade to the next. For charts detailing the progression of the *Mathematics Framework*’s Big Ideas throughout the grade levels, see [chapter 6](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.cde.ca.gov%2Fci%2Fma%2Fcf%2Fdocuments%2Fmathfwchapter6.docx&wdOrigin=BROWSELINK) (TK–grade 2 and grades 3–5) and [chapter 7](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.cde.ca.gov%2Fci%2Fma%2Fcf%2Fdocuments%2Fmathfwchapter7.docx&wdOrigin=BROWSELINK) (grades 6–8).

State-adopted instructional materials help teachers to present and students to learn the content set forth in the *California Common Core State Standards for Mathematics with California Additions,* which include boththe content standards and the standards for mathematical practice (SMPs). Publishers/developers should use the following tables to provide page number citations or other references that demonstrate alignment with the SMPs and content standards.

## Standards for Mathematical Practice

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| MP.1 | Make sense of problems and persevere in solving them. |  |  |  |  |
| MP.2 | Reason abstractly and quantitatively. |  |  |  |  |
| MP.3 | Construct viable arguments and critique the reasoning of others. |  |  |  |  |
| MP.4 | Model with mathematics. |  |  |  |  |
| MP.5 | Use appropriate tools strategically. |  |  |  |  |
| MP.6 | Attend to precision. |  |  |  |  |
| MP.7 | Look for and make use of structure. |  |  |  |  |
| MP.8 | Look for and express regularity in repeated reasoning. |  |  |  |  |

## Grade-level Content Standards

### Domain: Operations and Algebraic Thinking

#### Cluster: Write and interpret numerical expressions.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.OA.1 | Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. |  |  |  |  |
| 5.OA.2 | Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. |  |  |  |  |
| 5.OA.2.1 | Express a whole number in the range 2–50 as a product of its prime factors. For example, find the prime factors of 24 and express 24 as 2 x 2 x 2 x 3. |  |  |  |  |

#### Cluster: Analyze patterns and relationships.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.OA.3 | Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. |  |  |  |  |

### Domain: Numbers and Operations in Base Ten

#### Cluster: Understand the place value system.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.NBT.1 | Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. |  |  |  |  |
| 5.NBT.2 | Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. |  |  |  |  |
| 5.NBT.3a | Read, write, and compare decimals to thousandths. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form. |  |  |  |  |
| 5.NBT.3b | Read, write, and compare decimals to thousandths. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. |  |  |  |  |
| 5.NBT.4 | Use place value understanding to round decimals to any place. |  |  |  |  |

#### Cluster: Perform operations with multi-digit whole numbers and with decimals to hundredths.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.NBT.5 | Fluently multiply multi-digit whole numbers using the standard algorithm. |  |  |  |  |
| 5.NBT.6 | Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. |  |  |  |  |
| 5.NBT.7 | Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. |  |  |  |  |

Domain: Number and Operations—Fractions

#### Cluster: Use equivalent fractions as a strategy to add and subtract fractions.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.NF.1 | Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. |  |  |  |  |
| 5.NF.2 | Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. |  |  |  |  |

#### Cluster: Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.NF.3 | Interpret a fraction as division of the numerator by the denominator (*a/b = a ÷ b*). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers. |  |  |  |  |
| 5.NF.4a | Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. Interpret the product (*a/b*) × *q* as *a* parts of a partition of *q* into *b* equal parts; equivalently, as the result of a sequence of operations *a* × *q* ÷ *b*. |  |  |  |  |
| 5.NF.4b | Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. |  |  |  |  |
| 5.NF.5a | Interpret multiplication as scaling (resizing), by: Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. |  |  |  |  |
| 5.NF.5b | Interpret multiplication as scaling (resizing), by: Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a divided by b equals the quantity n times a divided by the quantity n times b  to the effect of multiplying *a*/*b* by 1. |  |  |  |  |
| 5.NF.6 | Solve real world problems involving multiplication of fractions and mixed numbers. |  |  |  |  |
| 5.NF.7a | Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[[2]](#footnote-3) Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. |  |  |  |  |
| 5.NF.7b | Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.2 Interpret division of a whole number by a unit fraction, and compute such quotients*.* |  |  |  |  |
| 5.NF.7c | Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.2 Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions. |  |  |  |  |

### Domain: Measurement and Data

#### Cluster: Convert like measurement units within a given measurement system.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.MD.1 | Convert among different-sized standard measurement units within a given measurement system, and use these conversions in solving multi-step, real world problems. |  |  |  |  |

#### Cluster: Represent and interpret data.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.MD.2 | Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. |  |  |  |  |

#### Cluster: Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.MD.3a | Recognize volume as an attribute of solid figures and understand concepts of volume measurement. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume. |  |  |  |  |
| 5.MD.3b | Recognize volume as an attribute of solid figures and understand concepts of volume measurement. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units. |  |  |  |  |
| 5.MD.4 | Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. |  |  |  |  |
| 5.MD.5a | Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes. |  |  |  |  |
| 5.MD.5b | Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. Apply the formulas *V* = *l* × *w* × *h* and *V* = *b* × *h* for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems. |  |  |  |  |
| 5.MD.5c | Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems. |  |  |  |  |

### Domain: Geometry

#### Cluster: Graph points on the coordinate plane to solve real-world and mathematical problems.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.G.1 | Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond. |  |  |  |  |
| 5.G.2 | Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. |  |  |  |  |

#### Cluster: Classify two-dimensional figures into categories based on their properties.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met**  **Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 5.G.3 | Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. |  |  |  |  |
| 5.G.4 | Classify two-dimensional figures in a hierarchy based on properties. |  |  |  |  |

## Appendix: (Publisher/Developer, please enter any additional notes regarding the standards below.)

California Department of Education, October 2024

1. The California Common Core State Standards: Mathematics were adopted by the State Board of Education on August 2, 2010, (and modified pursuant to Senate Bill 1200 on January 16, 2013). This standards map is organized by Big Idea and Content Connections in alignment with the *Mathematics Framework for California Public Schools: Kindergarten Through Grade Twelve*, approved by the State Board of Education on July 12, 2023. [↑](#footnote-ref-2)
2. Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. [↑](#footnote-ref-3)