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 TemplateGrade Four

## 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: Use the four operations with whole numbers to solve problems.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.OA.1 | Interpret a multiplication equation as a comparison, Represent verbal statements of multiplicative comparisons as multiplication equations. |  |  |  |  |
| 4.OA.2 | Multiply or divide to solve word problems involving multiplicative comparison. |  |  |  |  |
| 4.OA.3 | Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. |  |  |  |  |

#### Cluster: Gain familiarity with factors and multiples.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.OA.4 | Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite. |  |  |  |  |

#### Cluster: Generate and analyze patterns.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.OA.5 | Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. |  |  |  |  |

### Domain: Number and Operations in Base Ten

#### Cluster: Generalize place value understanding for multi-digit whole numbers.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.NBT.1 | Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. |  |  |  |  |
| 4.NBT.2 | Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. |  |  |  |  |
| 4.NBT.3 | Use place value understanding to round multi-digit whole numbers to any place. |  |  |  |  |

#### Cluster: Use place value understanding and properties of operations to perform multi-digit arithmetic.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.NBT.4 | Fluently add and subtract multi-digit whole numbers using the standard algorithm. |  |  |  |  |
| 4.NBT.5  | Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. |  |  |  |  |
| 4.NBT.6  | Find whole-number quotients and remainders with up to four-digit dividends and one-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. |  |  |  |  |

### Domain: Number and Operations—Fractions

#### Cluster: Extend understanding of fraction equivalence and ordering.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.NF.1 | Explain why a fraction *a*/*b* is equivalent to a fraction The quantity n times a divided by the quantity n times b by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. |  |  |  |  |
| 4.NF.2 | Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions. |  |  |  |  |

#### Cluster: Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.NF.3a | Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. |  |  |  |  |
| 4.NF.3b | Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions. |  |  |  |  |
| 4.NF.3c | Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. Add and subtract mixed numbers with like denominators. |  |  |  |  |
| 4.NF.3d | Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators. |  |  |  |  |
| 4.NF.4a | Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction *a*/*b* as a multiple of 1/*b*. |  |  |  |  |
| 4.NF.4b | Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a multiple of *a*/*b* as a multiple of 1/*b*, and use this understanding to multiply a fraction by a whole number. |  |  |  |  |
| 4.NF.4c | Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Solve word problems involving multiplication of a fraction by a whole number. |  |  |  |  |

#### Cluster: Understand decimal notation for fractions, and compare decimal fractions.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.NF.5 | Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.[[2]](#footnote-3)  |  |  |  |  |
| 4.NF.6 | Use decimal notation for fractions with denominators 10 or 100. |  |  |  |  |
| 4.NF.7 | Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions. |  |  |  |  |

### Domain: Measurement and Data

#### Cluster: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.MD.1 | Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. |  |  |  |  |
| 4.MD.2 | Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. |  |  |  |  |
| 4.MD.3 | Apply the area and perimeter formulas for rectangles in real world and mathematical 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** |
| --- | --- | --- | --- | --- | --- |
| 4.MD.4 | Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. |  |  |  |  |

#### Cluster: Geometric measurement: understand concepts of angle and measure angles.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.MD.5a | Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a “one-degree angle,” and can be used to measure angles. |  |  |  |  |
| 4.MD.5b | Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees. |  |  |  |  |
| 4.MD.6 | Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. |  |  |  |  |
| 4.MD.7 | Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems. |  |  |  |  |

### Domain: Geometry

#### Cluster: Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

How does the program address this aspect of the domain?

| **Standard** | **Standard Language** | **Publisher/Developer Citations** | **Met****Yes** | **Met No** | **Reviewer Notes** |
| --- | --- | --- | --- | --- | --- |
| 4.G.1 | Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. |  |  |  |  |
| 4.G.2 | Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles. (Two dimensional shapes should include special triangles and special quadrilaterals.) |  |  |  |  |
| 4.G.3 | Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry. |  |  |  |  |

## 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 who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade. [↑](#footnote-ref-3)