



# California's Additions to the Common Core State Standards

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Statewide Assessment Reauthorization  
Work Group  
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# California and the Common Core State Standards (CCSS)

## Senate Bill 1 from the Fifth Extraordinary Session (SB X5 1):

- established an Academic Content Standards Commission (ACSC) to develop standards in mathematics and English–language arts
- stated that 85 percent of the standards were to consist of the CCSS with up to 15 percent additional material
- directed the State Board of Education (SBE) to adopt or reject recommendations of the ACSC





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# California Additions CCSS

- Focus
  - Clarifying
  - Curriculum Design
  - New Content



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# California Additions CCSS

- Types
  - “e.g.”
  - Additional wording
  - New standard



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# California Additions English–language arts (ELA) CCSS

- Connected vocabulary standards included in language strand to vocabulary standards in reading strand (grades K–12).
  - See page 1, Reading Standard 4, Grades K-1-2 and on pages 19-20, the Language Standards 4-6, Grades K-1-2.



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# California Additions ELA CCSS

- Plan and deliver formal presentations (grades 2–12)
  - Under Speaking and Listening, Standard 4, planning and delivering some type of formal presentation was added. (Example: see page 17, Grades 3-4-5.)



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# California Additions ELA CCSS

- Activate prior knowledge and use illustrations/context to make predictions (grades K–1)
  - For Reading Standard #10 in both informational and literature, the addition of two lettered standards: a. Activate prior knowledge related to the information and events in a text, and b. Use illustrations and context to make predictions about text. (Examples, see page 2, Grades K-1.)



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# California Additions ELA CCSS

- Penmanship (grades 2–4)
  - Under the Language standards, an addition requiring students to create readable documents with legible print (Grade 2, page 19), and legible cursive or joined italics (Grades 3-4, page 20).



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# California Additions ELA CCSS

- Analysis of text features in informational text (grades 6–12)
  - For Reading Standards for Informational Text, the addition of an “a.” under Standard 5, for grades 6-12, to have students analyze the use of text features in different setting (Examples, see pages 30 & 32, popular media, public documents, consumer materials, workplace documents.)



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# California Additions ELA CCSS

- Create career documents (grade 8)
  - Under Writing Standard 2, Grade 8, the addition of writing career development documents, e.g., simple business letters or job applications.



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# ELA/ELD Curriculum Framework

- Combine ELA and English language development (ELD) standards
- Beginning of process and applications are due August 16, 2012
- Information at <http://www.cde.ca.gov/ci/rl/cf/>



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# California Additions

## Math CCSS K–2

- Grades K–2
  - K. Measurement and Data (MD) 4.a & b: adds time and days of week
  - 1. Operations and Algebraic Thinking (OA) 7.1: adds writing number sentences from problems
  - 1. MD 3.1 and 4.1: adds relating time to events and repeating patterns
  - 2. OA.5 and 6: addresses multiplication and division
  - 2. OA.7.1, 7.2 and 3.1: adds estimation



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# California Additions

## Math CCSS Grades 3–5

- Grades 3–5
  - 3.NBT.1.1 adds 4 digit numbers
  - 3.NF 3.e adds using money to explain fractions
  - 4.NBT 5.1 adds multiplication of multi-digit numbers and two digit numbers.
  - 5.OA 2.1 includes whole numbers 2-50 reduced to prime factors



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# California Additions Math CCSS Grades 3–5 (Cont.)

- 5.G 3.1 adds distinguish shapes of rectangles, parallelograms and trapezoids
- 5.G 5 adds knowing the sum of angles of triangle and quadrilateral to solve problems
- 5.G 6 adds comparing the formula for area of triangle and parallelogram



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# California Additions Math CCSS Grades 3–5 (Cont.)

- **Example of adding words to standards:**
  - (3.OA.1) Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each, **or 7 groups of 5 objects each**. *For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .*



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# California Additions Math CCSS Grades 3–5 (Cont.)

- Example of clarifying standard:
  - 4.G. 2. Classify two-dimensional figures . . . **(Two dimensional shapes should include special triangles, e.g., equilateral, isosceles, scalene, and special quadrilaterals, e.g., rhombus, square, rectangle, parallelogram, trapezoid.)**

# California Additions to Math CCSS Grades 6–8



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## Grade 6

### Ratios and Proportional Relationships

6.RP

Understand ratio concepts and use ratio reasoning to solve problems.

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."*
2. Understand the concept of a unit rate  $a/b$  associated with a ratio  $a:b$  with  $b \neq 0$ , 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."*
3. 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.
  - 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?*
  - c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.
  - d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

### The Number System

6.NS

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for  $(2/3) \div (3/4)$  and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that  $(2/3) \div (3/4) = 8/9$  because  $3/4$  of  $8/9$  is  $2/3$ . (In general,  $(a/b) \div (c/d) = ad/bc$ .) 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?*

Compute fluently with multi-digit numbers and find common factors and multiples.

2. Fluently divide multi-digit numbers using the standard algorithm.
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
4. 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. 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  $4(9 + 2)$ .*

# California Additions to Math CCSS Grades 6–8 (Cont.)



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- 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.

7.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

(Common Core Standard 7NS-1)

- a. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.  
(Common Core Standard 7NS-1a)
- b. Understand  $p + q$  as the number located a distance  $|q|$  from  $p$ , in the positive or negative direction depending on whether  $q$  is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. (Common Core Standard 7NS-1b)
- c. Understand subtraction of rational numbers as adding the additive inverse,  $p - q = p + (-q)$ . Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.  
(Common Core Standard 7NS-1c)
- d. Apply properties of operations as strategies to add and subtract rational numbers.  
(Common Core Standard 7NS-1d)

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.



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# California Additions Math CCSS Grades 6–8 (Cont.)

- Addition of Algebra 1 Course
  - CCSS Grade 8 Standards
  - CCSS Algebra Standards from the Algebra conceptual categories in higher math
  - CA Standards of 1997



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# California Additions Math CCSS Grades 9–12

- Mathematical Practice Standards for Grades 9–12
  - Additions on method of mathematical induction and proofs



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# California Additions Math CCSS Grades 9–12 (Cont.)

- Additional standards to Conceptual Categories, including Algebra, Functions, Geometry
- Added two courses:
  - Advanced Placement Probability and Statistics
  - Calculus



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# California Additions to CCSS

- How to understand them:
  - Are they complementing the standards or changing?
  - Are they there to help instruction?
  - Are they test worthy?



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# Mathematics Curriculum Framework

- Guidelines for Framework Development approved by SBE July 2012
- 19 members
- Completion by November 2013



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# Supplemental Instructional Materials Review

- Bridge materials for ELA and math
- Submissions this summer
- Panels deliberate at the end of September
- SBE action November 2012/January 2013



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# Legislation

- SB 1200: Standards clean up bill
- AB 1246: Adoption of mathematics instructional materials