



# 2013 Revision of the *Mathematics Framework*

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## Report from the Instructional Quality Commission

September 2013  
State Board of Education



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State Superintendent  
of Public Instruction

# 2013 Revision of the *Mathematics Framework*

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## Presenters:

- Tom Adams, Director, Curriculum Frameworks and Instructional Resources Division
- Bill Honig, Chair, Instructional Quality Commission
- Ed D'Souza, Co-Chair, Mathematics Subject Matter Committee
- Julie Spykerman, Co-Chair, Mathematics Subject Matter Committee



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# 2013 Revision of the *Mathematics Framework*

Today:

Hear an update on the revision of  
the *Mathematics Framework*

Next Step:

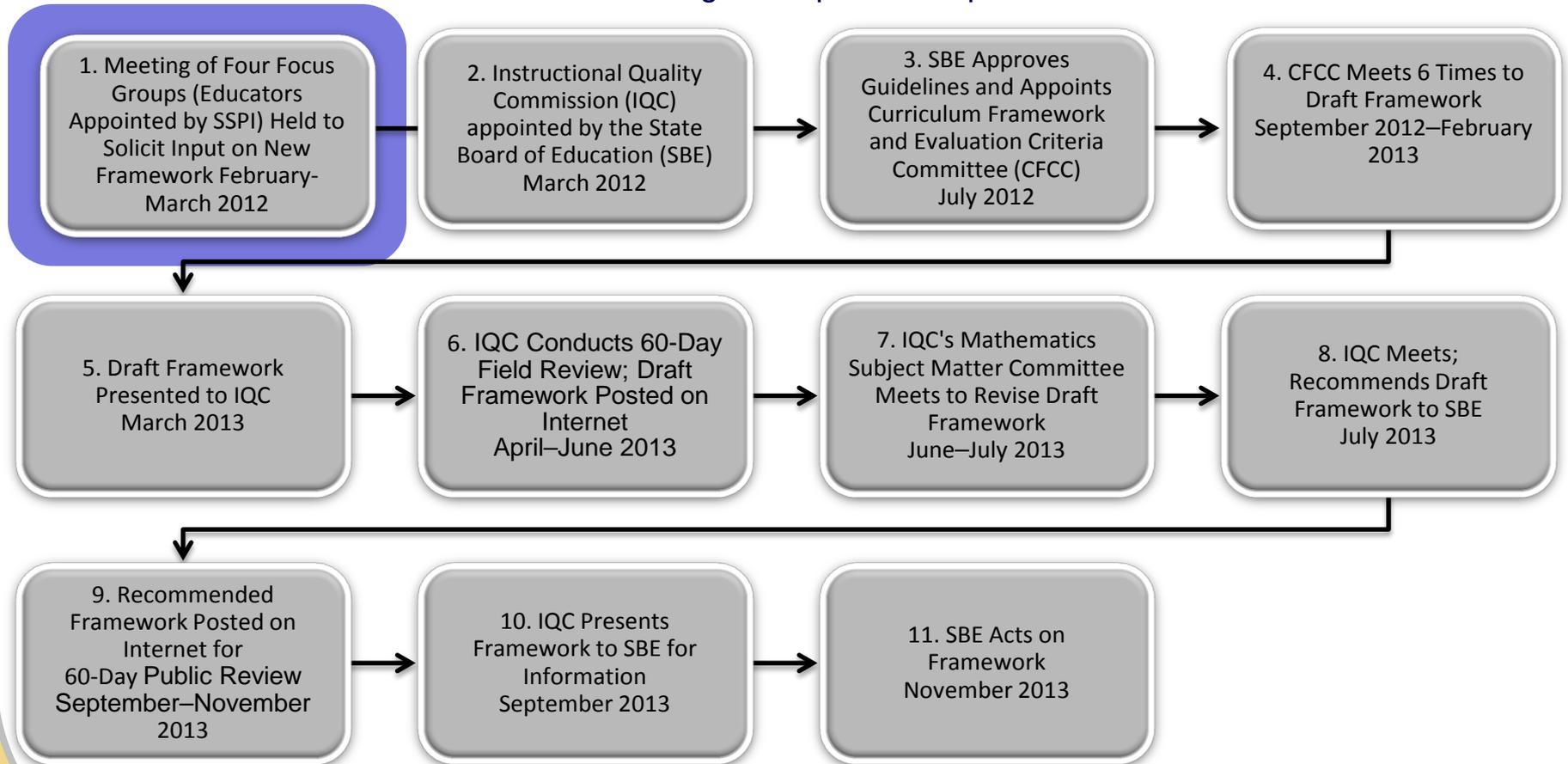
State Board of Education Action to  
adopt the revised *Mathematics  
Framework* in November 2013

# CALIFORNIA DEPARTMENT OF EDUCATION

## *Mathematics Curriculum Framework Development Process*

This chart shows the major steps of the curriculum framework development process.

All meetings are open to the public.





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# Recent State Board of Education Actions

In January 2013, the State Board of Education:

- Modified California additions to the California Common Core State Standards for Mathematics and approved model courses in higher mathematics in two pathways
- Approved the Criteria for Evaluating Mathematics Instructional Materials for Kindergarten through Grade Eight



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# What Guided the Revision of the Mathematics Framework?

- National documents and research from the Common Core State Standards Initiative
- Achieve the Core and Progressions Documents
- State Board of Education Guidelines
- The Standards for Mathematical Practice



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# What Guided the Revision of the Mathematics Framework?

Three major shifts in mathematics:

- **Focus:** Place strong emphasis on the grade-level and course-level standards
- **Coherence:** Think across grades and link major topics in each grade
- **Rigor:** Pursue with equal intensity
  - Conceptual understanding
  - Procedural skills and fluency
  - Applications



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# Who contributed to the draft *Mathematics Framework?*

- Focus Group members—all educators in California K–12 public schools, four regional meetings
- MCFCC members—one-half teachers, including teachers with experience teaching English learners and students with disabilities, other educators, and two content experts with Ph.Ds. in mathematics
- IQC—one-half teachers
- Staff of the Curriculum Frameworks and Instructional Resources Division and mathematics expert Dr. Christopher Yakes



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# Who contributed to the draft *Mathematics Framework*?

- The field—provided comments on the draft framework
- County Offices of Education—held discussion forums on the 1<sup>st</sup> draft of the *Mathematics Framework*
- Common Core State Standards for Mathematics author and expert Jason Zimba
- WestEd’s California Comprehensive Center, Neal Finkelstein and Dona Meinders
- Staff of the California Department of Education’s Language Policy and Leadership Office, STEM Office, and Assessment Transition Office

# Content of the *Mathematics Framework, K–5*



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## **Focus      Coherence      Rigor**

- A focus on understanding addition, subtraction, multiplication, and division (the four operations)
- Building from whole numbers to fractions in grades 3 to 5
- Expectations of fluency with whole numbers and fractions

# Content of the *Mathematics Framework, 6–8*



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## **Focus      Coherence      Rigor**

- A focus on ratio, proportion, rates, and percent and statistics and probability
- Extending operations with fractions to rational numbers
- Expectations of fluency with expressions and linear equations



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# Content of the *Mathematics Framework, Higher Mathematics*

- Traditional Pathway (Algebra I, Geometry, Algebra II)
- Integrated Pathway (Mathematics I, II, and III)
- Precalculus
- Statistics and Probability
- Calculus
- Advanced Placement Probability and Statistics
- Mathematical Modeling



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# Content of the *Mathematics Framework, Higher Mathematics*

## **Focus      Coherence      Rigor**

- A focus on the mathematics that students need for success in college and careers
- Extending from algebraic concepts to calculus, trigonometry, and advanced statistics
- Expectation that students are college and career ready and able to utilize mathematics in their lives



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# Content of the *Mathematics Framework*, Other Chapters

- Universal Access
- Instructional Strategies
- Supporting High-Quality Common Core Mathematics Instruction
- Technology in the Teaching of Mathematics
- Assessment
- Instructional Materials (including the evaluation criteria for the mathematics adoption)



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# Where can I find the draft *Mathematics Framework*?

The draft Mathematics Framework is posted on the CDE Mathematics Curriculum Framework Web page at

<http://www.cde.ca.gov/ci/ma/cf/>



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# Questions on the *Mathematics Framework?*

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