GUIDING QUESTIONS

The California Mathematics Framework: Curriculum Adoption, Technology Integration, and Instructional Decision-making

Introduction

The following questions are designed to help school board members and superintendents engage in meaningful discussions about the 2023 California Math Framework regarding curriculum adoption, technology integration, and instructional decision-making. These questions are meant to support school districts and county offices of education in making informed choices that align with best practices in mathematics education while considering the impact of emerging technologies, professional learning needs, and student equity.

Each section corresponds to the main concepts from the Math Framework, ensuring that board members are equipped with relevant discussion points when evaluating math curriculum, professional development opportunities, and technology investments.

Main concepts in the Math Framework

MAIN CONCEPT	DESCRIPTION
Fair and equal access	Ensure that all students, regardless of background, have equitable opportunities to learn math at a high level.
Use what students already know	Build on students' strengths, including their cultural and linguistic backgrounds, to make math more meaningful and accessible.
Focus on big math ideas	Teach math as a connected system of concepts rather than isolated skills, emphasizing real-world applications.
Use technology wisely	Leverage technology to enhance student learning, promote exploration, and provide access to diverse instructional tools.
Think like a mathematician	Foster reasoning, problem-solving, and critical-thinking skills so students can confidently tackle complex problems.
Support teachers	Provide educators with high-quality professional development to ensure they can effectively implement math instruction.
Involve families	Equip families with resources and strategies to support their children's math learning at home.
Use research-based practices	Adopt instructional methods that are grounded in evidence and proven to support deep mathematical understanding.
Local control	Allow local educational agencies (LEAs) to tailor their math programs to the needs of their students while maintaining alignment with statewide goals.

How to use this resource

The guiding questions in this document are designed to support governance conversations and inform strategic decisions. CSBA encourages school board members and superintendents to use this resource in the following ways:

- During curriculum adoption and instructional materials reviews
- When engaging in policy discussions related to mathematics, artificial intelligence (AI), or educational technology
- As part of budget planning process to align investments with instructional goals
- In board workshops or retreats focused on improvement planning
- To support collaborative conversations with staff and the community around instructional quality and access

By embedding these questions into regular governance practices, boards can foster more informed, equity-aware, and future-ready decisions for all students.

About the category tags

To help board members and superintendents quickly identify focus areas, each guiding question is tagged with one or more practical governance categories. These tags highlight how the question connects to common areas of board responsibility, including:

- [E] Ethics – Questions related to the ethical use of technology, student privacy, integrity in decision-making, and fairness.
- [B] Budget – Questions tied to resource allocation, funding priorities, and financial planning.
- [A] Assessment & Accountability – Questions about student learning outcomes, instructional quality, and systemwide evaluation.
- [P] Policy – Questions that support the creation or revision of LEA policies.
- [PL] Professional Learning – Questions that guide decisions on educator training and capacity building.

These tags serve as a crosswalk between the Math Framework's instructional focus and the governance responsibilities of school boards.

Guiding questions

Fair and equal access

1) What guidelines can the board establish to ensure fair distribution of advanced math programs and resources across all schools? [E] [P]

2) How does the LEA monitor and address potential disparities in math learning opportunities across student populations? [E] [A]

» Potential data to consider includes course placement and completion data, including honors and AP coursework; disaggregated for racial/ethnic groups; socioeconomic disadvantage; students with disabilities; and linguistically diverse students.

3) What proven professional learning and instructional approaches should the board support to strengthen math learning LEA-wide? [PL]

4) How does the LEA ensure all students have access to high-quality math instruction? [P] [A]

5) What assessment data should the board regularly review to monitor math learning outcomes across all student populations, and how often? [A]

Use what students already know

1) What protocols can the board implement to ethically evaluate curricula to ensure they are responsive and relevant to all students' backgrounds? [E] [P]

2) What professional learning can the LEA provide to help teachers effectively build on students' individual strengths and experiences in math instruction? [PL]

3) How does teacher training include strategies to help educators recognize and incorporate students' prior knowledge and personal experiences into math lessons? [E] [PL]

4) What policies can the board establish to ensure math curricula reflect and build upon the varied experiences, perspectives, and learning needs of all students? [E] [P]

5) What resources or investments could the board budget for to support teacher training that helps address the varied backgrounds and learning needs of students in math instruction? [B] [PL]

6) How can the LEA allocate funds to ensure math curricula and resources effectively integrate students' diverse backgrounds and prior knowledge? [B] [P]

Focus on big math ideas

1) What studies or data should the board review to understand which math teaching practices and technology tools are most effective? A PL

2) How can the LEA ensure funds are prioritized to support professional learning focused on teaching deep, conceptual understanding of math? B PL

3) How does the LEA ensure that math instruction goes beyond basic skills to focus on deeper concepts? P A

4) How does the LEA currently promote transferable problem-solving and reasoning and justification skills in math instruction? A PL

5) What steps should the board take to ensure students build reasoning, problem-solving, and communication skills in math? P A

Use technology wisely

1) What policies does the LEA have in place to ensure the ethical use of AI and educational technology (edtech) in math instruction and assessment? Are those policies up-to-date? E P

2) How does the LEA evaluate AI-powered and edtech tools to identify potential risks related to bias, privacy, or misuse? E A

3) What measures are in place to ensure AI and edtech tools align with ethical data privacy practices, including the protection of student information? E P

4) What research or external reviews can the board use to assess whether AI and edtech tools in the curriculum are being implemented fairly and transparently? E A

5) How can the LEA establish oversight on the long-term impact of AI and edtech on teaching and learning outcomes? E A

6) What policies should the board consider to ensure responsible use of AI in math instruction? P

7) What steps should the board take to ensure math technology supports meaningful math learning for all students? P

Think like a mathematician

1) What professional learning opportunities support educators in creating classroom environments that encourage mathematical exploration, reasoning, and creativity? PL B

2) What policies should be adopted to prioritize math curricula and assessments that promote students' reasoning, critical-thinking, and problem-solving skills? P A

3) What investments should the LEA consider to provide ongoing teacher collaboration opportunities in math? B PL

4) What actions should the board take to ensure that math instruction emphasizes meaningful concept-based learning? A P

Support teachers

1) What professional learning is needed to help teachers understand and navigate the ethical implications of AI and edtech tools in math instruction? E PL

2) What professional development opportunities are currently available for teachers in math instruction? PL

3) What professional development models could the board consider to enhance teacher effectiveness in math? B PL

4) What steps should the board take to ensure teacher training aligns with LEA math learning goals? B P

5) How does the LEA gather educator feedback about AI and other edtech tools to inform future professional learning and procurement decisions? B PL

Involve families

1) What types of family outreach programs could the board consider to strengthen partnerships between families and schools in math learning? E P

- » Consider ongoing parent communication, education, and transparency about relevant AI tools

2) What specific steps should the board take to increase family and community involvement in supporting student math success? E P

3) What professional learning opportunities should the LEA offer to help teachers effectively engage families in students' math education? PL

4) What policies should the board consider to foster effective communication and collaboration between schools and families around math instruction and student progress? [P]

5) What budget decisions can the board make to fund family outreach programs and engagement initiatives that strengthen partnerships in math education? [B] [P]

Use research-based practices

1) What research or external reviews can the board use to assess whether AI and edtech tools in the curriculum are applied in a fair and transparent manner? [E] [A]

2) What data does the LEA collect to ensure AI-powered and edtech interventions are improving student outcomes without widening achievement gaps? [E] [A]

3) How can the LEA establish oversight on the long-term impact of AI and edtech on teaching and learning outcomes? [E] [P]

4) What protocols are in place to audit edtech companies and vendors to ensure compliance with ethical and legal standards? [E] [P]

5) What research-based methods are currently used in LEA math instruction? [PL]

Local control

1) What safeguards can the board implement to ensure local decisions about math instruction and resources align with LEA-wide priorities and are applied consistently across schools? [E] [P]

2) How does the board hold the LEA accountable for local decisions that impact the quality of math curriculum and access for all students? [E] [A]

3) What policies could the board adopt to support school-level decision-making while ensuring LEA-wide accountability? [P] [A]

4) What funding models could the board consider to maintain and expand the use of AI-driven learning platforms? [B]

5) How can the board monitor and evaluate school-level decisions regarding math assessments to ensure they align with LEA and state standards? [A] [P]

6) How does the board receive regular updates on the impact of edtech and vendor compliance about data protection and privacy? [E] [P]

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