



Assessing Common Core State Standards for Mathematics Shifts for Students AND Families

In 2014-2015, all students in California will take the **NEW Smarter Balanced Assessment**. This assessment will measure student learning of the new **Common Core State Standards (CCSS)** for both English Language Arts (ELA) and Mathematics. These new standards were put in place to better prepare students for college and career. Important changes in teaching and learning are required because students are asked to do more challenging work.



Outlined below are **the six major shifts to Common Core State Standards (CCSS) for Mathematics**. Use the information and tips below to support your child's success with the new standards and assessments. (Information on CCSS for English Language Arts (ELA) is available in a separate handout.)

All Grades:

Develop mathematical competence

Students develop math proficiencies and an understanding of mathematical processes

What are standards?

Standards list expectations for what students should know and be able to do at each grade level. The Common Core State Standards are replacing the California Content Standards.

Students Must:

- Demonstrate operational principles and mathematical reasoning through **calculation and writing**
- Develop deepened **mathematical disposition and practice**

Standards for Mathematical Practice

| Standard | Students Must: |
|----------|---|
| 1 | Make sense of problems and persevere in solving them |
| 2 | Reason abstractly and quantitatively |
| 3 | Construct viable arguments and critique the reasoning of others |
| 4 | Model with mathematics |
| 5 | Use appropriate tools strategically |
| 6 | Attend to precision |
| 7 | Look for and make use of structure |
| 8 | Look for and express regularity in repeated reasoning |

Families Can:

- **Make regular connections** with children about mathematics being learned at school
- Speak about and **reference math principles** seen outside of school

Focus strongly where the standards focus

Students focus deeply on “major work” of each grade to build a solid foundation in arithmetic (addition, subtraction, multiplication and division), fractions, decimals, and functions

Students Must:

- **Build a strong foundation in the Major Work** at each grade level which includes: understanding math concepts, procedural skill and fluency, problem-solving

Families Can:

- **Explore grade level math goals** with your child
- **Ask questions** about what children are learning in math class

What are Major Work clusters by grade?

*For a list of major, additional and supporting clusters by grade, please refer to 'Focus in Math' at achievethecore.org/focus pp. 4-12

Think across grades and link to major ideas within grades

Students build on their previous knowledge at each grade level and link major topics within grades

Students Must:

- **Build on their knowledge** from year to year
- **Represent mathematical thinking** in various ways (for example, represent a math problem in equations and graphs or tables)
- **Use written explanation** to demonstrate mathematical reasoning

Families Can:

- **Prompt students to seek connections** between past and current learning
- Look for opportunities to **use graphs, tables, and models** to solve word problems

Develop a deep understanding of math concepts

Students understand math reasoning from a variety of perspectives

Students Must:

- **Use a variety of methods** to solve arithmetic problems (using objects, drawing, writing an equation)
- **Understand key math concepts and relationships** (for example, the relationship between addition and subtraction, $8 + 5 = 13$, $13 - 5 = 8$)

Families Can:

- Encourage children to **explain different ways to solve** the same problem
- Ask children to **explain relationships** between operations (+, -, x, ÷) and representations (graphs, models, equations, and word problems)

Calculate with speed and accuracy

Students develop procedural skill and fluency in computing math facts

Students Must:

- Students **practice core functions** such as single-digit multiplication so they have access to more complex concepts and procedures

Families Can:

- Help your child **practice math facts at each grade level**

Apply math in context

Students use math to answer real world problems

Students Must:

- **Use math to make meaning** of content in science and social science

Families Can:

- **Talk about how you use math** to solve every day problems

Have questions?

Talk to your child's teacher to learn about CCSS for Math at your child's grade level, or go to the SFUSD website to learn more at www.sfusd.edu.