Grade-Level Focus

Fluency Expectations

Students will also learn to calculate quickly and accurately. This table shows some of the skills students are expected to develop by the end of each grade, which are part of the Standards for Mathematical Content.

Grade	Examples of Fluency Expectations
3	Fluently multiply and divide within 100 (using strategies) Know from memory all products of two one-digit numbers
4	Fluently add and subtract multi-digit whole numbers up to 1,000,000 using the standard algorithm
5	Fluently multiply multi-digit numbers using the standard algorithm

To help your student learn mathematics:

For more information on the California Common Core State Standards for Mathematics and ideas for helping your student succeed, check out these resources:

- The Common Core Resources Web page is online at http://www.cde.ca.gov/re/cc/. Start by clicking on the Students/Parents tab.

- The California Common Core State Standards for Mathematics are available online at http://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf

California Common Core State Standards for Mathematics

The California Common Core State Standards for Mathematics are based on three major principles: focus, coherence, and rigor. There are two types of standards—the Standards for Mathematical Practice and Standards

Thinking Like a Mathematician

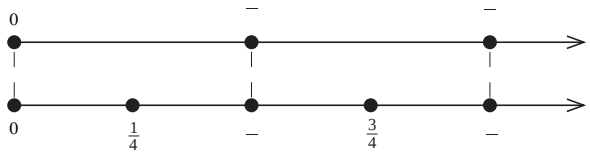
The Standards for Mathematical Practice (MP) help students learn to think like mathematicians—to apply mathematics to solve real-world problems, be resourceful, reason about numbers, and explain and defend their answers. When students apply MP.4, they use models to solve problems and better understand how mathematics works, as shown in the table and the example problems that follow.

Grade	Examples of MP.4: Model with mathematics.
3	Students use a variety of models (e.g., circles, squares, rectangles, number lines) to represent and develop understanding of fractions.
4	Students experiment with representing problem situations in multiple ways, including writing numbers; creating math drawings; using objects; writing equations; and making a chart, list, or graph.
5	Students evaluate the utility of the models they see and draw and can determine which models are most useful and e cient for solving a problem.

Example Problems

X

Students can use number lines and fraction models to represent and solve problems with fractions. Number lines help students develop a deeper understanding of fractions.

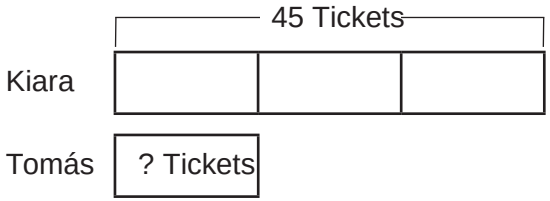


Y

Here is an example of a tape diagram that a fourth-grade student might use to represent and then solve a multiplication problem.

Kiara sold 45 tickets to the school play, which is 3 times as many as Tomás sold. How many tickets did Tomás sell?

Student draws:



Z

Students draw models to help them solve problems e ciently and to explain their answers. A fth-grade student might use a drawing like the one below to solve and explain the answer to a subtraction prob lem with a decimal number.

Solve 4 0.3. Explain how you found your solution.

Student says: “Since I’m subtracting 3 tenths from 4 wholes, it would help to divide one of the wholes into tenths. The other 3 wholes don’t need to be divided up. I can see there are 3 wholes and 7 tenths left ove or 3.7.”