



3rd Grade

Parent Guide for Understanding the Math Common Core

	Operations and Algebraic Thinking	Number and Operations in Base 10	Number and Operations - Fractions	Measurement and Data	Geometry
Students will be able to:	<ul style="list-style-type: none"> Solve multiplication and division problems using a variety of strategies. Solve word problems using multiplication and division within 100. Identify and explain patterns in arithmetic such as the connection between multiplication and division. Fluently multiply and divide within 100. 	<ul style="list-style-type: none"> Use understanding of place value to round whole numbers. Multiply single digit whole numbers by 10. Fluently add and subtract within 1000 using strategies involving place value. 	<ul style="list-style-type: none"> Understand unit fractions, such as $\frac{1}{2}$ or $\frac{1}{3}$; represent unit fractions on a number line by dividing one whole into 2 or 3 parts. Understand that fractions such as $\frac{2}{3}$ are represented as 2 segments of $\frac{1}{3}$. Recognize that fractions with the same endpoint on a number line are equivalent. Generate simple equivalent fractions. Compare two fractions based on their sizes. 	<ul style="list-style-type: none"> Tell and write time to the nearest minute. Solve word problems involving elapsed time. Measure and estimate volume and size in standard units. Generate and represent data in a variety of ways. Understand area of a rectangle and how it relates to multiplication and addition. Understand perimeter as the measure of the sides of a figure. 	<ul style="list-style-type: none"> Recognize similarities and differences between shapes, for example, how squares compare to rectangles. Break apart shapes into equal areas represented by fractions (e.g., the diagonals of a square divide it evenly into four equal parts).
Schools will support by providing opportunities to:	<ul style="list-style-type: none"> Show multiplication and division in a variety of ways. Solve multiplication and division problems with a variety of unknowns ($3 \times _ = 12$, $3 \times 4 = _$, $_ \times 4 = 12$). Extend knowledge using properties of operations (e.g., if students know a fact such as $8 \times 4 = 32$ then they also know $4 \times 8 = 32$, $32 \div 8 = 4$ and $32 \div 4 = 8$). 	<ul style="list-style-type: none"> Deepen understanding of place value using base 10 blocks and other manipulatives. Understand how moving from one place value to another is like multiplying or dividing by 10. 	<ul style="list-style-type: none"> Understand that a fraction is a whole broken up into equal parts. Solve problems that require expressing fractions as fair-sharing. Explain why two fractions are equivalent (e.g., "Justify why $\frac{1}{2}$ is the same as $\frac{2}{4}$"). Explore real-world situations that involve comparisons with fractions (e.g., $\frac{1}{3}$ of a cake is larger than $\frac{1}{4}$ of the same cake). 	<ul style="list-style-type: none"> Solve word problems involving addition and subtraction of time intervals using clocks or number lines. Solve word problems involving mass and volume using scales or drawings. Conduct real-world experiments to collect and interpret data. Represent data as bar graphs, and line plots. Engage in tasks that involve covering regions with unit squares to find area. 	<ul style="list-style-type: none"> Sort and classify shapes and describe their groupings in geometric terms. Use manipulatives and drawings to represent unit fractions as equally divided areas.
Parents can support by:	<ul style="list-style-type: none"> Ask your child to divide snacks into baggies in equal portions. Ask questions such as: "If 5 bags of bagels hold six bagels each, how many bagels are there?" 	<ul style="list-style-type: none"> Asking questions such as: "What digit is in the hundreds' place of 2,764?" Ask number riddles like: "I have 11 hundreds, 23 tens, and 15 ones. Who am I?" Write a four digit number and ask, "How many thousands are there? Hundreds? Tens? Ones?" 	<ul style="list-style-type: none"> Providing opportunities to help in the kitchen by cutting fruits and vegetables into equal parts. Ask questions about the size of a serving and compare servings. 	<ul style="list-style-type: none"> Ask your child, "What time is it? What time will it be when we eat dinner in three hours?" Measure weight on a scale and record data on a two-column chart. Calculate perimeter and area in the garden or other areas of your home. 	<ul style="list-style-type: none"> Cut or fold a piece of paper and name the resulting fractional parts using halves, fourths, eights, thirds, and sixths. Have your child go on a "Shape Hunt" in your home; identify shapes, ask questions about how the shapes are the same or different.

Third Grade Students:

- Solve multiplication and division word problems within 100.
- Understand place value to round whole numbers, multiply by 10, and fluently add and subtract within 1000.
- Solve one- and two-step word problems using addition, subtraction, multiplication, and division.
- Use equations to represent word problem situations.
- Begin developing an understanding of fractions as numbers by representing unit fractions, such as $\frac{1}{2}$ and $\frac{1}{4}$, using manipulatives, pictures, and on a number line.
- Solve problems using measurement of length, volume, time, and volume.
- Sort and classify geometric shapes.

Resources:

Sacramento City Unified School District

<http://www.scusd.edu/commoncoredept>

- ✓ Links to documents for California (CCS) Common Core Standards, including videos for the Standards for Mathematical Practice

Parent-Teacher Association

<http://www.pta.org/446.htm>

- ✓ Parent Guides including key items that children should be learning in mathematics in each grade.

California Department of Education

<http://www.cde.ca.gov/re/cc/index.asp>

- ✓ Informational flyers provide overviews and highlights of the Math CCS
- ✓ Handouts for parents on transitioning to CCS
- ✓ Link to *Council of Great City Schools Parent Roadmaps*
- ✓ Links to *Smarter Balanced Assessments*

How Parents Can Support:

- Determine how many calories are in a large bag of your family's favorite snack food by reading and interpreting the given nutritional information.
- Tell time with your child. Ask them what time it will be when their favorite half-hour TV show is over.
- At your neighborhood playground, find as many geometric shapes as possible. With your child, talk about what makes shapes similar or different.
- Go online and play games together such as Math Man, Number Monster or The Timernator from www.coolmath.com
- Share how you use math in your daily life.
- Encourage your child to be persistent if a problem seems difficult.
- When your child gets stuck on homework, some questions to ask are:
 - 1) Can you tell me what you know now?
 - 2) What do you need to find out?
 - 3) Can you make a drawing or picture to get started?
 - 4) Can you show me what you did that didn't work?

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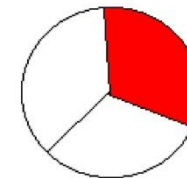
How Things Have Changed:

Expectations of students have changed a great deal with the adoption of the Common Core State Standards in Mathematics. While getting the right answer is still a great achievement, students are now required to think mathematically, communicate their thinking, and justify their reasoning while continuing to develop a greater level of understanding of how math works.

Previous California Standards Assessment:

Which fraction is represented below?

Answer: $\frac{1}{3}$



Common Core Standards Assessment:

Ms. Francis drew the following picture on the board, then asked her students what fraction it represents.



- a) Emily said that the picture represents $\frac{2}{6}$. Label the picture to show how Emily's answer can be correct.
- b) Raj said that the picture represents $\frac{2}{3}$. Label the picture to show how Raj's answer can be correct.
- c) Alejandra said that the picture represents 2. Label the picture to show that Alejandra's answer can be correct.