Sacramento City Unified School District

5th Grade Parent Guide for Understanding the Math Common Core

	Operations and Algebraic Thinking	Number and Operations in Base Ten	Numbers and Operations- Fractions	Measurement and Data	Geometry
Students will be able to:	• Solve problems that use parentheses. • Use language of mathematics to write expressions. • Recognize a pattern in a table. • Generate a table from a rule.	• Understand that decimals are part of the base-10 system. • Understand that each place value is 10 times greater than or less than the place next to it (…30, 3, 0.3, 0.03…). • Read, write, round and compare decimals to thousandths. • Fluently multiply multi-digit whole numbers. • Divide large numbers (6,928÷24)	• Add and subtract fractions, including word problems. • Extend understanding of multiplication to include fractions. • Solve real-world problems involving multiplication of fractions and mixed numbers. • Understand fractions represent a division problem of equal sharing • Extend previous experiences with division to include division of unit fractions by whole numbers in real-world problems.	• Convert to appropriate unit of measurement (1 ft. = 12 in.). • Represent data on a line plot using measurements with fractional units of 1/2, 1/4, or 1/8. • Recognize that finding volume is appropriate for 3-dimensional figures and can be measured in cubic units. • Apply understanding of multiplication and addition to problems involving volume.	• Understand parts of a coordinate plane (x-axis and y-axis, origin and coordinates). • Graph positive ordered pairs on the coordinate plane. • Classify 2-dimensional figures by property. • Understand subcategories of figures (A square is also a rectangle). • Understand that the sum of angles of a triangle is 180^{o}. • Use the formula for area of a rectangle to find areas of parallelograms and triangles.
Schools will support by providing opportunities to:	• Apply understanding of parentheses to interpret and solve problems. • Write an expression to represent a problem (“John has $13. Steve has $4 more than twice as much money as John…”) • Graph ordered pairs from tables.	• Use manipulatives to explore and interpret patterns of the base-10 system. • Use tools such as number lines and grids to compare and round decimal numbers. • Extend use of computational strategies to multiply and divide whole numbers. • Add, subtract, multiply and divide decimal numbers. • Provide explanations of reasoning with calculations.	• Use visual fraction models or equations to solve problems with fractions. • Determine if answers are reasonable using number sense and benchmark fractions (0, 1/2, 1/1). • Calculate area of a rectangle with side lengths that are fractions and relate the area to multiplication of fractions. • Understand how the products of fractions grow or shrink. • Use visual fraction models, number lines, tape diagrams, number grids, to understand division with unit fractions.	• Explore how the base-ten system works with the metric system. • Model real-world problems by constructing a line plot to represent data using fractions. • Interpret data using strategies that include the use of operations of fractions. • Look for patterns in data and explain conclusions. • Use manipulatives to explore the concept of volume of solid figures. • Take apart 3-dimensional shapes and find volumes of rectangular boxes by viewing them as layers cubes. • Solve real-world and mathematical problems that use multiplication and addition.	• Use real-world data to create graphical representations on the coordinate plane (“Sara has $23. She makes $8 per hour. Draw a graph to show how much money she will have after 2, 3, and 4 hours of working”). • Expand on knowledge of geometric figures to classify triangles and special quadrilaterals (square, rhombus, trapezoid, etc.)
Parents can support by:	• Tell your child to write, illustrate and explain word problems based on problems in texts.	• Ask your child to help with household money calculations. • Estimate total expenditures as you fill up your shopping cart at the store.	• Tell your child to divide to divide object amongst family members (3 brownies for 5 people) and explain her thinking.	• Ask your child to build structures with blocks or Legos with specific dimensions and calculate volume of the structures. • Tell your child to calculate the volume of household items (laundry basket, tissue boxes, etc.)	• Using graph paper, chart the weather with temperature on vertical axis (y-axis) and date on horizontal axis (x-axis). • Play “Battleship” with your student. • Find coordinate “connect-the-dots” worksheets online: http://www.superteacherworksheets.com/mystery-graph-picture.html

Fifth Grade Students:

- Expand their understanding of place value to include writing, rounding, and comparing decimals to the thousandths.
- Extend their understanding of operations and properties of fractions to include division of unit fractions by whole numbers when solving real world problems.
- Use symbols in expressions to represent patterns found in a table or problem, and generate a rule.
- Understand the parts of the coordinate plane and graph ordered pairs.
- Apply their understanding of multiplication and addition to problems involving volume.

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:

- Ask your child to estimate and then calculate costs of groceries and household expenses.
- Discuss newspaper articles and pieces of literature that are related to math with your child.
- Discuss sports statistics with your child.
- Play games with your child such as chess, backgammon, checkers, cribbage and board games.
- Read and interpret maps with your child.
- Calculate volumes when cooking or during household projects.
- Work together on math teasers.
- 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 their 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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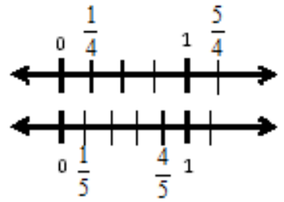
How Things Have Changed:



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 is closer to 1?

A) 5/4 B) 4/5
C) 3/4 D) 7/10

Answer: B

Common Core Standards Assessment:
4/5 is closer to 1 than 5/4. Explain why this is true using a number line.

Possible Answer:

When one is divided into five parts, each part is shorter than when one is divided into four parts because there are more parts. So the distance between 4/5 and one is shorter than the distance between 5/4 and one.

DRAFT