

# Major Learning Targets for This Grade

Reasoning with Ratios and Rates		
Students will use reasoning of ratios, rates, and percentages.		
"I can read a word problem a represent the situation with a ratio."	nd "I can use a ratio to find the associated rate, the unit rate, and equivalent ratios."	"I can model ratios, rates (associated and unit rates), and percentages."
Example Task:   Situation: You baked brownies for your whole class, but you didn't bake enough. You baked 24 brownies, and there are 36 students in your class.   Represent as a Ratio: Make a Visual Model: Find the Unit Rate:   24 brownies : 36 students 1 brownie 1 brownie   or 2:3 1 1 1 1   Interpret Ratio: 1 1 1 1 1   There are 2 brownies for every 3 students. 1 1 1 1 1   How many brownies should you give to the table that has 6 students sitting at it? Students sitting at it? Students sitting at it?		
Expressions and Equations		
Students will write, interpret, and evaluate expressions and equations.		
"I can make sense of the parts within algebraic expressions and equations (factor, product, term, etc.)."	"I can read, write and evaluate expressions and equations in which letters stand for numbers." 2x + 1 (Expression, x can be any value) 4x - 3 = 9 (Equation, $x = 3$ )	"I can write an inequality to represent a real-world situation, in the form $x > c$ or $x < c$ ; for example, our class needed to raise at least \$100 to go on the school trip ( $x \ge 100$ )".
Example Task:   Meagan spent \$56.58 on three pairs of jeans. If each pair of jeans costs the same amount, write an equation that   represents this situation and solve it to determine the price of one pair of jeans.   J J		
Number System		
Students will understand and use negative numbers, divide fractions, and perform decimal operations.		
"I can fluently add, subtract, multiply, and divide multi-dig decimals using the standard algorithm."	"I can solve real-world and it mathematical problems by graphing in all four quadrants of the coordinate plane (x/y grid)."	"I can divide fractions by whole numbers and divide fractions by fractions using a visual fraction model." (see example below)
Example Task:		
Manny has $\frac{1}{2}$ of a yard of fabric with which he intends to make bookmarks.		$\frac{1}{2} \text{yd}$
Each bookmark is made from of $\frac{1}{8}$ a yard of fabric.		
How many bookmarks can Manny make?		





### Expected Behaviors in Math Class

Students will ...

- Make predictions and estimations
- Decide if their answer is reasonable
- > Use examples and counterexamples to justify a conclusion
- > Explain their thinking and their process to solving a problem
- > Apply mathematics to solve problems in everyday life
- > Consider available tools to help them solve problems (including hands-on tools and technology)
- Use technology to explore and deepen their understanding
- > Communicate ideas clearly verbally and in writing, using math vocabulary when appropriate
- Look for patterns and shortcuts

## How Can I Support My Student in This Course?

### 1. Ask Questions

- When your student is stuck, ask him/her questions like:
  - "How do you know?"
  - "Have you seen a similar problem like this before?"
  - "Does your answer make sense?"
  - "What is the problem asking you?"
  - "What information do you need to solve this question?"

#### 2. Encourage Your Student to Ask Questions

• You don't need to be able to answer every question that students may come up with; encourage your student to write down his/her question to bring to a teacher or peer the next day

#### 3. Ask Your Student to Draw the Math Problem

- o All mathematics can be represented visually; visual representations help students understand the concepts
- Encourage color coding

#### 4. Encourage Multiple Representations of the Problem

• Ask your student to solve the problem in a different way, and to make connections between the different representations

#### 5. Value Mistakes

• Students are learning when they are making mistakes; create an environment where your student feels comfortable making a mistake and learning from it

#### 6. Don't Simply Tell Them the Right Answer

- Once students are aware that their answer is right, they are more likely to stop thinking about the math
- Instead of telling them the right answer, ask them a question (see #1) or have them draw a picture
- 7. Praise Effort
  - When your student gets a right answer, acknowledge how hard they must have worked and practiced
  - When your student is stuck, acknowledge that sometimes math is challenging and that if they continue to practice and work hard, they will improve

For more information, visit scusd.edu/math or contact Mikila-Fetzer@scusd.edu, Math Coordinator

SCUSD's Vision for Instruction and Assessment: *As a community of learners, we strive to create positive and engaging environments where a rigorous, student-centered curriculum is central. Teachers use inquiry-based instruction and formative assessment practices to support ALL learners in maturing socially and in becoming disciplinary thinkers.*