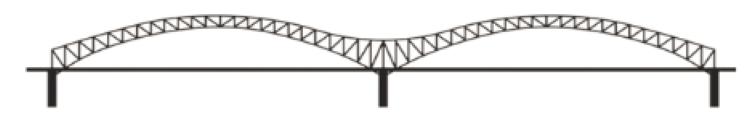


# **Bridging for Math Strength Resources**

**Standards of Learning Curriculum Framework (SOL)** 

## **Bridging Standards of Learning (SOL) for Grade 6**

**Bridging Standard of Learning (SOL) 6.5c** Solve multistep practical problems involving addition, subtraction, multiplication and division of decimals



Student Strengths	Bridging Concepts	Standard of Learning
Students can create and solve single-step and multistep practical problems involving addition, subtraction of decimals.	Students can solve multistep practical problems with multiplication of decimals and single-step practical problems involving division of decimals.	Students can solve multistep practical problems involving addition, subtraction, multiplication and division of decimals.

## **Understanding the Learning Trajectory**

## Big Ideas:

- The real-world actions for addition and subtraction of whole numbers are the same for operations with decimals.
- Different real-world interpretations can be associated with the product of a whole number and decimal, a decimal and whole number, and a decimal and decimal.
- Different real-world interpretations can be associated with division calculations involving decimals (Charles, 2005).
- In mathematics, emphasis should be placed on representing the problem and applying reasoning to understand it rather than relying on keywords (See <u>Grade 4 VDOE Standards of Learning Document p.19</u>).
- Examples of practical situations solved by using estimation strategies include shopping for groceries, buying school supplies, budgeting an allowance, and sharing the cost of a pizza or the prize money from a contest.
- Different strategies can be used to estimate the result of computations and judge the reasonableness of the result.

#### Virginia Department of Education

#### Formative Assessment:

- Just in Time Mathematics Quick Check 6.5c Word
- Just in Time Mathematics Quick Check 6.5c PDF
- Just in Time Mathematics Quick Check 6.5c Desmos

#### **Important Assessment Look Fors:**

- The student determines the correct operation or operations needed to solve the problem and can justify his/her choices.
- The student uses estimation to determine reasonableness of solution.
- The student can justify why the answer makes sense.
- The student uses a strategy to organize the information presented in the problem, such as a chart, diagram, list, or picture.

## **Purposeful Questions:**

- What are you trying to find in the problem?
- How can you begin to organize your thinking? Will a picture or chart help you?
- How do you know your answer is reasonable and what does it mean?
- How can you determine the operation or operations that can be used to solve the problem?
- Have you answered the question asked in the problem?

Bridging Activity to Support Standard	Instructional Tips
Routine Math in Our World: Ruined Receipt, Math Learning Center	The student will determine the missing parts of the receipt. There is also a follow up activity and a challenge activity.
Rich Tasks  VDOE 6.5c Smart Shopper  Template and Task	Students have a limited budget to purchase items. They are given three stores and prices to make the best choice from.
Games/Tech Gimkit: Decimal Word Problems	Students will use what they know about operations with decimals to play the Gimkit game.
<u>Desmos 6.5c Problem Solving</u> <u>with Decimals</u>	This activity explores a variety of contexts and models to solve decimal word problems.

#### Other Resources:

- Open Middle slides: 13, 14, 15, 16, 21, 24, 25, 26, & 27. Students will use the numbers given only one time with the given operation to get as close as they can to the given number.
- VDOE Mathematics Instructional Plans (MIPS)
  - <u>Practical Problems Involving Decimals</u> (Word) / <u>PDF</u>
- VDOE Algebra Readiness Formative Assessments
  - o SOL 6.5c (Word) / PDF
- VDOE Algebra Readiness Remediation Plans
  - o Problem Solving- Strategies for Finding the Hidden Question (Word) / PDF
- VDOE Word Wall Cards: Grade 6 (Word) / (PDF)
  - Multiplication and Division of Decimals

### **Learning Trajectory Resources**

Charles, R., (2005). <u>Big Ideas and Understandings as the Foundation for Elementary and Middle School Mathematics</u>. *Journal of Mathematics Education Leadership*, 7,(3), NCSM.

Common Core Standards Writing Team. (2019). <u>Progressions for the Common Core State Standards for Mathematics</u>. Tucson, AZ: Institute for Mathematics and Education, University of Arizona.

Curriculum Framework for All Grades -Standard of Learning Curriculum Framework (SOL)

Van De Walle, J., Karp, K. S., & Bay-Williams, J. M. (2018). *Elementary and Middle School Mathematics: Teaching Developmentally.* (10th edition) New York: Pearson(2019:9780134802084)