



Bridging for Math Strength Resources

[Standards of Learning Curriculum Framework](#)

Standard of Learning (SOL) 7.1e Identify and describe absolute value of rational numbers.



Student Strengths	Bridging Concepts	Standard of Learning
The student can plot an integer on the number line. The student can determine the distance between two numbers on the number line.	The student will identify and describe absolute value of integers.	Students can identify and describe absolute value of rational numbers.

Understanding the Learning Trajectory

Big Ideas:

- Numbers can be described as distance from 0.

Formative Assessment:

- VDOE Just in time Quick Check [SOL 7.1e](#) (Word) / [PDE](#) / [Desmos](#)

Important Assessment Look Fors:

- The student correctly identified the absolute value of a value on the number line
- The student correctly determined the distance between two numbers on the number line and properly justified their answer.
- The student demonstrates the understanding of absolute values by correctly identifying positive and negative values with the same absolute value.

Purposeful Questions:

- Why is the absolute value of a rational number always a positive?
- How can you verify your answer on the number line?
- How does absolute value apply to finding the difference between two numbers?

Bridging Activity to Support Standard	Instructional Tips
Routine Always/Sometimes/Never Slides 1, 7, 9, 10	Students are given the opportunity to justify their reasoning in regards to finding the absolute value of a rational number. The questions are in variable terms allowing for the students to understand how these justifications and statements would apply to a variety of rational numbers. Teachers can provide prompts for the students to consider to guide a student's argument. Slides 11 and 13 can be applied to enrichment and expand the student's understanding of absolute value.
Rich Tasks Jumping Flea	This activity allows the students to explore absolute value from the perspective of the solution and to consider which rational values would yield various absolute values. Teachers might want to give students a manipulative they can physically move on the number line provided.
Games/Tech Desmos 7.1e Exploring Absolute Value Math is Fun Math Games: Absolute Value of Rational Numbers	Students explore the meaning of absolute value and demonstrate absolute value on a number line, then work on finding the distance between two integers using absolute value. Students are provided an explanation regarding absolute values then are given questions to answer with immediate feedback regarding accuracy. Various levels of difficulty are available in this game which provides the students with immediate feedback in response to their answer.
Other Resources: • VDOE Mathematics Instructional Plans (MIPS) ◦ 7.1e Absolute Value (Word) / PDF Version • VDOE Algebra Readiness Formative Assessments ◦ SQL 7.1e (Word) / PDF Version • VDOE Algebra Readiness Remediation Plans ◦ Absolute Value (Word) / PDF • VDOE Word Wall Cards: Grade 7 (Word) (PDF) ◦ Absolute Value • Desmos Activity ◦ Exploring Absolute Value Learning Trajectory Resources: Charles, R. (2005). Big ideas and understandings as the foundation for elementary and middle school mathematics. <i>Journal of Mathematics Education Leadership</i>, 7(3), NCSM. Clements, D. H., & Sarama, J. (2019). Learning and teaching with learning trajectories [LT]2. Marsico Institute, Morgridge College of Education, University of Denver. https://www.learningtrajectories.org/ Common Core Standards Writing Team. (2019). Progressions for the Common Core State Standards for Mathematics. Tucson, AZ: Institute for Mathematics and Education, University of Arizona. Richardson, K. (2012). How Children Learn Number Concepts: A Guide to Critical Learning Phases. Bellingham: Math Perspectives Teacher Development Center.	

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VDOE Curriculum Framework for All Grades - [Standard of Learning Curriculum Framework \(SOL\)](#)