

Core Content

Cluster Title: Apply and extend previous understandings of numbers to the system of rational numbers.
Standard 6: Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own opposite.
MASTERY Patterns of Reasoning:
Conceptual: Understand the meaning of the term <i>opposite</i> . Recognize that the opposite of the opposite of the number is the number itself (e.g., $-(-3)$). Recognize that zero is its own opposite. Procedural: Find the opposite of a number. Representational: Extend number line diagrams to include negative numbers. Plot opposites on a number line.

Supports for Teachers

Critical Background Knowledge
Conceptual: Know the characteristics of a number line (extends in both directions, origin, importance of unit). Know a number line can be used to represent real life situations. Procedural: Create a number line with equidistant tick marks determined by the identified unit. Representational: Draw a number line. Represent real-life contexts on a number line.

Academic Vocabulary and Notation	
+, −, integer, opposite, rational number, (), point	
Instructional Strategies Used	Resources Used
<p>Make a number line on the floor. Have a student choose an integer to stand on then call on a student to come stand on the opposite integer.</p> <p>Repeat process asking students to stand on the opposite of an opposite. Have students use appropriate notation to record these integers.</p>	<p>http://mathstar.lacoe.edu/lessonlinks/integers/integers_main.html</p>
Assessment Tasks Used	
<p>Skill-based Task: Locate 4 and its opposite on a number line.</p>	<p>Problem Task: This is a skill-based standard. Therefore, no problem task is offered.</p>