



## Common Core Math Newsletter

### 6th Grade Unit 1: Rational Numbers

*In this unit, students will develop an understanding of rational numbers and specifically integers. In addition, they will learn the use of integers in the real world.*

#### Standard

##### 6.NS.C.5

- Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g. temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge)
- Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation

##### 6.NS.C.7b

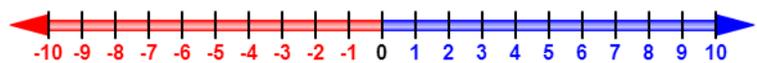
- Write statements of order for rational numbers in real-world contexts
- Interpret statements of order for rational numbers in real-world contexts
- Explain statements of order for rational numbers in real-world context (e.g. write  $-3^{\circ}\text{C} > -7^{\circ}\text{C}$  to express the fact that  $-3^{\circ}\text{C}$  is warmer than  $-7^{\circ}\text{C}$ )

##### 6.NS.C.8

- Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plan
- Use coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate

#### Vocabulary

|                        |   |
|------------------------|---|
| <b>rational number</b> | a number made by dividing two integers; in other words, a number that can be written as a ratio (fraction $a/b$ )   |
| <b>integer</b>         | a whole number or number with no fractional parts (e.g. $-1, 5, 37, -46\dots$ )   |
| <b>absolute value</b>  | how far a number is from 0 on a number line (e.g. 6 is 6 away from 0, and $-6$ is also 6 away from 0; the absolute value of 6 and $-6$ is 6; $ 6  = 6$ and $ -6  = 6$ ) |



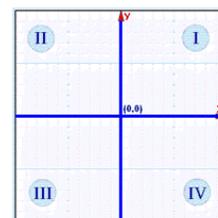
$$|-6| = 6$$

## 6th Grade Common Core Math

### Unit 4: Rational Numbers

#### Vocabulary (cont'd.)

|                                   |   |
|-----------------------------------|---|
| <b>positive number</b>            | a number with a value greater than 0  |
| <b>negative number</b>            | a number with a value less than 0   |
| <b>opposite</b>                   | having a position on the other side of 0 and the same distance from 0 (e.g. opposite of 6 is $-6$ ) |
| <b>quadrant</b><br>I, II, III, IV | the four areas made when we divide up a plane by an x and y axis                                    |
| <b>x-axis</b>                     | line on a graph that runs horizontally through 0  |
| <b>y-axis</b>                     | line on a graph that runs vertically through 0  |
| <b>coordinates</b>                | a set of values that show an exact location [e.g. $(3, -2)$ ]                                       |
| <b>less than</b> <                | having less value (e.g. $-6 < -5$ )   |
| <b>greater than</b> >             | having greater value (e.g. $-4 > -9$ )  |



#### Additional Resources

##### IXL.com Topics:

- Integers
- Rational Numbers
- Coordinate Plane

##### LearnZillion.com Videos:

- <https://learnzillion.com/lessonsets/447-understand-the-relationship-between-positive-and-negative-numbers-interpret-zero-and-positive-or-negative-numbers-in-real-world-contexts>
  - Quick Code LZ2550
- <https://learnzillion.com/lessonsets/191-understand-and-interpret-absolute-value-and-distinguishing-comparisons-of-absolute-value-from-statements-about-order>
  - Quick Code LZ1142
- <https://learnzillion.com/lessonsets/192-graph-points-in-all-four-quadrants-on-the-coordinate-plane-to-solve-real-world-and-mathematical-problems>
  - Quick Code LZ1147

*Be sure to look to the left of the video to see other lessons on the standard.*