**Grade 5 G/T Mathematics**

 **Unit 3 Integers Preview**

Understand *p* + *q* as the number located a distance  from *p*, in the positive or negative direction depending on whether *q* is positive or negative.

Mathematical Concepts: (Your child will be able to)

* Understand a rational number as a point on the number line.
* 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.
* Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane.
* Recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
* Find and position integers and other rational numbers on a horizontal or vertical number line diagram.
* Find and position pairs of integers and other rational number on a coordinate plane.
* Understand ordering and absolute value of rational numbers.
* Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.
* Write, interpret, and explain statements of order for rational numbers in real-world contexts.
* Understand the absolute value of a rational number as its distance from 0 on the number line.
* Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.
* Distinguish comparisons of absolute value from statements about order.
* Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers.
* Represent addition and subtraction on a horizontal or vertical number line diagram.
* Describe situations in which opposite quantities combine to make 0.
* Understand *p* + *q* as the number located a distance  from *p*, in the positive or negative direction depending on whether *q* is positive or negative.
* Understand subtraction of rational numbers as adding the additive inverse, .
* Apply properties of operations as strategies to add and subtract rational numbers.

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# Vocabulary: (Words your child will need to understand)

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| • **Additive Inverse:** The additive inverse of a number a is the opposite of the number, or –a. The sum of a number and it’s additive inverse is 0. | **• Ordered Pair:** a pair of numbers (x, y) that can be used to represent a point in the coordinate plane. |
| **• Absolute Value:** the distance between a number and 0 on a number line | **• Origin:** The point (0, 0) where the x-axis and the y-axis meet in a coordinate plane. |
| **• Inequality:** A mathematical sentence formed by placing an inequality symbol between two expressions. | **• Quadrant:** One of the four regions that a coordinate plane is divided into by the x-axis and the y-axis. |
| **• Integer:** The numbers …, -4, -3, -2, -1, 0, 1, 2, 3, 4, … consisting of the negative integers, zero, and the positive integers. | • **x-axis:** The horizontal axis in a coordinate plane. |
| **• Multiplicative Inverse:** The multiplicative inverse of a number a/b is the reciprocal of the number, or b/a. | **• y-axis:** The vertical axis in a coordinate plane. |

Optional activities to do with your child:

Math Game – Identify ordered pairs on the coordinate plane <http://www.mathplayground.com/locate_aliens.html>

Addition and Subtraction of Integers <http://mypages.iit.edu/~smart/dvorber/lesson4.htm>

Multiplication of Integers<http://www.aaamath.com/ac121.htm>

Dividing by Repeated Subtraction <http://www.aaamath.com/div39_x1.htm>

Balancing a Checkbook <http://themint.org/kids/get-some-practice.html>