**Math Unit 4: Rational Numbers (4-6 weeks)**

**Week 6: 1/27 – 1/31**

1/27 - Distance on the Coordinate Plane

YWBAT apply knowledge of absolute value in order to determine distance between two points on a coordinate plane

Success is: compute the length of horizontal and vertical line segments with integer coordinates for end points in the coordinate plane by counting the number of units between end points and using absolute value

* In partners or individually, complete the tasks involving plotting and reflecting points and calculating distance
* Re-visit goals

1/28 – Lesson 19: Problem Solving and the Coordinate Plane

YWBAT solve problems related to the distance between points that lie on the same horizontal or vertical line

Success is: using the coordinate plane to graph points, line segments, and geometric shapes in the various quadrants and then use the absolute value to find the related distances

* Correct homework
* Warm up – opening exercise and exploratory challenge in table groups
* Exercise 3 as a class
* Exercise 4-6 in table groups
* Exercise 7 individually
* Independent/guided practice: problem set
* Re-visit goals
* Exit ticket

1/29 - YWBAT recall your previously learned knowledge about rational numbers, number lines, absolute value and graphing on the coordinate plane

Success is: solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same *x*-coordinate or the same *y*-coordinate

* Correct homework
* Assessment

1/30 - Lesson 5: Exponents

YWBAT understand that a base number can be represented with a positive rational number

YWBAT understand that an exponent represents the number of times the base is used as a factor

Success is: represent numbers using exponents

* Sprint: division of fractions
* Opening exercise
  + Discussion
* Vocabulary: base, exponent, powers
* Examples 1-5: Write products as powers and write powers as products
* Examples 6-8: evaluating expressions
* Vocabulary: squared and cubed
* Examples 9-10
* Guided practice: exercises
* Exit ticket
* Revisit goals

1/31 - Lesson 6: Order of Operations

YWBAT recall the order of operations from 5th grade

Success is: find the value of expressions using the order of operations.

* Correct homework
* Opening exercise
  + Discuss
* Example 1: Expressions with only addition, subtraction, multiplication and division
  + practice: exercises 1-3
* Example 2: Expressions with 4 operations and exponents
  + practice: exercises 4-5
* Example 3: Expressions with parenthesis
  + practice: exercises 6-7
* Example 4: Expressions with exponents and parenthesis
  + practice: exercises 8-9
* Exit ticket
* Re-visit goals