Essential Math 2

The following learning targets represent the major concepts studied and assessed in this course.

Unit 3
Micro-Geography of the Number Line

U3.1. Comparing rational numbers(decimals and fractions).
U3.2. Look for and make use of structure using numbers sense with fractions and decimals.

- Order & place positive & negative numbers (decimals & fractions) on the number line
- Connect the structure of decimals to that of integers by zooming in on the number line by factors of 10.
- Connect fractions to integers both through zooming in on the number line & through division
- Evaluate & estimate sums & differences of decimals & fractions
- Find distances between numbers with fractions & decimals by using the number line in the same way it was used with integers
- Identify numbers between numbers using decimals & fractions

Unit 4
Area and Multiplication

- Understand the behavior of multiplication with signed terms as an extension of number line patterns
- Understand the relationship between area and multiplication and use it to reason about numerical and polynomial multiplication
- Use area model thinking to apply the distributive property to multiplication problems
- Translate between symbolic expressions and area models
- Recognize and create equivalent expressions using properties of operations

Unit 5
Logic of Algebra

U5.1 Write an expression, equation or inequalities using multiple representations.
U5.2 Justify my steps in solving linear and simple quadratic equations.

- Explore the basic rules of algebraic manipulation by imagining a balanced mobile puzzle
- View expressions as a series of ordered steps recorded with precise notation
- Understand, generate, & translate between verbal arithmetic instructions & algebraic expressions
- Develop mathematical language related to calculations & equations
- Solve equations using properties of operations & the logic of preserving equality