

# 7th Grade Math Curriculum Outline

\*Here are the end goals curriculum to cover in 6th grade math for each academic year.

Keep in mind, this is an ideal. With school activities, unexpected weather, sometimes not every chapter is able to be covered. HOWEVER, what isn't covered in one year's curriculum is still reviewed and recovered in some form in the other middle school years so it WILL still be taught.

*Also, while concepts are taught, reinforcement may be needed outside the school walls. With many concepts, there are steps involved and some students may need to review & study those steps outside of the classroom for sake of retention. If you have any questions, feel free to fast direct me for any further clarification.*

## **Chapter 1**

- Integers: Adding, subtracting, multiplying & dividing
- Ordering & comparing integers
- Integers & absolute value

## **Chapter 2**

- Simplifying mathematical & algebraic expressions
- Solving addition/subtraction/multiplication/division equations

## **Chapter 3**

- Inequalities & graphing inequalities on a number line
- Solving 1 & 2 step inequalities

## **Chapter 4**

- Rational numbers
- Ordering & comparing rational numbers
- Adding/subtracting/multiplying/dividing decimal numbers
- Negative exponents
- Scientific notation & operations with scientific notation
- Solving 1 & 2 step equations with decimals

## **Chapter 5**

- Prime Factorization
- Greatest Common Factors
- Least Common Multiples
- Fraction sense & comparing & ordering with rational numbers
- Adding, subtracting, multiplying, & dividing fractions & mixed #s
- Simplifying expressions & solving equations with fractions & mixed #s

## **Chapter 6**

- Ratios, rates, & unit rates
- Solving various types of proportions
- Scale drawings & similarity

<b>Chapter 7</b>	→Fractions, decimals, & percents →Percent applications in the real world
<b>Chapter 8</b>	→Surveys & samples →Measures of tendency & range →Different types of graphs (stem & leaf, histogram, bar, etc.)
<b>Chapter 9</b>	→Points, lines, & planes; types of angles →Polygons, triangles, and congruent triangles →Quadrilaterals & circles
<b>Chapter 10</b>	→Perimeter & areas of parallelograms, triangles, & trapezoids →Square roots & The Pythagorean Theorem →Irrational numbers
<b>Chapter 11</b>	→Surface area of pyramids, cylinders, & cones →Volume of prisms, pyramids, cylinders, & cones →Surface area & volume of complex 3-D objects
<b>Chapter 12</b>	→Theoretical probability vs experimental probability →Odds & fairness →Compound events →Permutations & combinations
<b>Chapter 13</b>	→Arithmetic vs geometric sequences →Relations, functions, & graphing linear functions →Graphing translations, reflections, rotations, and dilations →Nonlinear functions
<b>Chapter 14</b>	→Polynomials: Adding & subtracting →Multiplying & dividing monomials →Operations between polynomials & monomials →Operations with inequalities

