PEAK MATH | SYLLABUS

SUMMIT EDUCATIONAL GROUP

ALGEBRA – PART 1

Session 1: Prealgebra Review
- Numbers
  Natural, Whole, Integers, Negative & Positive, Rational & Irrational, Real & Imaginary
- Order of Operations
- Commutative Property
- Distribution & Factoring
- Equations
- Exponents
- Fractional Exponents
- Radicals

Session 2: Algebraic Expressions
- Expressions
- Distribution & Factoring
- Fractions

Session 3: 1-Variable Linear Equations
- Solving Equations
- Word Problems

Session 4: More Variables
- Evaluating Multi-Variable Expressions
- Distribution & Factoring
- Fractions

Session 5: Multi-Variable Equations
- Systems of Equations
- Substitution
- Elimination

Session 6: Ratios & Percents
- Ratio Problems
- Conversion Factors

Session 7: Proportions
- Direct Proportion
- Inverse Proportion
- Joint Proportion

Session 8: Review

Session 9: Graphing Lines
- Number Lines & Cartesian Plane
- Graphing Coordinates
- Slope & Midpoint

Session 10: Graphing Lines
- Point-Slope Form
- Standard Form
- $y = mx + b$
- Parametrization
- Parallel Lines
- Perpendicular Lines

Session 11: Inequalities
- Comparison of Fractions
- Interval Notation
- Graphing Inequalities
- Optimization

Session 12: Quadratic Equations
- $ax^2 + bx + c = 0$
- FOIL
- Factoring Quadratics

Session 13: Quadratic Equations
- Sum of Roots
- Product of Roots
- Applications of Quadratics

Session 14: Factorization
- Squares of Binomials
- Difference of Squares

Session 15: Factorization
- Sum of Cubes
- Difference of Cubes
- Rationalizing Denominators
- Factoring Strategies

Session 16: Review