

# 8<sup>th</sup> Grade Honors & Advanced Math Syllabus

May 23, 2016- Revised

1 <sup>st</sup> Benchmark	2 <sup>nd</sup> Benchmark	3 <sup>rd</sup> Benchmark	4 <sup>th</sup> Benchmark	Math Lab
<p><b><u>Ch. 1- Foundations</u></b></p> <p>Number Systems</p> <p><b><u>Ch. 2- Solving Equations:</u></b></p> <p>Multi-Step Equations (Distributive and Combining Like Terms) Variables on both sides</p> <p>Special Equations:</p> <p>Solving Decimal/Fractional Equations Solving Literal Equations Solving Zero Product Equations Solving Absolute Value Equations</p> <p>Radicals (Simplifying/Adding/Subtracting/Multiplying/Rationalizing)</p> <p>Solving Squared Quantity Equation</p>	<p><b><u>Ch. 5 Linear Functions:</u></b></p> <p>Table of Values Slope ~ Y-Intercept Quick Graphs Using Slope-Intercept Form Linear Equations in Slope-Intercept Form Generating Parallel and Perpendicular Lines Linear Equations in General-Linear Form Point-Slope Form of a Linear Equation</p> <p>Scatter Plots/Line of Best Fit Predicting with Linear Models</p> <p>Graphing Linear Inequalities in Two Variables</p> <p><b><u>Ch. 6 Systems of Equations and Inequalities:</u></b></p> <p>Solving Linear Systems by Graphing Solving Linear Systems by Substitution Solving Linear Systems by Elimination Applications of Linear Systems Solving Systems of Linear Inequalities</p>	<p><b><u>Ch. 8 Polynomials and Factoring:</u></b></p> <p>Adding/Subtracting Polynomials Multiplying Polynomials Special Products of Polynomials</p> <p>Factoring (Modeling) Factoring Special Products Factoring Using the Distributive Property Polynomial Division</p> <p><b><u>Ch. 9 Quadratic Functions and Equations:</u></b></p> <p>Introduction to Graphing Non-Linear Equations Graphing Quadratic and Absolute Value Equations in Vertex Form Graphing Non-Linear Inequalities Graphing Quadratic Equations in Standard Form</p> <p>Solving Quadratic Equations with Quadratic Formula</p>	<p><b><u>Ch. 11 Rational Expressions and Functions:</u></b></p> <p>Simplifying Rational Expressions Multiplying and Dividing Rational Expressions Dividing Polynomials Adding and Subtracting Rational Expressions</p> <p>Advanced Word Problems (Motion, Mixture, Coin, Consecutive Int, Work)</p> <p>Matrices (Add, Subtract, Scalar and Multi-Dimensional Multiplication)</p> <p>Matrix Equations</p>	<p><b>1<sup>st</sup> Rotation:</b></p> <p>Exponent Rules</p> <p><b>2<sup>nd</sup> Rotation:</b></p> <p>Linear and Quadratic Functions</p> <p><b>3<sup>rd</sup> Rotation:</b></p> <p>Exponential Functions- Compound Interest, Growth/ Decay</p> <p>Inequalities- Linear, Compound, Absolute Value</p> <p><b>4<sup>th</sup> Rotation:</b></p> <p>Pythagorean Theorem Special Right Triangles Triangle Trig Ratios</p>