Topics covered in Math 1 Honors
Sorted by Unit

Unit 1: Expressions, Equations and Inequalities
- Solving two-step and multi-step equations (including no and all real solutions)
- Solving literal equations
- Solving and graphing inequalities
- Writing, solving and graphing compound inequalities

Unit 2: Functions
- Function notation
- Reading graphs (positive, negative, increasing and decreasing intervals)
- Domain and Range
- Average Rate of Chance
- Interpreting function notation

Unit 3: Linear Functions
- Rate of Change
- Slope Intercept Form
- Translating between graphs, tables, equations, recursive formulas and word problems
- Standard Form
- Parallel and Perpendicular Lines
- Linear Inequalities
- Linear Regression (lines of best fit, correlation coefficients, residuals and residual plots)

Unit 4: Exponential Functions
- Exponent Rules
- Writing and graphing exponential functions (in the form $y=a*b^x$)
- Growth and Decay
- Applications (including half life and interest compounded annually/semiannually/quarterly/monthly/daily)
- Comparing linear and exponential functions
- Exponential Regression

Unit 5: Quadratic Functions

Unit 5a: Polynomials
- Adding, subtracting and multiplying polynomials
- Factoring polynomials (including a=1, a>1, a<1 and difference of squares)

Unit 5b: Quadratic Functions
- Graphs and tables of quadratics
- Standard and factored form of quadratic functions
- Finding vertex, axis of symmetry and zeros by hand and on graphing technology
- Applications of quadratics
- Quadratic Regression

Unit 6: Sequences
- Recursive and explicit form of arithmetic sequences
- Recursive and explicit form of geometric sequences

Unit 7: Systems of Equations
- Solving systems of linear equations by substitution
- Solving systems of linear equations by elimination

- Solving systems of equations by graphing (linear and nonlinear combined)
- Word problems involving systems of equations

Unit 8: Statistics
- Frequency tables, relative frequency and histograms
- 5 number summaries and boxplots
- Shape, outliers, center, spread

Unit 9: Geometry
- Pythagorean Theorem
- Coordinate Geometry (classifying figures, finding perimeter and area)
- Midpoint and Distance Formulas