

# Secondary Math 1 Honors:

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## Module 1

1. I CAN identify and explain the different parts of expressions, equations, inequalities and formulas.
  2. I CAN write expressions and equations to model real-life situations.
  3. I can define a variable, write an equation, and find the value of the variable.
  4. I CAN identify algebraic properties
  5. I CAN solve two-step equations, justify the steps involved and verify the solutions.
  6. I CAN solve multi-step equations, justify the steps involved and verify the solutions.
  7. I CAN solve multi-step inequalities and justify the steps involved.
  8. I CAN use the skills for solving equations to solve literal equations.
  9. I CAN evaluate solutions of equations and inequalities.
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## Module 2

10. I CAN understand and apply the steps for solving problems.
  11. I CAN write linear inequalities to model real-life situations.
  12. I CAN write equations for solving problems involving Travel.
  13. I CAN write equations for solving problems involving Proportions.
  14. I CAN write equations for solving problems involving Percent.
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## Module 3

15. I CAN understand the definition of a function and identify its parts and write a relation in function notation.
  16. I CAN perform operations on and evaluate linear functions.
  17. I CAN identify linear functions represented in equations, tables, graphs or situations.
  18. I CAN graph linear functions using input-output pairs.
  19. I CAN define slope as the rate of change of a function and calculate slope given the coordinates of two points.
  20. I CAN use the slope and y-intercepts to graph and write functions.
  21. I CAN write linear functions in function notation to describe what is happening in a table.
  22. I CAN write linear functions in function notation to describe what is happening in a graph.
  23. I CAN use x- and y-intercepts to graph linear functions.
  24. I CAN write functions using the point-slope form.
  25. I CAN identify the relationships of and write equations for parallel and perpendicular lines.
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## **Module 4**

26. I CAN evaluate exponential functions.
  27. I CAN identify exponential functions represented in equations, tables, graphs or situations.
  28. I CAN graph exponential functions using input-output pairs.
  29. I CAN write exponential equations in function notation to describe what is happening in a table.
  30. I CAN write exponential equations in function notation to describe what is happening in a graph.
  31. I CAN graph parent functions and transformations of exponential functions.
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## **Module 5**

32. I CAN write arithmetic sequences.
  33. I CAN write geometric sequences.
  34. I CAN compare and contrast linear and exponential functions.
  35. I CAN use functions to model a situation.
  36. I CAN draw conclusions and make inferences from graphs and use a graph to model a situation.
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## **Module 6**

37. I CAN solve systems of linear equations graphically and predict the number of solutions .
  38. I CAN solve systems of linear equations by substitution.
  39. I CAN solve systems of linear equations by elimination.
  40. I CAN graph linear inequalities.
  41. I CAN graph systems of linear inequalities.
  42. I CAN use systems of equations to solve real world problems.
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## **Module 7**

43. I CAN define, name and model geometric figures including points, lines, rays, segments, angles and planes.
  44. I CAN find perimeter and area of geometric figures.
  45. I CAN write equations for solving problems involving Angle Relationships.
  46. I CAN find the lengths of segments using addition and midpoint properties.
  47. I CAN find the measures of angles using addition and bisector properties.
  48. I CAN explain and use the properties of triangles.
  49. I CAN explain and use the properties of quadrilaterals and polygons.
  50. I CAN find the measures of angles in circles and polygons.
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## **Module 8**

51. I CAN use the Pythagorean Theorem to find the missing side of a triangle.
  52. I CAN use the distance formulas to calculate lengths of line segments in a coordinate plane.
  53. I CAN use the midpoint to find the midpoint of a line segment in the coordinate plane.
  54. I CAN explain linear relationships dealing with parallel and perpendicular lines, distance and midpoint in a coordinate plane.
  55. I CAN classify shapes and compute perimeter and area in a coordinate plane.
  56. I CAN use my knowledge of geometric shapes to generate complex shapes.
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## **Module 9**

57. I CAN define, identify and make rigid transformations (rotations, reflections and translations), contrast them with non-rigid transformations and discuss symmetry.
  58. I CAN use mappings to transform geometric figures and write rules from transformations.
  59. I CAN justify congruence of triangles.
  60. I CAN construct congruent segments and angles, bisect segments and angles, and construct perpendicular and parallel lines.
  61. I CAN construct Triangles, Squares and Hexagons.
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## **Module 10**

62. I CAN find the mean, median, mode, and range of a set of data, compare my results to an expected distribution, and interpret results based on different sample sizes.
  63. I CAN organize, display and analyze data in histograms.
  64. I CAN organize, display and analyze data in box plots.
  65. I CAN find mean and compute standard deviation and analyze data using mean and standard deviation.
  66. I CAN create scatter plots and use them to analyze data and estimate linear and exponential functions that fit the data.
  67. I CAN understand the difference between correlation and causation and explain that a strong correlation does not mean causation.
  68. I CAN choose the best method to display and analyze statistical data.
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## **Module 11**

69. I CAN recognize vector quantities as having both magnitude and direction. Represent vector quantities

by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g.,  $v$ ,  $|v|$ ,  $\|v\|$ ,  $v$ ).

70. I CAN find the horizontal and vertical components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.
71. I CAN solve problems involving velocity and other quantities that can be represented by vectors.
72. I CAN add vectors end to end, component-wise, and by the parallelogram rule.
73. I CAN represent scalar multiplication graphically and compute the product of a scalar and a vector.
74. I CAN use matrices to represent and manipulate data.
75. I CAN add, subtract, and multiply matrices of appropriate dimensions.
76. I CAN work with  $2 \times 2$  matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.
77. I CAN solve systems of linear equations using matrices.