

# Algebra 2/Honors Algebra 2 At-a-Glance

## Marking Period 1

Unit 1: Functions and Their Inverses	
Sept	<ul style="list-style-type: none"> <li> <b>Unit 1 Topic 1: Inverse Relationships</b>                      In this topic, students develop conceptual understanding of functions and their inverses, informally defining <math>f(x)</math> and <math>g(x)</math> as inverse functions by: <i>When a value, <math>n</math>, is input into <math>f(x)</math> and that result is then input into <math>g(x)</math>, the final result is the original value, <math>n</math>. Additionally, when a value, <math>n</math>, is input into <math>g(x)</math> and that result is then input into <math>f(x)</math>, the final result is the original value, <math>n</math>.</i> Students use what they know about linear, quadratic, square root, and cube root functions from Algebra 1 to explore the relationships between pairs of inverse functions (e.g., quadratic and square root functions and cubic and cube root functions have inverse relationships). The use of known functions, including transformations and applications, allows for review while building new understanding..                 </li> </ul>
	<ul style="list-style-type: none"> <li> <b>Unit 1 Topic 2: Radical Expressions and Equations</b>                      Students apply their understandings of inverses to explore radical expressions, equations, and functions. Initially, the focus is on graphing radical functions and identifying key features. As students explore these functions and inverses, they will compare average rates of change. Students use a variety of strategies to solve simple radical and rational equations, and are able to move flexibly between radical and rational form. Finally, students apply understandings of radical functions to model and solve application problems.                 </li> </ul>
Sept/ Oct	<ul style="list-style-type: none"> <li> <b>Unit 1 Topic 3: Exponential &amp; Logarithmic Expressions, Equations, &amp; Functions</b>                      In this topic, students extend what they have learned about inverse relationships to exponential and logarithmic functions (base 2, 10, and <math>e</math>). Students will solve exponential and logarithmic equations graphically, numerically, and symbolically. This includes solving exponential equations by applying the definition of a logarithm. <i>Note: Students are not expected to utilize the properties of logarithms to evaluate expressions or solve equations in this course.</i> Students will extend what they know about key features of graphs and transformations of graphs to exponential and logarithmic functions. Applications of these functions will be explored throughout this topic.                 </li> </ul>

## Marking Period 2

Unit 2: Polynomial and Rational Functions	
Nov	<ul style="list-style-type: none"> <li> <b>Unit 2 Topic 1: Quadratic Expressions and Equations</b>                      Under construction.                 </li> </ul>
Dec/ Jan	<ul style="list-style-type: none"> <li> <b>Unit 2 Topic 2: Polynomial Expressions &amp; Equations</b>                      Under construction.                 </li> </ul>

## Marking Period 3

Jan/ Feb	<ul style="list-style-type: none"> <li> <b>Unit 2 Topic 3: Rational Expressions &amp; Equations</b>                      Under construction.                 </li> </ul>
Unit 3: Introduction to the Unit Circle & Trigonometric Functions	
Feb	<ul style="list-style-type: none"> <li> <b>Unit 3 Topic 1: Introduction to the Unit Circle</b>                      Under construction.                 </li> </ul>
Feb/ Mar	<ul style="list-style-type: none"> <li> <b>Unit 3 Topic 2: Trigonometric Functions</b>                      Under construction.                 </li> </ul>
Unit 4: Modeling with Functions	
Mar	<ul style="list-style-type: none"> <li> <b>Unit 4 Topic 1: Modeling with Functions</b>                      Under construction.                 </li> </ul>

## Marking Period 4

Apr	<ul style="list-style-type: none"> <li> <b>Unit 4 Topic 1: Modeling with Functions <i>Continued</i></b> </li> </ul>
Unit 5: Inferences and Conclusions from Data	
Apr/ May	<ul style="list-style-type: none"> <li> <b>Unit 5 Topic 1: Interpreting Data, Making Inferences, &amp; Justifying Conclusions</b>                      Under construction.                 </li> </ul>
Unit 6: Applications of Probability	
May/ Jun	<ul style="list-style-type: none"> <li> <b>Unit 6 Topic 1: Conditional Probability and the Rules of Probability</b>                      Under construction.                 </li> </ul>