HONORS PRECALCULUS
UNIT 2: POLYNOMIAL FUNCTIONS

DAY	LESSON	ASSIGNMENT
1	• To analyze quadratic functions • To write a quadratic function in vertex form and use it to sketch the graph • To use quadratic functions to model real world situations	Optional: p. 143–146: 1-8, 12, 15, 17, 23, 29, 31, 37, 41, 45, 49 Homework: p. 143–146: 61 – **67** – 73 odd, 74, 78, 79-81 Quad Review Wksht Odds
2	• To use transformations to sketch the graphs of polynomial functions • To determine the end behavior of graphs • To find and use the zeros of polynomial functions and sketch their graphs • To use the intermediate value theorem to locate the zeros of polynomial functions	Optional: p. 156-159: 1-8, 9, 11, 17, 21, 27, 29, 33, 43, 45, 50, 61, 65 Homework: p. 157-159: 68, 71, 81, 86, 88, 91, 93, **95**, **96**, **99**
3	• Use synthetic division to divide polynomials by binomials of the form (x-k) • Use the remainder theorem and factor theorem • Use the rational zero theorem to determine possible zeros of a polynomial function • Determine the upper and lower bounds for the zeros of a polynomial function	Optional: p. 170–173: 6, 7-27 every other odd, 37, 39-55 odd Homework: p. 170-173: 55-77 every other odd, **89**, 90, Division Worksheet
4	• Use the imaginary unit *i* to write complex numbers • Add, subtract and multiply and simplify complex numbers • Use complex conjugates to divide complex numbers • Plot complex numbers in the complex plane	Optional: p. 180–181: 1-36 Homework: p. 180-181: 37-74 Every Other Odd **Quiz 1** Complex Worksheet
5	• Use the Fundamental Theorem of Algebra to determine the number of zeros of polynomial functions • Find all the zeros of a polynomial function including the complex zeros • Find the zeros of a polynomial by factoring	Optional: p. 187–188: 1-45, every other odd Homework: p. 187-188: 53-63 odd, 65,66, 73-76 Zeros Worksheet
6	• Find the domain of rational functions • Find the vertical and Horizontal asymptotes of graphs of rational functions • Use rational functions to model and solve real-life problems	Optional: p. 195–198: 7- 18, Homework: p. 195-198: 19-30,**31**, **32**

7	• Analyze and sketch rational functions • Determine if rational functions have slant asymptotes • Use rational functions to model and solve real-life problems	Optional: p. 204–207: 1-65 every other odd **Quiz #2** Homework: p. 204-207: 68, 70, 71,**72**,73 **82-85** **Rational Worksheet #1** **Rational Worksheet #2**
7	• ***Review***	**Unit 2 Review Worksheet 1** **Unit 2 Review Worksheet 2**
8	• ***Unit 2 Test***	Problem Set #2