

**Honors Precalculus**  
**Chapter 2 "Can you?" (F2016)**

**Name:**

1. Using a graphing calculator,
  - a. Graph a polynomial function,
  - b. Determine the domain and range of the function,
  - c. Determine end behavior,
  - d. Find the x- and y- intercepts,
  - e. Find relative maximum and minimum values,
  - f. Describe where the function is increasing and decreasing.
2. Without using a calculator,
  - a. Find the power of a polynomial function,
  - b. Give the maximum number of zeroes and turning points,
  - c. Compute the zeroes of the function,
  - d. Determine end behavior,
  - e. Determine the domain and range of the function,
  - f. Determine the y-intercept,
  - g. Draw the graph of the function.
3. Explain the significance of multiple roots and how they affect the graph of a polynomial function.
4. Solve a polynomial inequality.
5. Write the equation of a polynomial function given the degree and zeroes.
6. Use polynomial functions to model real life behavior.
7. With or without a calculator, for a rational functions:
  - a. Find the equations of the vertical and horizontal asymptotes;
  - b. Describe end behavior;
  - c. Describe interior behavior;
  - d. Give domain and range;
  - e. Graph the function.
8. Graph exponential functions and describe their behavior.
9. Use exponential functions to model real life situations.
10. Graph logarithmic functions and describe their behavior.
11. Apply the rules of logarithms.
12. Solve equations involving logarithms.
13. Solve equations involving exponential functions.