

## Chapter 4 Activity

Use your note sand class discussion to answer the following to your best ability.

1. Fully define polynomial. Include information about its graphical representation.
2. Explain when synthetic division can and cannot be used. Give an example of polynomial long division and one of synthetic division.
3. Explain what the relationship is between remainders and factors.
4. Explain the Remainder Theorem and how the Factor Theorem is a particular case of it.
5. Discuss the relationship between zeros, factor, solutions, and x-intercepts of a polynomial function.
6. Explain how to determine the zeros of a polynomial beginning with the rational zeros. Use a polynomial from a HW activity or notes to help clarify your procedure.
7. Describe how to determine if an x value is an upper or lower bound for the zeros of a polynomial.
8. Explain the basic shapes of Odd and Even degree polynomials. In addition, discuss the End Behavior of Odd and Even degree polynomials.
9. Explain multiplicity regarding the factors of a polynomial. What information does multiplicity give? Explain.
10. The degree of a polynomial gives us what information? What other information about the graph of the polynomial can be derived from knowing the degree?