**Unit 7 Polynomials and Functions**

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| **Practice Packet:**  See below | **Writing Task:**  Make you a “cheat sheet” for finding all roots of a polynomial by factoring, division, rational root theorem, etc… |
| **Game/Activity:**  <https://www.vocabtest.com/crosswords.php?tid=110274> | **Technology:**  <http://www.softschools.com/math/algebra/polynomials/classifying_polynomials/> |
| **Art/Music/Drama/etc.** :  Write an “I am a polynomial” poem using at least 8-12 vocabulary words. |  |
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**Practice Packet for Polynomials**

* Don’t forget ZERO Coefficients for missing degrees
* Solve the binomial divisor equal to zero.
* Multiply and Add Patterns
* If zero value is a fraction, then divide all coefficients by denominator.

1. **Perform the following divisions using Synthetic Division.** Is the binomial divisor a factor of the polynomial?

A. 

B. 

C. 

D. 

E. 

F. 

1. **Completely FACTOR each polynomial given a known factor.**

What are all of the zeros of the polynomial?

A. 

B. 

C. 

D. 

1. **For each polynomial, LIST all POSSIBLE RATIONAL ROOTS.** 
   * Find all factors of the leading coefficient and constant value of polynomial.
   * ANY RATIONAL ROOTS = ± (Constant Factor over Leading Coefficient Factor)

A. 

B. 

C. 

D. 

E. 

F. 

1. **Completely FACTOR and find all zeros for each polynomial:**

* List all POSSIBLE RATIONAL ZEROS (Section #3)
* Use Synthetic Division to check each zero. (Section #2)
* When you reach a quadratic equation, perform regular factoring or Quadratic Formula.

A. 

B. 

C. 

D. 