

## Unit 3 - Polynomials, Polynomial Equations and Polynomial Inequalities

### Topics for the TEST !

- 1) Define a 'Polynomial Function' and understand the criteria
- 2) Understand **dominant terms** and **lead coefficients** and their role in determining the end behavior of a polynomial function
- 3) Determine end behavior, degree, and properties of a polynomial function written in standard form  
(i.e.  $f(x) = -2x^7 - 3x^5 + x^2 - 10$ )
- 4) Determine degree, x-intercepts and other properties of a polynomial function written in factored form  
(i.e.  $f(x) = 3(x-4)^2(x+1)(2x-5)$ )
- 5) Understand the definition of an "ODD Function" and an "EVEN Function"
- 6) Use the *Factor Theorem* and *Synthetic Division* to help accurately graph a polynomial function
- 7) Solve polynomial equations
- 8) Solve linear inequalities
- 9) Solve polynomial inequalities

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