Term	Definition/Example
Factor	to break the expression/number into expressions/numbers that multiply to it
Greatest Common Factor (GCF)	largest factor that all the terms share
Difference of squares	$a^2 - b^2 = (a+b)(a-b)$ Ex: $25x^2 - 16 = (5x+4)(5x-4)$
Sum of Cubes	$a^3 + b^3 = (a+b)(a^2 - ab + b^2)$ Ex: $8x^3 + 27 = (2x+3)(4x^2 - 6x + 9)$
Difference of Cubes	$a^3 - b^3 = (a-b)(a^2 + ab + b^2)$ Ex: $27x^3 - 125 = (3x-5)(9x^2 + 15x + 25)$
Perfect Square trinomial	$(a+b)^2 = a^2 + 2ab + b^2$ OR $(a-b)^2 = a^2 - 2ab + b^2$ Ex: $(x+7)^2 = x^2 + 14x + 49$ Ex: $(x-10)^2 = x^2 - 20x + 100$
Grouping	used to factor polynomials with more than three terms
Long Division	
Synthetic Division	
Polynomial Function	
Zero	
Multiplicity Test	

Multiplicity, k	Zero, r	Graph

9.2