Precalculus
Section 3.5 Worksheet
Zeros of Polynomial Functions

This table will help us organize the information in section 3.5. Fill in the table with the statement of each theorem and provide one or two examples of f(x) for each theorem. If the theorem has graphical implications (most do), provide a quick graph. The first one is done for you.

Let f be a polynomial function.

Theorem	**Statement**	**Example(s)**	**Graph**
Remainder Theorem	If f(x) is divided by x – c, then the remainder is f(c).	$f(x) = 4x^3 + 3x^2 - 5$	
Factor Theorem			
Number of Zeros Theorem (pg 252) (Two examples with different degrees would be nice here.)			

Theorem	Statement	Example(s)	Graph
Descartes' Rule of Signs (An example that shows off this theorem by having lots of variations in sign would be good.)			
Rational Zeros Theorem			
Linear/Quadratic Factors Theorem (pg 259) (Try to find one f(x) that has linear factors and one f(x) that has one linear and one irreducible quadratic factor.)			

Theorem	Statement	Example(s)	Graph
Corollary (pg 259)			
Bounds on Zeros Theorem			