Root 'em Out: A Polynomial Work Sheet

General Form: $P(x) = a_n x^n + a_{n-1} x^{n-1} + \ldots + a_2 x^2 + a_1 x + a_0$

My Polynomial: $P(x) =$ _____

Initial Observations

1. Degree of polynomial? _____
2. Degree odd or even? _____
3. Number of roots: _____
4. Are coefficients real? _____
5. Are coefficients rational? _____

Descartes Rule of Signs

Variations in $P(x)$: ___ # in $P(-x)$: ____

Combo	Pos	Neg	Complex

Rational Root Possibility List

Entry: p divides a_0; q divides a_n.

p :_____
_____

q :_____
_____

$\frac{p}{q}$:_____
_____

_____

_____

Root Trial Matrix

x	$P(x)$	Root?	Bound?	Sign

Observations on Root Trials

Successive Factorizations

1: $P(x) =$ _____

2: $P(x) =$ _____

3: $P(x) =$ _____

4: $P(x) =$ _____

5: $P(x) =$ _____