Name _____ Student No._____ G___/____ Date: _____Score: _____
Nickname: _____ Quiz No.: _____

Graphing Polynomial

A. Give the possible roots (RRT), nature of roots (DRS), number of roots (FTA), factored form, actual roots, end behavior and graph of the given polynomial.

1) $f(x) = x^4 - 9x^2 + 4x + 12$

FTA: Atmost 4
Possible Roots: $\{1.0, 2.0, 3.0, 4.0, 6.0, 12.0\}$
Factored form: $(x-2)^2(x+1)(x+3)$
Actual roots: -3, -1, 2 mul. 2
End Behavior:

$f(x) \to \infty \ as \ x \to -\infty$
$f(x) \to \infty \ as \ x \to \infty$

Graph: