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) $f(x) = -2x^4 - 11x^3 - 16x^2 - x + 6$

FTA: Atmost 4
Possible Roots: $\left\{\frac{1}{2}, 1, \frac{3}{2}, 2, 3, 6\right\}$
Factored form: $-(x+1)(x+2)(x+3)(2x-1)$
Actual roots: -3, -2, -1, 1/2
End Behavior:

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

Graph: