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) $f(x) = -2x^5 - 5x^4 + 11x^3 + 23x^2 - 9x - 18$

FTA: Atmost 5
Possible Roots: $\{0.5, 1.0, 1.5, 2.0, 3.0, 4.5, 6.0, 9.0, 18.0\}$
Factored form: $-(x-2)(x-1)(x+1)(x+3)(2x+3)$
Actual roots: -3, -3/2, -1, 1, 2
End Behavior:

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

Graph: