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

FTA: Atmost 4
Possible Roots: $\{1, 2, 4\}$
Factored form: $(x-1)^2 (x+2)^2$
Actual roots: -2 mul. 2, 1 mul. 2
End Behavior:

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

Graph: