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

Graphing Polynomial

A. Identify the properties of the given polynomial equation then sketch its graph.

1) $f(x) = -x^3 + x^2 + x - 1$

FTA: Atmost 3
Factored form: $-(x-1)^2(x+1)$
Actual roots: -1, 1 mul. 2
End Behavior:

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

Graph:

2) $f(x) = 2x^4 + 13x^3 + 29x^2 + 27x + 9$

FTA: Atmost 4
Factored form: $(x+1)^2(x+3)(2x+3)$
Actual roots: -3, -3/2, -1 mul. 2
End Behavior:

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

Graph: