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

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

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

Graph:

2) $f(x) = -x^4 - 3x^3 + 7x^2 + 27x + 18$

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

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

Graph: