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) $f(x) = -x^3 - 5x^2 - 3x + 9$

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

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

Graph:

2) $f(x) = -x^4 - 5x^3 - 9x^2 - 7x - 2$

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

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

Graph: