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) $f(x) = x^3 + 5x^2 + 7x + 3$

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

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

Graph:

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

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

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

Graph: