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

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) $f(x) = 2x^4 + 5x^3 - 3x^2 - 8x + 4$

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

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

Graph: