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

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

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

Graph:

2) $f(x) = x^4 - x^3 - 10x^2 + 4x + 24$

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

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

Graph: