

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) $f(x) = x^3 + 6x^2 + 11x + 6$

2) $f(x) = x^4 + 2x^3 - 7x^2 - 8x + 12$

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

$$f(x) \rightarrow -\infty \text{ as } x \rightarrow -\infty$$

$$f(x) \rightarrow \infty \text{ as } x \rightarrow \infty$$

Graph:

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

$$f(x) \rightarrow \infty \text{ as } x \rightarrow -\infty$$

$$f(x) \rightarrow \infty \text{ as } x \rightarrow \infty$$

Graph:

