

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

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: $(x-1)(x+1)^2(x+2)$

Actual roots: -2, -1 mul. 2, 1

End Behavior:

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

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

Graph:

