

Name _____ Student No. _____ G ____/____ Date: _____ Score: _____
Nickname: _____ Quiz No.: _____

Graphing Polynomial

A. Give the possible roots (RRT), nature of roots (DRS), number of roots (FTA), factored form, actual roots, end behavior and graph of the given polynomial.

1) $f(x) = x^4 + 3x^3 - 3x^2 - 11x - 6$

FTA: Atmost 4

Possible Roots: $\{1.0, 2.0, 3.0, 6.0\}$

Factored form: $(x - 2)(x + 1)^2(x + 3)$

Actual roots: -3, -1 mul. 2, 2

End Behavior:

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

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

Graph: