

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) $f(x) = x^5 + x^4 - 2x^3 - 2x^2 + x + 1$

FTA: Atmost 5

Possible Roots: $\{1, 0\}$

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

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

End Behavior:

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

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

Graph: