

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) $f(x) = -2x^4 - 9x^3 - 7x^2 + 9x + 9$

FTA: Atmost 4

Possible Roots: $\{0.5, 1.0, 1.5, 3.0, 4.5, 9.0\}$

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

Actual roots: -3, -3/2, -1, 1

End Behavior:

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

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

Graph: