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) $f(x) = -x^5 - 2x^4 + 9x^3 + 22x^2 - 4x - 24$

FTA: Atmost 5
Possible Roots: $\{1, 2, 3, 4, 6, 8, 12, 24\}$
Factored form: $-(x-3)(x-1)(x+2)^3$
Actual roots: -2 mul. 3, 1, 3
End Behavior:

$f(x) \to \infty \ as \ x \to -\infty$
$f(x) \to -\infty \ as \ x \to \infty$

Graph: