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

FTA: Atmost 5

Possible Roots: $\{0.5, 1.0\}$

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

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

End Behavior:

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

Graph: