

NAME: _____ Score _____/10

Please **print** your name**Circle T or F, whichever is correct.**Suppose f is a polynomial function f whose leading term is $-3x^6$ and whose constant term is 4 .

1. T F The graph of f tries to cross the x -axis 6 times.
2. T F The graph of f has at least one x -intercept.
3. T F The graph of f might have no x -intercepts.
4. T F As $x \rightarrow +\infty$, $f(x) \rightarrow +\infty$.
5. T F As $x \rightarrow -\infty$, $f(x) \rightarrow +\infty$.
6. T F As $x \rightarrow +\infty$, $f(x) \rightarrow -\infty$.
7. T F As $x \rightarrow -\infty$, $f(x) \rightarrow -\infty$.
8. T F The graph of f might have a horizontal asymptote.
9. T F A possible rational zero of f is $\frac{3}{4}$.
10. T F A possible rational zero of f is $\frac{4}{3}$.