∨3 DAY 2 Homework- Graphing Polynomial Functions

1) Determine end behavior (from lead term)
2) Find y intercept
3) Factor completely
4) Find zeros (x intercepts)
5) Determine the multiplicity of each zero. (If multiplicity is even, the graph touches the
   x axis at that zero. If the multiplicity is odd, the graph crosses the x axis at that zero.)
6) Sketch the graph

Sketch the following polynomial functions by transformations:

1) $f(x) = (x+1)^4 + 1$

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

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

Graph each of the following polynomial functions using the procedure outlined at the beginning of this assignment:

4) $f(x) = (x-1)(x-2)(x+4)$

5) $f(x) = 4x - x^3$ (hint: factor first)

6) $f(x) = x^3 - 5x^2 + 6x$

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

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

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

10) $f(x) = x^2(x-2)(x^2 + 3)$