Polynomials 6b – Graphing Polynomials in Standard Form

HW#12

Name _____

Per _____ Date _____

Given the zero or factor for each function, identify all *x*- and *y*-intercepts and end behavior. Then, sketch the graph of *f*(*x*). Make sure to label the axes and scales used to create your graphs. Show all work on a separate paper in POWER HW FORMAT and round any decimals to the nearest hundredth. Cut and paste the grids below on your separate sheet of paper.

1. $f(x) = x^3 + 4x^2 - 4x - 16$ given zero $x = -2$

2. $f(x) = x^3 - 3x^2 + 2$ given *x*-intercept $(1,0)$

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

4. $f(x) = 3x^3 + x^2 - 4x$ given zero $x = 1$

5. $f(x) = x^3 + 3x^2 - 3x - 9$ given factor $x + 3$

6. $f(x) = 3x^3 - 4x^2 - 5x + 2$ given factor $3x - 1$