The Birthday Polynomial Project

Due date: _____ by the beginning of class

Grade: Quiz Grade (10 pt deduction for each day late)

Create a Birthday Polynomial

Use the digits of the month, day and 4 digit year of your birth – in order – as the coefficients of the polynomial. (For example: If your birthday is August 13, 1999, then use the digits 8131999 in that order)
The degree of your polynomial must be either 4 or 5.

Example: $f(x) = 8x^5 – 1x^4 – 3x^3 + 19x^2 + 9x - 9$

Change the signs of the coefficients to make the most interesting graph you can – one that has *at most* two complex roots. Part of this project is finding the complex roots; therefore, you cannot get 100% if all of your roots are real.

Analyze the Polynomial

Find:

1) domain and range

2) the y-intercept

3) all of the zeros(real and complex)

4) describe the end behavior (What happens on the left and right sides)

5) the extrema

Make a Presentation of Your Birthday Polynomial

1) Present your birthday polynomial neatly, accurately and artistically.

2) A written analysis of your polynomial will be included on the visual.

3) You may use your graphing calculator, but what you turn in is hand done.

Grading

The Birthday Polynomial is accurate:	20 points
The Analysis is complete and accurate:	20 points
Overall presentation is creative, interesting, neat and colorful:	10 points