ROLLER COASTER POLYNOMIALS

DESIGN:
You have decided to become a structural engineer who
specializes in roller coaster design. Your job is to design
your own roller coaster ride. To complete this task, please
follow these steps:

1. Write the **zeros** of your choosing as **factors** (   ).
*Must have *at least 2 real roots* and *2 imaginary roots* with at least one root having *even
multiplicity.* **(5 pts)**

2. **Multiply** your factors out to get your roller coaster polynomial. **(5 pts)**

3. Graph your roller coaster polynomial on Desmos.com
   - Take a screenshot of your graph (either print it or include the graph in your google
     slide presentation) **(2pts)**
   - Be sure to include a *title* and *labels* for the *x & y axes* **(3 pts)**
   - **Label** key features like your **zeros & y-intercept (2 pts)**

4. Analyze the key features of your roller coaster

   -Degree & classification **(2 pts)**
   - End behavior (Use arrows and proper notation) **(3 pts)**

5. Write a summary paragraph about your roller coaster polynomial. Please use full
sentences! **(5 pts)**

   Please include the following:
        *Polynomial classification
        * Describe what the zeros represent for your roller coaster situation
        *How does your roller coaster polynomial reflect who you are? Why did you
         choose the zeros you chose?

6. Make a presentation of your roller coaster polynomial on either a piece of paper or a
google slide presentation. Make sure to include all of your work. Be creative and original.
(3 pts)

Total: /30 points