Logo Area Project

Your job is to find a logo for a company (or a well-known symbol), model it with equations, demonstrate the design using technology by finding and sharing a set of functions or equations with appropriate domains, and find the area of a shaded portion of your logo using Calculus.

It should be a logo that requires thinking to create! In other words, don't "create" a logo that is a series of straight lines (e.g. the American flag without the stars) or simple parabolas and circles (e.g. Target or Oakley).

Bad Examples:

Good Examples:

1. Choose a curved logo seen in an advertisement. You will need a large enough logo to work with. You must email me or tell me by **Friday, May 12 th** what your logo will be. I must approve it before you begin working.

2. Place the logo on a coordinate axis using graph paper. This works best by taping the logo on the window and tracing it.

3. Split the logo into pieces and write exact equations that will imitate the logo when graphed (you may have to give domain restrictions if it is not a full curve). Check by graphing on a graphing calculator or on Desmos (visit www.desmos.com and sign up for a free account to use an online calculator) to see if the equations match your logo.

4. Find the area of the shaded part of your logo using Calculus. This might be one of the colors of the logo, if you have multiply colors in your logo.

5. A typed description of the different curves you used, domain restrictions, and how the equations were developed.

    a) How did you model the equations? What mathematical steps did you take? What was your reasoning?
    b) What were the domain restrictions? How did you determine those?
    c) How did you know that you were correct?
    d) How did you find the area of the shaded areas of your logo?
    d) What did you learn from this project?

6. On a poster board, you will need to display:

    a) Actual logo
    b) Graph of the logo on coordinate axis
    c) Equations you used (with domain restrictions, if any)
    d) Area of shaded part of logo, with work shown.
    d) Screen-capture from graphing calculator or Desmos.

Grading Rubric

Paper

Category	Points
Professional and neatly typed mathematical paper	4 points
Description of work (see #5 above)	8 points
Mathematical accuracy	8 points

Poster

Category	Points
Logo Drawn Neatly on Graph Paper	4 points
Screen capture from graphing calculator or Desmos	4 points
All equations are provided and are mathematically correct	5 points
Area calculated correctly and work shown	5 points
Well-designed logo – Does it look correct?	4 points
Creativity/Uniqueness	4 points
Complexity of Logo	4 points

Total: _____/50