

Parabola Project

Directions: You will be using desmos for this project. Below are some pre-made parabolas that you may choose from to use to demonstrate your knowledge of key characteristics of a parabola. Click on the link to open the parabola.

St. Louis Arch <https://www.desmos.com/calculator/wadeaiz4sx>

Eiffel Tower <https://www.desmos.com/calculator/x68kjkjxkq>

Rainbow <https://www.desmos.com/calculator/xazttazmnu>

Golden Gate Bridge <https://www.desmos.com/calculator/mi23jmv2md>

Angry Bird <https://www.desmos.com/calculator/qpwbggntxv>

Use the table below to record the information you place into desmos.com to identify the key components.

Identify three points on your parabola: Point 1	
Point 2	
Point 3	
Equation in $y = ax^2 + bx + c$	
Vertex coordinate point	
Is that a maximum or minimum -> write response here	
Y-intercept	
X-Intercepts(s)	
Quadratic Formula: Show all work here for credit	
Axis of Symmetry	
Equation in vertex form: $y = a(x - h)^2 + k$	
What is the domain?	
What is the range?	
What is the values when $x = -1, 1, 3, \text{ and } 5$?	
When does $y = 2$?	