



DRAGONS Design Project

Jake Choi (P2 Honors Algebra II)

Contents

- ① Introduction
- ② Function Design
- ③ Key Features of the design
- ④ Steps that I took to complete the design
- ⑤ Reflection
(What I learned through this project)



01


Introduction





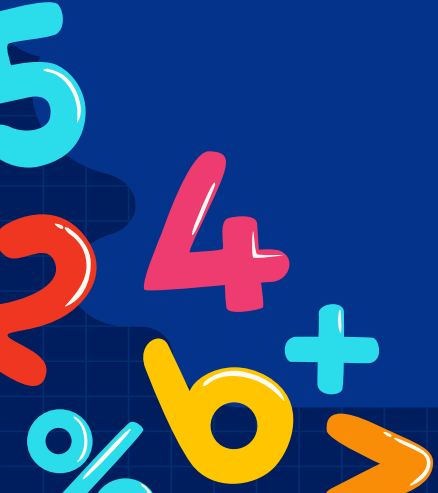
Client: Dorothy Jang

Important features as a PERSON

- She enjoys reading books.
 - She enjoys listening to music.
 - She is good at English and Global Studies. She likes those subjects better than Math and Science.
 - She enjoy watching movies during leisure time.
 - She enjoys speaking in front of others and debating.
 - She has strength in debating and speaking to the public.
 - She likes animals generally.
 - She always doesn't get enough sleep.
 - MBTI test result: ENTJ (Highly motivated, competitive, and active person)
 - She enjoys socializing with other people.
- 

Important features as a DRAGON

- She is an active person who deeply contemplates about her future dream as a lawyer and designs her own destiny.
- She respects her friends and teachers in school. She is very respectful and kind to everyone.
- She frequently leads the group during group assignments or projects and tries to take risks as well as responsibilities.
- She is always open-minded, extroverted, and enthusiastic.





Function Design

02

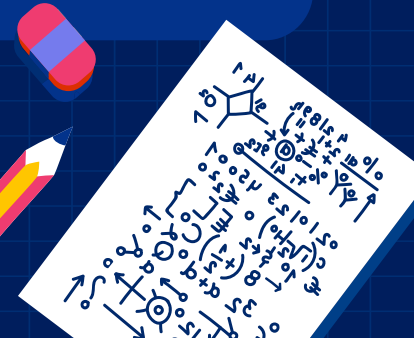
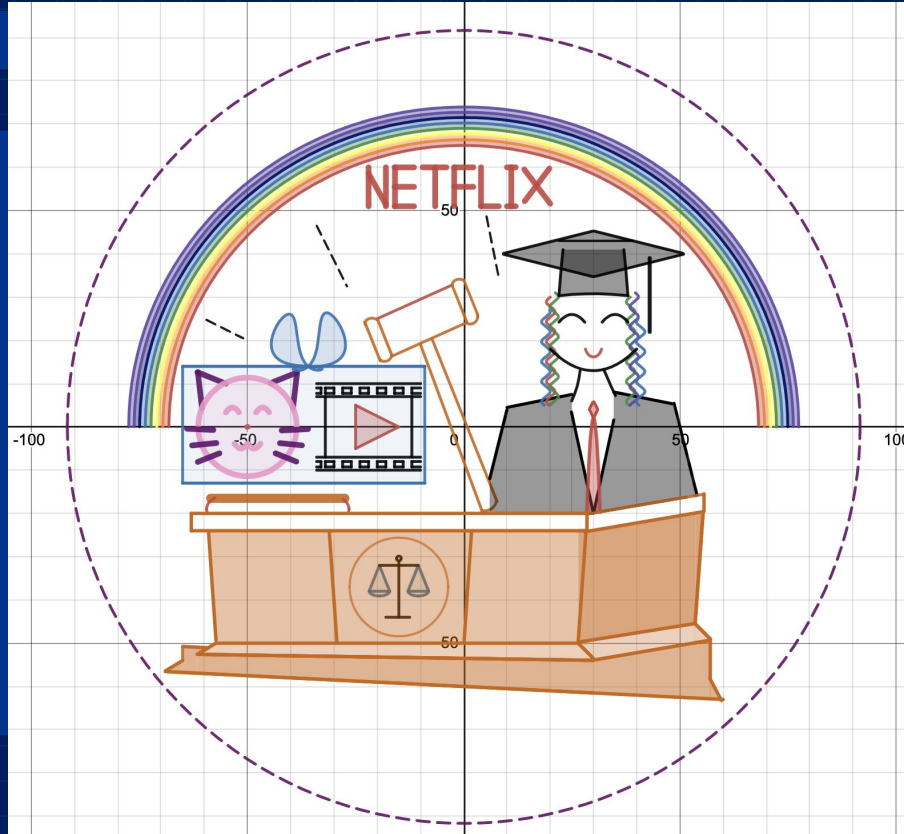


Desmos Link

<https://www.desmos.com/calculator/u4r9791h4w>



Picture of Design






Explanation of how I created the design using math

I created the design using the functions and the related concepts that I learned during class. For example, I used linear functions that are translated in many ways to draw the straight lines of the table. Also, I used quadratic functions and applied vertical and horizontal stretch/compression to express the eyes, eyebrows, and many other elements of the face. I applied inverses, translations, and reflections in these functions. Finally, I used other exceptional concepts such as the equations of circles.





03

Key Features of the design



The gavel and the judge suit is one of the key features of the design. It is because it expresses Dorothy's dream job, which is a job related to law.

The symbol of court shows that Dorothy hopes to be a successful person at court in the future.

The cat, movie player, and the "NETFLIX" logo shows that she likes animals and enjoys watching movies during her leisure time.

The rainbow is a symbol that Dorothy's future is bright and hopeful.




Steps for Design

04



Steps that I took to complete the design

- ① Made a list of the client's strengths and interests
 - ② Had a deeper conversation with the client about her characteristics
 - ③ Briefly sketched the design
 - ④ Set the color and drew the rainbow in Desmos
 - ⑤ Drew the cat, movie player, judge, gavel, and symbol of court in Desmos
 - ⑥ Received peer feedback
 - ⑦ Revised some parts and made improvements based on peer feedback
 - ⑧ Design completed
- 



05

Reflection






What I learned through this project

Through this project, I improved my understanding of various functions such as linear function, quadratic function, and absolute function. Furthermore, I learned how to control the graph using vertical and horizontal stretch and compression. I also learned how to effectively use inverse functions and graph them.

Additionally, I learned not only the mathematical concepts but also how to identify characteristics of a person and express them using symbols. It was challenging to express them using graphs, but I believe that this project was very meaningful since I realized that I can demonstrate the objects in the world using the mathematical concepts such as graphs.



Thanks!

