***UC essay prompt 6***

*Think about an academic subject that inspires you. Describe how you have furthered this interest inside and/or outside of the classroom. (350 words)*

“Koch Snowflake: a continuous fractal curve that has no tangent, formed by adding equilateral triangles ad infinitum.”

I find this concept fascinating! The beauty of its never-ending patterns was actually useful in my life, especially in stocks. The repeating sequence of numbers played a big role in predicting the direction of an asset’s price actions. From something never-ending into something with pin-point accuracy, this is the reason why math inspired me.

Upon discovering fractals, I began furthering my interest in math in search of its other applications by creating my personal online math journal called “thejourneyofmellvin.” My curiosity into fractal’s behavior had led me to investigate other concepts, such as Sierpinski's triangle at every “nth” term. As I continue to challenge myself for my journal, I made my own investigation called “Hit the runway” where I created the process of how to land a plane safely using mathematical equations. Right now, I am investigating how to find the volume of a flowery 3D shape using the Shell method by rotating the line equation on the y-axis.

In addition to my journals, I also enjoy the adrenaline rush of solving complex math problems. However, solving complex problems could be time consuming. Therefore, I learned programming via free online resources and, as my first project, coded a classic game of “Space Invaders” where trigonometric functions and vectors are used to determine the location of the spaceship. Who would have thought that even games require a deep understanding of math! This is how I realized that math is applicable to other subjects and hypothesized that, perhaps, math is at the core of everything.

I believe that math is limitless and I intend to pursue the depth of its world. Exploring this complex world of formulas and numbers may be never-ending like fractals, but so will the number of people who are passionate about getting to the bottom of it. As such, I am psyched to become on the side of these math explorers in the STEM world and am looking forward to contributing into getting closer to the bottom of this fractal world.