## Final Common Application Essay

For twelve years, in the months stretching from August to June, I have extensively studied the *Student mathematicus*. Visitors to the schoolhouse may observe the *S. mathematicus* from afar, but few have had the opportunity to live with them in their natural classroom.

From a young age, the *S. mathematicus* compete and differentiate themselves quickly. Those who finish a multiplication set in time move on; those who do not stay behind. The teacher recruits a few students into the gifted program at the back of the room. But for now, they are all safe.

When the *S. mathematicus* enter middle school, they are assessed and tracked. Those who make it into Accelerated Math 7 will learn rapidly. By the time they enter Integrated I, they will be a full year ahead of their classmates.

From adolescence to young adulthood, I studied a specific group of *S. mathematicus*: my friends. The first time I did something after school was when these classmates invited me to Mathcounts. We trekked over mud slopes and dirt hills to get to these clandestine math meetings. When I fell behind, they carried my backpack. Guided by the high school volunteers, we discussed everything from circle theorems to sock permutations. We get into a particularly heated debate about the validity of "solving" geometry problems with a ruler.

High school is different. Like Icarus, the *S. mathematicus* jostles to fly as high as they can. A dizzying spectrum of classes awaits, with seven courses covering the gap from Integrated III to AP Calculus BC. Once they have exhausted their options, the *S. mathematicus* sends out dozens of forms, appealing to the community colleges for Multivariable Calculus or Discrete Math.

It was around this time that I became intensely curious about success. Holding the metaphorical microphone up, I asked my upperclassmen, "What do you think made you successful?" There were a variety of replies. One friend had early Montessori education, another took additional competition classes, and the third worked through difficult problem-solving books. Taking their advice, I spent my lunch in the physics classroom, reading through "Competitive Math for Middle School" and practicing trigonometry problems on Khan Academy.

My friends played the same competitive game that I did. But behind my back, I overheard them confess, secretly and shamefully, that they started to hate math. This inexplicable change rattled me. In this environment, I changed my research question. Let me present the Mathematical Field Paradox: why do so few people like math? After years of field observation, I can only conclude that the *S. mathematicus* must overcome increasingly complex conceptual challenges, leaving only a few remaining by graduation. (I call it the Many Filters Resolution.) And will these people continue to enjoy math? I'll have to continue this survey in college.

But in the meantime, I have shelved these notes and observations. As the math club president and the Mathcounts program director, I seek a better philosophy than the ambitious, competitive person I was in the past. A volunteer nervously talks through a complicated clock problem, growing more confident as they walk through the modular relationship between clockwise and counterclockwise movement. The students cheer as we unravel a dense permutation tree with simple multiplication, condensing the solution into a single number. My friend laughs as we throw a potato around for the SAT workshop; my colleagues all pitch in silly cow puns for the annual competition hosted by "Moo" Alpha Theta. These days, that's how I spend my lunch breaks. It's a small oasis in a competitive bubble. At night, I still read math books—for leisure. I let myself go on an adventure, jumping from logarithm properties to combinatorial tricks. The numbers hiding under my tongue feel light, and math seems brighter than ever. That's my small success.