# Discrete Mathematics

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## 1 Strengths as a Mathematician

#### Mathematical Writing

I have fairly strong writing and communication skills, and have been able to more than sufficiently utilize them in mathematical contexts in the past. I've become very comfortable communicating math at both a more complex level aimed at advanced audiences, and a less intensive level aimed at lower level audiences.

#### **Making Connections**

I've become good at making and/or recognizing connections between different things I've learned, sometimes even from completely distinct areas of math. This helps me develop sufficient intuition for new concepts fairly quickly.

#### Logical and Rigorous Thinking

By doing proofs both in class and on my own, I have become fairly accustomed to developing logical, analytical, and rigorous arguments, allowing me to gain a deeper understanding of why various things work, or tackle more difficult proofs than a class might undertake.

#### **Passion**

Skills are nothing if you refuse to apply them. I find doing math inherently fun, and this gives me a genuine passion for math that drives me to learn more.

#### Eyes

Eyes allow me to see math. Without them, I don't know how I would see math.

#### 2 Personal Process Goals

To share my mathematical thinking with classmates and help them understand and appreciate it and to let them help me improve it.

Although my communication skills are fine, I often keep my own thought processes to myself, unless someone specifically asks to see it. I want to be more open and share my math more, so that others can either learn from it, or help me refine it.

Evidence supporting progress towards this goal would likely include documents I personally drafted to share with others, or an increase in the number of contributors on my documents.

### To critique my own reasoning and find and correct mistakes.

Although mistakes are inherently part of the process of doing math, I often find I don't catch my mistakes for long periods of time. I would like to start catching them sooner, which means being more critical of my reasoning when re-reading it.

Evidence supporting progress herein could be done in some form of log - every time I notice and correct a mistake, I log it, and estimate how long it took me to notice the mistake. A downward trend in these time deltas would indicate improvement. This could be stored in an excel spreadsheet, which has the benefit of being able to graph the overall trend.