Writing Prompts

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1. **Math origin story:** In a short paper (approximately 300-500 words) talk about your own experiences of mathematics. Describe the ways that any important experiences you had made you feel about maths and how they shaped your learning of maths. You can draw from formal or informal experiences, in the home, school, or any other setting. Maybe you had conversations with a family member that was important to you? If you were fortunate you may have had an amazing teacher or perhaps you were unfortunate enough to have had a negative learning experience. You could consider experiences you have had doing maths in groups or solving problems. Be descriptive, this is not an academic paper, it is a chance for you to share your maths history and for us to learn more about you and your relationship with maths.

2. **Attend office hours:** One of the major goals of the SSEA program is helping prepare you for classes at Stanford. To succeed you will likely need to engage your instructors and TAs in office hours. In order to introduce you to how they work you are expected to attend at least one office hours session with the mathematics instruction team. The office hours schedule is below, but if you cannot attend any of the scheduled times please email a member of the math teaching team to schedule an alternative time to meet.

   To complete this assignment write a short statement about who you attended office hours with, what day you attended and what you discussed.

3. **Good group work:** We all are individuals and may engage in group work differently. For example some people may be very comfortable throwing out ideas in a group and others may not be as comfortable speaking up. In light of our discussion about good group work, how do you plan to approach group work moving forward in this class? Do you have any concerns about working in groups in the upcoming 3 weeks?

   (Write as much or as little as you would like. We aren't expecting more than a paragraph or two.)

4. **Ask a "dumb" question:** In the next week we want you to ask someone a "dumb" question. It can be about math, another course, or Stanford in general. By "dumb" question we mean something you feel like you're supposed to know, but have a confusion about.

   Often in math classes you might feel like you are the only one not understanding something, but in reality many people have the same question. It takes courage to ask the "dumb" question that might actually be on everyone's mind. We hope you can use this assignment as an opportunity to step out of your comfort zone and exercise the courage it takes to ask a "dumb" question.

   Please write a short reflection about your question, the context, and what you felt and learned from doing this. Also, note the asking doesn't have to be verbally. You can text a friend,

email an RA, however you want to interpret this is up to you but challenge yourself and step out of your comfort zone.

5. **Mathematics in the world:** We want to dialog with you about mathematics in the wider world. In this assignment you will respond to the prompt below and we will respond to your reflection with further ideas or questions for you to consider. We then ask you to respond to our comments and revise your original response if necessary. The goal of this assignment is to deepen your thinking about how mathematics is present in the world beyond the classroom.

   To start we want you to make an observation about the world around you. It could be something tangible you see in land, nature, art, buildings, or landscapes. It could also be something in society big or small like political gerrymandering or even Stanford housing assignments.

   We want you to think about how mathematics might be present in or help you to understand or address the phenomenon you observed. Formulate an observation or conjecture about the mathematics in your chosen phenomenon. For example if you are laying in the sun you might observe how a shadow moves over you and how there is a sharp visual boundary for the shadow but the temperature changes very gradually. As another example, if you love football (soccer for us Americans) you might think about what is involved in kicking a ball and what you need to know in order to build a robot to replicate your efforts. You might conjecture that you need to know various vectors to represent the starting direction and magnitude of the kick, but also will have to account for how gravity and air resistance might impact the path of the ball in flight.

   Please write a short reflection with your observation/conjecture and current thinking. We intend this reflection to be the start of a dialog.