

Mathematics Autobiography/Biography/Growth Mindset Project

Due: Friday, March 18

Bring a printed copy of your paper to class
and email your paper and powerpoint slide to Dr. Phillips at tmphilli@bsc.edu.

The purpose of this assignment is to have you reflect on your experiences with mathematics and to learn about mathematicians that have come before you. The autobiography portion of this assignment will help me in knowing how you feel about mathematics and what you have experienced in mathematics classes up to this point, as well as allow you to better understand your disposition toward mathematics. The audience is just me, your professor, and in some sense you. The growth mindset portion of this assignment is to emphasize that we all can improve in our mathematics skills over time and that our abilities are not just “fixed.” The biography portion of this assignment is to gain an understanding of the contributions and challenges of previous mathematicians and to exemplify that individuals from all backgrounds are capable of excelling in mathematics (that means you, too)!

Assignment: This written project consists of three pieces which you will write as one paper:

1) Write an autobiography regarding “you and mathematics.” Here are some ideas of what you could include in your paper, although you are not limited to this list:

- Your experiences with math/math teachers at any grade level (positive, negative, neutral)
- How you feel about math and whether it has evolved over the years or not
- What you like/dislike about math
- How you view your math ability and how you want that to stay the same or change; future goals
- What aspects of math are scary, exciting, challenging, interesting, etc.

This portion of the essay should be no more than 2 pages (double-spaced).

2) Having a growth mindset in mathematics is valuable - believing that your abilities can be developed through dedication and hard work (and are not simply fixed traits). To demonstrate improvement, pick a SPECIFIC problem that you have seen in Calculus I so far that you struggled with (from a quiz, worksheet, exam, or homework assignment) and re-do the problem. State where the problem is from (for example, Quiz 1, problem #2). Then, explain in full sentences what overall topic this problem is umbrellaed under, why you might have struggled with it initially/what mistakes you made, and each step that you are taking to solve the problem correctly now. [An example of what is expected for this portion of the essay is posted on Moodle and you must choose a problem different than that specific one.]

This portion of the essay should be no more than 1 page (double-spaced).

3) Research a mathematician of your choice and write a biography about them. The only stipulation is that this mathematician must be from an underrepresented group (if you have questions about this, please ask). This person may be from any time in history or a present day mathematician. You must have references (any format) from your research and use resources other than Wikipedia. Here are some ideas of what you could include in this biography, although you are not limited to this list:

- Their background/life story
- Their education
- What they accomplished/contributed to mathematics

- Any challenges or struggles they endured
- Any recognition they received (or should have received)
- Historical context

This portion of the paper should be no more than 2 pages (double-spaced).

Once you have decided on the mathematician you will write about, please *post the name on our shared Google Document on Moodle* with your name so that each student has a unique mathematician. You will also *send me one powerpoint slide with their picture on it and a few highlights about them*. You will give a 1 minute presentation about this mathematician at the end of the semester.

Final Checklist:

- You have posted your mathematician's name on the Moodle document.
- You have looked at the Student Example for part 2 of the essay on Moodle (and have not chosen that problem yourself).
- You have checked the rubric on Moodle and completed all that is required to achieve full credit.
- Maximum 5 page (double-spaced paper), printed, stapled, with your name on it brought to class to turn in that includes your math autobiography, a specific problem worked through and explained, and a mathematician biography with references.
- Paper and 1 slide emailed to tmphilli@bsc.edu with your name on the paper and slide.