

**Assignment #1 – Mindset Mandala**

Tanya Blackall

Thompson Rivers University

EDMA 3100

Instructor: Anthoney Rempel

October 10, 2024



Figure 1: My mindset mandala

## **My Mathematics Journey:**

When I first thought about this assignment, I thought it would be easy for me to draw a representation of my math journey. But, as I thought more about it, I was realizing that it was going to be challenging because I initially thought that my math journey was less complex compared to those stories that I've heard around me. It's been quite a few years since I've graduated high school (1992), and I did calculus in university which was also quite a long time ago (1996). I did have challenges throughout my high school experience, and I did have an awful experience in university in calculus. It's amazing how we forget things!

My story of my math journey starts pretty straightforward. Through elementary school, I don't remember ever having any issues with the mathematics that I was exposed to or in the performance and understanding of it. Fractions in Grade 5 made me pause for a bit, but I was ultimately able to defeat my reluctance and confusion for them. That takes me through to Grade 7 and I cruised on to Grade 8 and junior high school.

I got a teacher in Grade 8 mathematics that had a heavy Indian accent, and it was my downfall. I spent most of my time focusing on what he was saying, my marks slid to a dismal C-, and my confidence in mathematics suffered greatly. Due to the difficulty that I had in that course, the school decided to enroll me in a lower-level math class for Grade 9 (General Math 9 it was called). I went through the General Math 9 course with ease, a high grade, and it was determined that I would be placed into the Academic Grade 10 mathematics level for the next school year. I was terrified. Could I do it? Could I keep up? Will I understand the formulas and course material? With all my trepidation, I ended up doing quite well and I understood everything that was taught. My teacher was fantastic, and I believe that he gave me the confidence that I needed to get over my fear of mathematics. I was ready for high school and Grade 11 mathematics at this point.

Grade 11 mathematics proved me wrong. I went from clearly understanding the concepts in Grade 10 mathematics to being completely confused. Once again, I found myself struggling and it wasn't due to a teachers' accent this time: I just simply didn't understand the material and I found the teacher intimidating. I was again thrust into an academic level mathematics course feeling very unsure and lacking confidence. So, I went on to Grade 12 mathematics with a low grade in the Grade 11 mathematics beforehand. I ended up with a haunting C- again in Math 12. This had me thinking that I was certainly not very good at mathematics after all.

The year after I graduated high school (1993), I decided that I needed a better understanding of Grade 12 mathematics plus a better grade to get accepted into programs in university, so I enrolled into that course at the Okanagan College in Salmon Arm. I ended up with an A in Grade 12 math after that and I felt like I finally got the grade that I needed to move on with my education comfortably.

A few years later, I applied to the Forestry transfer program at the University College of the Cariboo, and I was accepted. Low and behold, first year calculus was a required course for my degree program. "Okay, I've got this," I told myself. I did not have it. I got an instructor with an extremely heavy accent, and I was more lost than I had ever been. The instructor left out algebra steps while doing problems on the board and flew quickly through information. My head was spinning. I ended up with a resounding F on my transcript and I was heartbroken. As I needed this course to continue, I enrolled in it again for the following summer semester. Everything clicked that summer. I ended up answering questions in class, enjoying mathematics

once again, and I felt proud that I had erased that F from my previous semester. I got an A- in calculus that summer and I will never forget how it helped reassure me that I could do mathematics with perseverance and determination when needed. It gave me the confidence to consider myself “good at math”.

### **Explaining My Mandala (See Figure 1):**

The centre represents the prettiness and freedom that I experienced in mathematics through most of my elementary years. I'll call it the “smooth sailing phase”. The purple and deep pink colours used in my centre flower represent calmness and “smelling the flowers” as I had an easy time with it. The first set of inner petals and the orange ring represent my bump when I entered fractions in Grade 5 being that the petals are the bumps and the orange ring between them is the easy flow again in mathematics. The harmony.

As I move outside to the bright yellow, it represents my calmness in mathematics. The leaves are slight bumps but nothing that interrupts my calmness (the yellow). The spikes on the outside of the yellow is my Grade 8 experience in mathematics. The sharp points and abrupt change in colour represent how this year was super hard for me and the lack of confidence that began to show in my abilities in mathematics.

The green shoots going from the yellow calmness right through the pink and outer orange colour, represent the continual growth in my attitude towards mathematics and my ability in it. Never completely discouraged but instead, determination to continue to grow like a plant shoot trying to reach the sun. The pink colour amongst with the red and purple violets, indicate that I had a great journey in Grade 9 and 10 mathematics making my confidence and ability shine. The green shoots continuing through the colours and phases, indicating the growth that continued to happen for me in my math mindset.

The orange-coloured ring in the outer levels, is my high school experience which is not a happy one. It represents a “warning” to me with the colour that I chose. Grade 11 and 12 math really made me think that I was poor at mathematics in all aspects. Although I still had growth and managed to pass, I did not feel very prepared for the future if it had anything to do with mathematics.

The outer blue ring with black voids represents my first calculus journey in university. The black voids are the holes in my understanding and lack of ability to perform.

The outer purple ring represents the much more successful Grade 12 mathematics and calculus that I redid, as I had no issues while I was in these classes. In fact, I enjoyed them. Everything seemed to flow. It was much easier to perform and gain very high grades in both classes. I am thankful to these teachers as they once again, renewed my interest in a subject that was lost for me for so long.

### **Ideas on How I Can Have a Positive Mindset:**

I think everyone has a different opinion on this and it is a very individual list, but I have come up with a few that I believe would work. I also think that most of these, if not all, would work for students as well to encourage a positive mindset. These are:

- Positive thinking – A positive mindset is one of the major things that we can do to set ourselves up for success. “Mind over matter” really is the case in my opinion. Positive thinking can, and usually will, lead to positive things happening.
- Don’t give up – Determination and perseverance is a huge factor in getting positive results.
- Ask for help if needed – Asking for help can be difficult for a lot of us but if it’s needed, ask! It’ll create a lot less stress in my life for the long run. Stuck = ask!
- If I’m stuck and getting frustrated, take a break – This is critical in my opinion so that I can come back once I’ve rested and look at the problem with fresh eyes.
- Learn from mistakes and setbacks – We’re all human and we all make mistakes. Learn from them of what not to do in the future and take it as a tool to go further into trying new directions.
- Get proper sleep and downtime – These simple things can help focus and to have a positive mindset so that I can help my students. If I don’t take care of me, I can’t help others.

### **Strategies that I can Use to Support Students’ Positive Mindsets:**

Keeping students positive especially in the mathematics realm can be a challenge as a lot of people struggle with it. A huge part of that is negative thoughts and past experiences that were less than stellar. I have some ideas on how I can support students’ positive mindsets, and I have listed them below:

- I can utilize multiple resources at my disposal – Give students a variety and number of tools that they can utilize in their mathematics journey. There is a vast amount of information out there now so using it my advantage is a huge bonus. Venues such as videos, manipulators, curricular materials, kits from the Henry Grube Center, and the use of colour and pictures will add a Universal Design for Learning (UDL) component to ideas and will help a lot more students.
- I can use diverse teaching techniques (multiple ways to teach) so that students that do not learn in a traditional way, can see other methods that may make sense to them.
- I can ask students to expand on their answers so that they can do a deeper dive into their understanding and critical thinking. If they can explain their answer to me, they understand the methods of how they got to their answer. This might also provoke further investigation for the student.
- I can keep a positive mindset myself – I can’t help students if I have a negative mindset myself. I need to use self-care so that I don’t pull them down with negativity.
- I can praise mistakes as growth and learning – We all learn from our mistakes so I should take advantage of this and praise them for trying as it will encourage them to keep trying.
- I can be accepting of students’ ideas, explanations, and suggestions – If students are giving me information, they’re thinking and that’s what I want them to do. It furthers deeper thinking about how to resolve the problem at hand.
- I can ask students to give me their best effort – If they try their best and give it everything that they can, they have already progressed. Our mistakes and setbacks give us insight into what we should not do for the future, steering us towards deeper critical thinking to solve our problems.

**Conclusion:**

I hope that my journey is interesting and that I explained it well. I definitely had a fun time thinking about this mandala and what every area of it means. It made me reflect on my mathematics journey, the good and the bad, as well as giving me insight into how important a positive mindset is to myself and my students. I've always enjoyed mathematics for the most part even with a few bumps in the road and I want to instill this positivity into my future students as well. We can all do math!