Ismael, the possible areas and volumes of plane

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STEM – ANDLAUERJanuary 26, 2018A mathematical branch that deals with the study of a certain system of calculating and how things change is called calculus. The word “ calculus” came from Latin that literally means ‘ small pebbles’. Calculus was referred to the word counting because of the fact that people in ancient time use stones to do their arithmetic counting.

It is widely used in order to utilize subjects along the lines of physics, engineering, and medicine that helps with the analysis and explanation of how things work. It has two major branches; differential calculus and integral calculus. When we hear the word calculus, the majority of us see it as an obstacle for us to learn mathematics. One reason why students find a hard time coping up with the subject is because of the fact that it deals with so much algebra on it. Students who didn’t pay attention listening and learning algebra during their junior high school days consider themselves in a problematic situation when calculus is being introduced to them. As it was stated, there are two main branches of calculus; the differential calculus and integral calculus. Differential calculus is a branch of calculus that deals with the concepts of derivative and how the functions change within the given idea and problem. Rene Descartes, a mathematician who contributed to give out the idea of calculus.

He discovered that by using a pair of numbers, one can possibly describe a position on a plane. He was one of the influences in creating the differential calculus. While integral calculus focuses on calculating the possible areas and volumes of plane structures and solutions on problems regarding

statistics and hydrodynamics. These 2 branches of calculus are actually related in terms of foundation and mathematical analysis.

It’s just that differential calculus is the reversal of integral calculus. Calculus was both discovered by two mathematicians namely Sir Isaac Newton and Gottfried Wilhelm von Leibniz. There are controversies and debates about who was the complete person to discover calculus, but the answer is both of them. Although they found calculus at the same time, they discovered it in different ways. Leibniz put a lot of effort analyzing the symbols to be used for the functions and notations while Newton just uses any notation he can think off every day; that he will, later on, use it.

They both developed the idea of calculus in order to understand the change of functions and quantities. Newton claimed that he started doing his research and invention during 1666, but unfortunately he did not publish it as a whole. According to Leibniz, he began working on calculus during 1677. After Leibniz went public with his work, Newton was troubled when he knew that Leibniz discovered the same thing but in different way/methods, when in fact he already knew it before. Both of them accused each other of plagiarism until the end of their lives.

They also develop their discovery with the use of infinitesimals. These are the qualities of a number that are infinitely small but it doesn’t get to zero. Most of the equation/notations that we use today are under the discovery and invention of Leibniz. Newton and Leibniz deserve to have equal rights for creating and discovering the calculus. Both of them use calculus to help professionals who are under medical and health, architects, engineers, and

etc. Calculus can be reflected in our everyday lives. We can reflect calculus on the daily activities that we do like cooking. Cooking rice every day is one thing Filipinos are known for because of the fact that Asians specifically Filipinos are huge rice consumers.

If there is one food that most Filipinos will not eat without, that is rice. I usually cook rice at home for my sisters before I go to school and sometimes I repeat it when I arrived at home from school. We all know that cooking rice takes a process and it will start with taking the rice out of the container to put it in the rice cooker or pot. After washing the rice and removing unwanted dirt, we directly put the rice in the rice cooker or pot with their corresponding water level.

When the rice absorbs the water it creates the changes in their size and texture because of the fact that the temperature and pressure given by the machine will affect the changes that will occur. Of course, people who cook do not need the exact measurement and temperature for them to finish the same product, but applying calculus through the process will help them to lessen the burden of having troubles with the food that they are cooking. When I plan to go home from school, I usually ride the tricycle. After stating the address of the location that I’m planning to go to, I’ll ride the tricycle. In this case, this will cover calculus with the tricycle as the line and my destination as the asymptote. As a student, I usually save my allowances and try not to spend too much on other things.

One way to save money is by telling the driver to stop when you know that you are already near to your house. You will see that the tricycle is getting

closer and closer to my destination but it doesn’t get there. This is because of the fact that I do not usually let the tricycle to land directly at my house. Walking is one of the activities that used calculus to measure the distance, speed, and force. I usually arrived at school at 7: 55 AM.

For me to arrive on time, I need to run/walk 2 meters per seconds to arrive on class.