Reina Villegas

September 3, 2009

MAE 4330

Philosophy of Mathematics Teaching

When you hear the word mathematics, what do you think? Is it numbers, addition, multiplication, steps to solving a problem? According to the website, Mathematics is the study of the measurements, properties, and relationship of quantities and sets, using real numbers and symbols (www.education.yahoo.com). To me, mathematics is anything to do with working around numbers. Math is much more than just simply adding or subtracting numbers. Math is used to create everything that we have around us. Besides just using numbers, in math you have infinities, logs; you have a combination of letters with numbers.

We have seen that in the secondary schools, students have different math courses that they have to complete. These courses are divided based on grade level and some have a faster pace at covering the material. The secondary schools teach Algebra I and Algebra II, Geometry, Pre-Calculus, Calculus, and more intensive math. Pre-Calculus and Calculus are for more advanced students and it is not required to take to graduate from high school. Although taking these courses in high school can really be a head start to understanding it in college. Taking three math courses are the only thing you really need to graduate, which would be just Algebra I, Algebra II, and Geometry.

The goal is not to rush through the whole book before the end of the school year. The goal is to teach the students the material. Maybe they didn’t learn all that you covered, but at least if you take some time to actually teach, your students can walk out of your class knowing at least something new. Students should be able to apply what they learn in class to the real world. My goal is to teach them the best I can. I will help every single student that needs my help and even those that don’t need my help that much. It is a goal to teach students to believe that mathematics is vital for the future and that it can be fun at some points. It is critical for the future of the students to know at least basic mathematics. That is why it is crucial that they have at least two to three math courses in the high school.

What can be a huge challenge is if the students are from another country. Other countries have different ways of working with mathematics. For example, some of them use a period in instead of a comma when talking about thousands. To them a period represents the thousands and for America after the period it means cents, huge difference (especially if we’re talking about money). Working out math problems can also be a challenge for those students. It will be like learning something they already know as something new. Besides that, I believe that if a student understands the formula for the problem, then they shouldn’t have a problem completing the rest of the work. Once the guide is learned the rest comes natural, well that’s my opinion. If the student doesn’t learn the basic formula, then they will have a very hard time completing any work at all. In math we have many formulas that follow other formulas, if you miss one of the formula then you are still lost for the completion of the problem.

Assessments should be given throughout the school year. I really don’t agree with pop-up quizzes. I believe that they just consume time, because students are not prepared and they tend to spend too much time on them. Grades then fall drastically. I would give my students a heads up the day before the quiz. The quiz should be in the middle of chapter 2, to see if they understand the chapter. The chapter test should range somewhere within three chapters. The tests will have some multiple choice questions and short response questions.

All my students are the same regardless of race, gender, ethnicity, etc. I believe that everyone is a human and should be respected like one. I know how it feels to be left out because of gender and race. They look at me and think that, “oh she’s a girl, she can’t do it” and also, “that Spanish girl doesn’t know any English.” Some people don’t even speak to me because I’m Spanish, like if that was a bad thing. This is why my students are all the same to me, regardless of anything. Everyone has the ability to complete every task they are asked to do. All the seats in my classroom will be diverse with different students all over the seats. The technology involved in the course would fall under the calculator, hands-on projects where students will have to figure math out in the real world.