

# Back in the day...

There was a time, when I was in college that I wanted to be a teacher. Specifically, I wanted to teach High School Math. While in college, I did specialize in computers, I took the exact same classes for a teaching position. For the first 2.5 years of college, I was sure I would either program video games, or teach High School Math. I don't do either of those. I'm not sure why I never tried the video game programming, but I do know why I didn't go into teaching.

It started with an introduction to student teaching. Not the full fledged student teaching, just 1 week in a 9th grade general math course. These were not troubled kids, just your normal everyday kids in small town Ohio. The problem is that they didn't know basic math. Things I remember learning very early in grade school. Other things I learned in 6th, 7th and 8th grade. Not any really advanced stuff. Things like  $33 + \underline{\quad} = 72$ . They were struggling. By the end of the first class, I was frazzled. The second day in I was in charge of a lesson. The teacher prepared it for me, and I just had to study in the previous evening. I stood in front of a class of dazed faces. The day before, I was helping individual students during their study period, today I saw the same faces on every one of the students. They didn't want to be there. They had no interest in math. My lesson went as well as could be expected and the teacher was impressed by the way I handled myself. I was to observe the next two days, and design my own lesson for Friday. We would talk about it after the Thursday class.

The next two days were just really getting to me. I found that my patience grew less as the week went on. Everyday I needed a few hours just to unwind from 1 class period. I wasn't sure what was causing this reaction. In talking with the teacher, he thought I just had nerves from a public speaking encounter. I thought that could have been the problem. My lesson on Friday when Ok, I developed a 'fun' review of the weeks

lessons. The teacher gave me the thumbs up to go ahead, he seemed to think his students would like it. If they did, I couldn't tell. Stuff they were giving earlier in the week was forgotten on Friday. Stuff drilled over and over again the day before was missing from their memory. If it had been a quiz, they would have had some very poor grades. My nerves were worse that Friday afternoon. Yes, maybe it was speaking in front of so many people, I did have that problem with theater just a year earlier.

Then I got a job as a college tutor. Getting other college students ready for tests, quizzes and just helping with their assignments. 1 on 1 stuff, some of these kids were friends of mine. Trying to give them a heads up on some basic math. Same thing with my patience. It was all I could do to not throw the math books at a head or two. Why didn't they know this stuff? It is all so basic. Why didn't they learn this earlier? What happened to math instruction in the High Schools? What happened to basic logic? Hmm. No easy answers. But that was one of my longest semesters at school. I needed the job to help pay for school, but I really hated the job I had. I'd rather wash the uniforms of the various sport teams (did that as a freshman).

To relax I started spending a lot of time in the computer center. Computers didn't argue that they were right. They did exactly what they were instructed to do. The computer never questioned the rules. At the end of that semester, teaching was out and computers were in. I didn't apply for my senior year of student teaching and I knew that I never would.

And what was the straw that broke this camel's back? One of the kids I tutored had a section on some of the basic Algebra rules. The very stuff that makes Algebra work. It was the "Commutative Property of Addition". That old  $A + B = B + A$ . I tried telling this person that it was a rule. It was one of the things that made Algebra work. I remember explaining that there were just a very few rules that made math work. We spent

a good two hours going over this again and again. At the end of the time, I was asked how I knew all this worked. My reply was simple. It works because it was designed that way. The answer back was, "Oh, Ok". I thought that was the end of it. The next session, the student brought back sheets upon sheets of paper with many, many math equations written on it..

$1 + 2 = 3$ ,  $2 + 1 = 3$ ,  $3 = 3$ ,  $1 + 2 = 2 + 1$  ...  $999,999 + 1 = 1,000,000$  ..  $1 + 999,999 = 1,000,000$  ..  $1,000,000 = 1,000,000$  ..  $1 + 999,999 = 999,999 + 1$  ... and so on. I don't know how long this was worked on, but was a lot of paper and pencil lead wasted. All to say "I guess it works, I couldn't find anything that didn't. I didn't have the nerve to say, that this could go on to infinity and never give you an incorrect answer unless you added wrong. All I said was, "Yep its a rule, and you can't break it." I just shook my head. I guess I could have had fun and changed a rule or two. Can you say Abstract Algebra or Non-Euclidean Geometry?