

Closing Ceremony Speech at MathPath 2016  
Mr M (Prof Stephen B Maurer), Executive Director  
July 23, 2016

Parents and Students,

At the opening ceremony, I told the students what I hoped they would experience at MathPath. They did experience it. Let me review that.

MathPath was the first national camp exclusively about mathematics and exclusively for middle-school aged students. It was founded by George Thomas, after he had already founded a high school age math camp and before he founded Epsilon camp for even younger students and Delta camp for even younger<sup>2</sup> students.

Now there are competing camps – other national camps exclusively for math that accept middle-school age kids. But MathPath remains unique, not just because it only accepts middle school aged kids, but also because of the variety of mathematics and the amount of fun.

One day I asked Derek's counselor group at lunch, were there any surprises about MathPath? Kevin Tang answered: I didn't expect so much mathematics I'd never heard of. I liked his answer because it confirms what I meant when I said the first day that we are a breadth camp. To be sure there are many courses you have heard of: competition practice courses. Basic topics courses like induction and number theory. Advance courses you have heard of. Lets see, as a Quiz Bowl question where any of you can answer what are the 4 types of geometry Dr T teaches? [Analytic, Hyperbolic, Elliptic and Projective.] But if there was nothing you hadn't heard of we're not doing our job.

And, I am pleased to say, you have learned how to listen to advanced talks that are hard for you to follow and still get something out of them. You are coming to understand that mathematicians do not know everything but rather know how much they don't know and are patient in their efforts to understand and solve.

Add to that our month long courses on history of mathematics and on writing mathematics and you get a very broad view of the mathematical enterprise.

And that is not all. Let me mention the Problems of the Day, run this year once again all four weeks by Mr L, with Philip continuing to provide his now famous real time illustrations. These are thinking out of the box problems. They are only sometimes solved by traditional mathematical techniques; they usually need some sort of clever special idea. But many problems in life as well as mathematics need clever special ideas, so practice in looking for them is very valuable – as well as great fun.

So let me go on to the unofficial part of the program. The key aspect is how you students interact with each other. Sometimes you talk math, sometimes you show each other how to solve puzzles, often you just kid around. But as someone said in the 2008 EndCamp Survey, this is a camp where it is ok to be a geeky math kid because there are lots of geeky math kids. As a result, you do all sorts of things that geeky kids like to do.

Among these are all the games and tournaments – chess, Set, other card games, but also pool, table tennis, football with a round ball, pickleball. And then there are the great trips – elective trips like Twins baseball, Fort Snelling, local lakes for boating and swimming, and all-camp trips to the Minnesota Science Museum and to tubing on the Apple River.

Throughout, you have a great sense of humor. You had to have a great sense of humor to do your clothes and hair, or do your counselors' clothes and hair, the way you did during Spirit Week. You had to have a great sense of humor to put up with our unique mail delivery system. The point is, through your geeky natures bouncing off each other, you create a unique spirit and have a lot of fun.

You've made a lot of new friends, from around the country and the world. And today, with email, instant messaging, cell phones, Skype,

and online MathPath forums at Facebook and the Art of Problem Solving, you can easily keep up with these friends until you see them again – at this camp next year, or other camps, at national competitions, at college, or later in life.

So keep thinking back on what happened here. A few years from now, even things that that didn't seem so important here may stand out in ways you can't foresee.

I used to end my speech with a brief section about my enjoying being here with you. Let me end this year with a different section about myself.

There is a Jewish prayer, over 2000 years old, the *Shehecheyanu*, which is recited at the start of major holidays, but can be recited on any pleasant occasion that hasn't happened for a while. In translation it reads

Blessed art Thou, oh Lord our God, king of the universe,  
who has granted us life, sustained us, and enabled us to  
reach this season.

Enabled us to reach this season. That's the phrase that stays with me whenever my wife, who is religious, recites this prayer. And the phrase is with me now. I'm here, in St Paul, Minnesota. I have been enabled to reach the season and the location – of MathPath. A few months ago it wasn't obvious this would happen. One day last spring I sent a long message to my colleagues on the senior staff, saying my physical condition had continued to get worse, and while MathPath was going to run, and I could still do a fair share to run it, I might have to do so from afar, from home. To which my colleagues, led by Kip, said no such thing; we will do whatever we have to do to take care of you here and make it work.

And so they have. I also thank you many students who have helped me from time to time. The further good news is that being here has proved somewhat easier than we all expected, and my condition has seemed

pretty stable for the month, after a year where things pretty steadily got worse. At this point, knock on wood, I am expecting to attend MathPath 2017 and play pretty much the same role I have here. [At this point the speech was interrupted by a standing ovation.]

That's not the role I would like to play. I have given up teaching breakouts, which for me was the most fun. There were no bike trips this year, something I used to organize. Most of all, I can't wander around sitting down briefly with one student after another. The result: I haven't talked to most of you, and only know you as an administrator at a distance.

But still, I have been hearing about *all of you* and I have seen that we once again have a great camp. It gives me great pride to have led the effort to make this happen. *It makes my daily struggle worthwhile.* I look forward to seeing you again, or learning of your accomplishments in the years ahead. Thank you.