Parents, grandparents, MathPath counselors,

Each year in the past 15 years I asked Mr. Kip Sumner this question: 'How are the counselors?' And he would say 'we have an excellent group of counselors.' And on occasion when I asked how this person or that person was, he would say that the person is a good person. A few years ago the answer came to me as to why Mr. Sumner this everybody is good. The answer is that Mr. Sumner is bad. In relation to him everybody is a good person. This was the first year he not only answered that we have an excellent set of counselors but also said they are uniformly excellent.

Students and counselors,

As the great bard wrote:

"Shall I compare thee to a summer's day? Thou art more lovely and more temperate:"

Beautiful minds, that is what you are! The better food you had here was the sweetly imparted knowledge in the classrooms. This has been a month-long math conference ...tailored to the math needs of those in your age group.

MathPath is a math ellipse filled with classes and plenaries on topics one is unlikely to find in school nor will have time for in university. If someone asked you what MathPath is, I hope you would honestly say something like this. It is a month-long summer math conference for students in my age range showing high promise in mathematics, featuring also a month-long math writing workshop and plenaries on the history of math, with also board games, some athletic activities and weekend trips to local attractions ... so it likes a summer camp. Let this also serve to encourage the academic director, faculty, and the board of directors itself to ask often if they are resonating with this original and true nature of MathPath. It is my sole and solemn desire that we continue to strive to keep this camp honest to its present nature.

I hope that you would remember MathPath for the overwhelming fun of having previously confusing concepts clarified, .... of seeing new concepts, .... and of

finding your tribe --- rather than spirit week and birthday cakes. Long ago, the camp used to give useful math books as birthday gifts. I think now that that was a better idea than the birthday cakes. Yet I neither endorse nor decry spirit week nor coloring of hair or body because I know you know... that these mundane diversions do not make you any more special than you already are.

Going on from here ..., you will eventually specialize in some area, whether mathematics, the sciences, or something else. But specialization produces, as someone has said, "people who know more and more about less and less, until they know all about nothing." You will have neither time nor inclination, nor will your mind easily take to a new idea that often spans a whole subject area. So this camp strives to give you a breadth early – in mathematics

For myself, I believe this: the very best thing I can do is to take the knowledge in my old head and place it in to a new one. I salute those members of the faculty who were able to drive home new concepts to you as well as give you homework, collect it, critique it, and return to you. I am in continued admiration also of Professor Stephen Maurer who, despite the debility that would have prevented ordinary men, strove with undiminished vigor each class day to make you write mathematics properly, and proofs as fitting the deductive method that is characteristic of the queen of the sciences.

Yet, as you go from here, the volume of a certain kind of your ignorance is only greater than when you came here. Blaise Pascal said, "Knowledge is like a sphere, the greater its volume, the larger its contact with the unknown." But this is the better kind of ignorance: you know not [pause] and you know you know not. Philosophers believe this is what Socrates meant in his pronouncement in Plato's Phaedrus: As for me, all I know is that I know nothing. [Pause] The only thing Socrates knows for sure is how little he knows. [pause] Your <u>learned ignorance</u> has now increased. You have more questions than you had before. In fact that is how knowledge advances, ... mathematics advances – from answers to questions. From know-how to knowwhy. In mathematics, standing on existing knowledge, we make conjectures!

The quality of your learned ignorance will in part determine the greatness of your future. And that quality will in part depend on those who help to cause that ignorance. But it is that you get to choose the quality of your future mentors ... you choose the quality by the quality you build in your mind... your quality.

Math is not a gentle game. It takes grit to discover a serious theorem. One day some of you will join me and other members of the faculty who had the opportunity to discover serious theorems. And some of you might attain greatness that we could not. But may you have epistemic humility ... may you know that the measure of what you do not know is infinity and it is the same as the measure for anyone else in the world. Thus all people are equal.

The numerous musical productions of Broadway are made by men (and women). You on the other hand are productions of Time. That is, minds like yours are produced only now and then. And as William Blake said, "Eternity is in love with the productions of Time."