Nika Polevaya Fall 2004 REU Evaluation

Entering the REU this Fall, I expected to become very familiar with tools of hyperbolic geometry, and I feel that now I have a fairly strong background in this field that I can apply to various mathematical problems. I feel very fortunate to have been working with Dr. Bromberg, as he was great to coordinate with and extremely knowledgeable. Whenever I needed help or was confused about the topics I've studied, he could usually meet with me close to that time and would help me pin down the problem in a way that made it click. He would always answer my questions - even when he was away. All the reading that Dr. Bromberg has suggested to me has prepared me well to embark upon solving the problem that I'm currently working on (construction of right-angled hyperbolic hexagon with arbitrary sides, and a pair of pants from that), and the solution of this problem extends naturally into the goal of the next semester – construction of certain hyperbolic polyhedra.

Since I am still an undergraduate student, the flexible schedule helped me do well in my classes as well as enjoy the research experience. I expected to work a lot independently, and that there would be someone who could provide me with a new angle at the problems I worked on, and I feel that this program has provided me with such an opportunity. I also did something that I didn't expect to do – I learned some programming skills in the process of my research, as the power of Mathematica and Maple turned out to be very useful for the problem that I'm working on. That was a beneficial unexpected turn that, I believe, will serve me well in the future, when I'm (hopefully) a graduate student in Mathematics.