A LETTER FROM PAUL COHEN

Dr. Paul J. Cohen, Professor of Mathematics at Stanford University, graduated from Stuyvesant High School in 1950. At Stuyvesant he was Captain of the Math Team and an associate editor of the Math Survey. After attending Brooklyn College for three years, he went to the University of Chicago where he received his Master's and Doctoral degrees. He established his reputation as a great mathematician in 1963 when he proved that the denial of the continuum hypothesis is consistent with the axioms of set theory. (See Transfinite Sets by Eli Cohen in the Survey of Spring, 1966.) His work won him a Research Corporation Award for 1963. Last August at the International Congress of Mathematicians in Moscow, Dr. Cohen received a major international award. His main interests are Axiomatic Set Theory, Partial Differential Equations, and Harmonic Analysis. The present editors of the Survey wrote to him, and asked him to send a reply for publication offering his advice to students interested in mathematics.

To the Readers of the Math Survey:

It is a pleasure for me to write again in the Math Survey. I have always looked back on my days at Stuyvesant with great fondness and I am convinced that the very lively spirit among the students at the time played a great role in my mathematical development. I am sure that today, just as then, you are exchanging problems and explaining to each other segments of mathematics which you have read in advanced texts. These contacts are undoubtedly essential in developing the determination to become a mathematician. Indeed, I have often thought how difficult it is to distinguish between native talent and a very deep-seated drive which enables a student to bring his full powers to bear on the problem before him.

I remember my own high school studies in mathematics as being rather disorganized and I had no clear picture then of what contemporary mathematics was. Today there are many more good introductory texts and a good student can get a reasonable picture of many fields. My own prejudice would be to guide young students away from the most abstract ideas at such a young age, but rather to build his ability in solving difficult problems. The solid base he acquires now will serve him all his life. Thus, number theory, geometry and analysis should be most accessible to him. Although my best work has been in Logic, my heart has always been with the most concrete mathematics, with roots deep in history.

Above all mathematics should be enjoyed. There are many pitfalls ahead and most of you will not become pure mathematicians. (There is even a rumor that other fields are equally rewarding.) Still, mathematics is unique in its purity and absoluteness. I hope that you who have been touched by its beauty will be the richer for it and that you will someday experience the thrill, (and pain), of creating new mathematics yourselves. Good luck to all of you!

Paul J Cohen