

## SAMPLE INITIATION CEREMONY

Local organization of Mu Alpha Theta chapters varies, but there is the common bond of interest in mathematics. Many chapters choose to emphasize this unity of purpose with a formal initiation ceremony for new members. If such a ceremony is held, it is an excellent time to invite parents of the initiates to attend.

For the initiation program some chapters invite a speaker from a neighboring college or university or from a local business or industry, and then call initiates forward to receive their membership certificates without any formal ceremony.

Chapters are encouraged to develop their own initiation program. However in order to assist those chapters that want a more formal ceremony, a sample is printed below.

### Sample Initiation Ceremony

(This particular ceremony is based on one originally contributed by Nellie Kitchens, a member of the first Governing Council of Mu Alpha Theta, modified by Carol Ropp, and edited in 2012 by Kay Weiss to bring it up to date.)

**President:** Candidates, you are being presented for initiation into Mu Alpha Theta, the National High School and Two-Year College Mathematics Honor Society. It is an honor to be selected for membership in this organization which has over 2100 chapters across the United States and in many foreign countries.

Each of you meets the requirements for membership, including work done with distinction in college preparatory mathematics.

The principal purpose of Mu Alpha Theta is to stimulate a deeper interest in mathematics. Thus, it is desirable that you be given some brief instruction that may encourage you to consider the deeper meaning and historical significance of mathematics.

**First Speaker:** I speak of the oldest *history* of mathematics. The arithmetic, trigonometry, number theory, and astronomy of the Babylonians and Egyptians was far reaching and contributed much to progress in the ancient world. From calculating the circumference of the earth to the building of the pyramids, man began to apply mathematics.

It took many years for the concept of the number zero to develop, but it made possible the algorithms for addition and multiplication which became important tools in human progress.

Greek geometry involved a new emphasis on the power of reason and served as a foundation for philosophy. Archimedes found ways to determine areas and volumes and used mathematics to engineer machines.

Next came the age of exploration and enlightenment.

**Second Speaker:** With the study of algebra and equations, logarithms and probability, humans found a new language so they could understand the world around them as never before.

With one overpowering stroke of genius, a young man in his early twenties, Sir Isaac Newton, invented The Calculus, discovered the Law of Gravity, Three Laws of Motion, and how mathematics could predict the very orbits of the planets. With this mathematics, mankind had the tools needed to discover and explain, and a way to develop the technology that would bring man to a new age of scientific understanding.

We learned from the likes of Descartes, Fermat, Leibniz, Riemann, and Fourier. Theory from Galois, Cauchy, Maxwell, and Hilbert. The names may not all be familiar, but the results have impacted each and every one of us today.

From the mathematics of Quantum Mechanics to the Theory of Relativity man learned of matter and light. John Von Neumann, another leader in the new mathematics, developed "game theory", merging concepts in strategy with mathematics principles. He also developed the background theory for the invention of digital computers.

**Third Speaker:** The applications of 20th century higher mathematics have radically changed virtually every aspect of our lives.

In the physical and life sciences, new developments have contributed to understanding areas as diverse as mass - energy relationships to population growth. Business and economics have benefited from new theories in statistics and group analysis. Advances in medical technology and communications abound. Applications of new kinds of mathematics have arisen.

Knot theory is being used to explain DNA's structure, while topology attempts to understand the shape of our universe.

Perhaps the most important development attributed to higher math is the field of computer science and the development of user-friendly computers, with its far-reaching applications to virtually every aspect of our lives. Mathematics has taken a large step from its role in the past decades as an obscure mental exercise of the few into a position of prominence in modern life, making our world both more comfortable and interesting.

**Fourth Speaker:** It is time now to consider the *future*. The mathematics of the 21<sup>st</sup> century promises mankind even more. Telecommunications without wires, words and pictures transmitted via algebraic codes. The exploration described by the previous speakers represents only the beginning of our understanding of the mathematical world. Rather than developing at a constant rate, discoveries build one upon the other, each leading to more innovative theories. Our knowledge grows exponentially, and its applications grow wider in scope. In summary, then, the mathematics of the future relies increasingly upon man's ability to imagine and create, as well as his ability to reason.

Mankind awaits new mathematical and scientific theories to complete the work of the great men and women who have come before. Just as mathematical principles and research have helped us understand so much, we anticipate further research and development to allow us greater understanding of the world around us.

It is with proud recognition of your skill and interest in mathematics that we welcome you to Mu Alpha Theta. May we someday add your name to the list of great mathematicians who have helped the world advance.

**President:** You have now heard a brief history of mathematics and its gifts to all. More is needed of you. You must exchange freely your ideas, and you must continue to grow through all your years.

You see before you a replica of the insignia of Mu Alpha Theta. Blue represents truth as unlimited as the sky. Gold shines as a symbol that mathematics is indeed a valuable treasure. The insignia represents, above all, a high point in the history of the world, an important relationship in mathematics - one that combines the mystery, the challenge, and the beauty of numbers with a simple geometric figure, the right triangle. Let this simple geometric proof of the Pythagorean Theorem be a symbol for you and serve as a challenge to encourage your further enjoyment and study of mathematics.

**Sponsor:** Candidates, please rise. If you agree to accept the challenge of membership in this organization, you should answer simply, "I do." (*pause*)

I now declare you to be members of Mu Alpha Theta. As your name is called, please step forward to accept your membership certificate. *Congratulations.*