

The history of the pythagorean theorem essay sample



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Pythagoras (569-500 B. C. E.) was born on the island of Samos in Greece, and did much traveling through Egypt, learning, among other things, mathematics. Not much more is known of his early years. Pythagoras gained his famous status by founding a group, the Brotherhood of Pythagoreans, which was devoted to the study of mathematics. The group was almost cult-like in that it had symbols, rituals and prayers. In addition, Pythagoras believed that “ Number rules the universe,” and the Pythagoreans gave numerical values to many objects and ideas.

These numerical values, in turn, were endowed with mystical and spiritual qualities. Legend has it that upon completion of his famous theorem, Pythagoras sacrificed 100 oxen. Although he is credited with the discovery of the famous theorem, it is not possible to tell if Pythagoras is the actual author. The Pythagoreans wrote many geometric proofs, but it is difficult to ascertain who proved what, as the group wanted to keep their findings secret.

Unfortunately, this vow of secrecy prevented an important mathematical idea from being made public. The Pythagoreans had discovered irrational numbers! If we take an isosceles right triangle with legs of measure 1, the hypotenuse will measure $\sqrt{2}$. But this number cannot be expressed as a length that can be measured with a ruler divided into fractional parts, and that deeply disturbed the Pythagoreans, who believed that “ All is number. ”

They called these numbers “ alogon,” which means “ unutterable. So shocked were the Pythagoreans by these numbers, they put to death a member who dared to mention their existence to the public. It would be 200

years later that the Greek mathematician Eudoxus developed a way to deal with these unutterable numbers. Pythagoras of Samos Who is Pythagoras? Born: about 569 BC in Samos, Ionia Died: about 475 BC Pythagoras is often described as the first pure mathematician. He was born to Mnesarchus and Pythais. He was one of either three or four children, there is proof for both of these accounts.

During Pythagoras's early life, he traveled all over the world with his father. At a very early age, Pythagoras learned to play the lyre and recite Homer. Pythagoras also wrote poetry at a very early age. Pythagoras got his education from three philosophers, the most important mathematically being Anaximander. Pythagoras meet Anaximander, through Anaximander's good friend Thales, in Egypt at around the age of thirty. Around 515 BC Pythagoras went on a journey to Croton, where he established a philosophical and religious school.

Pythagoras was the head of the inner circle of the society, his inside followers were called mathematikoi. The mathematikoi had to follow very strict laws that Pythagoras believed. The five things that Pythagoras believed very deeply were 1)that at its deepest level, reality is mathematical in nature, 2)that philosophy can be used for spiritual purification, 3)that the soul can rise to union with the divine, 4)that certain symbols have a mystical significance, and 5)that all brothers of the order should observe strict loyalty and secrecy.

Both men and women were allowed to join the society. Pythagoras was not acting as a modern research group at a major university. Pythagoras and his

society they studied mathematics, the principles of mathematics, the concept of numbers, the concept of the triangle and other mathematical figures, and also the abstract idea of proofs.