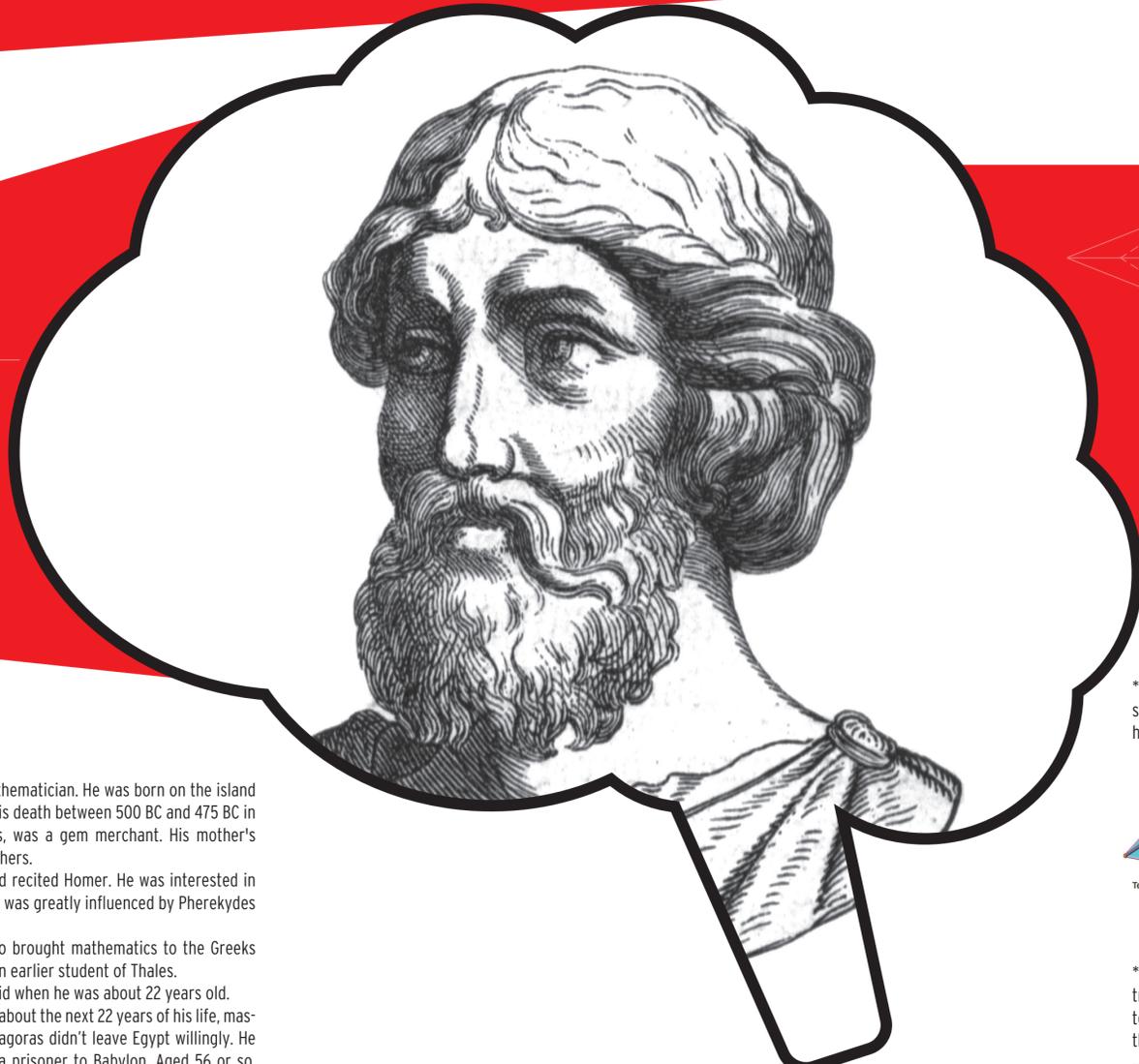


ANATOLIA "THE LAND WHERE SCIENCE WAS BORN AND FLOURISHED"



LIFE

Pythagoras is often referred to as the first pure mathematician. He was born on the island of Samos, Greece in 569 BC. Various writings place his death between 500 BC and 475 BC in Metapontum, Lucania, Italy. His father, Mnesarchus, was a gem merchant. His mother's name was Pythais. Pythagoras had two or three brothers. Pythagoras was well educated, and knew poetry and recited Homer. He was interested in mathematics, philosophy, astronomy and music, and was greatly influenced by Pherekydes, Thales and Anaximander. Pythagoras was taught mathematics by Thales, who brought mathematics to the Greeks from Ancient Egypt, and by Anaximander, who was an earlier student of Thales. Thales advised Pythagoras to visit Egypt, which he did when he was about 22 years old. Pythagoras must have liked Egypt. He lived there for about the next 22 years of his life, mastering mathematical ideas AND spiritual ideas. Pythagoras didn't leave Egypt willingly. He was caught up in a Persian invasion and taken as a prisoner to Babylon. Aged 56 or so, Pythagoras was finally set free. He returned to Samos, his birthplace. There he began teaching people his philosophy of life, which was based on a mixture of his own ideas, mathematics, and mysticism from Ancient Egypt and the East. He moved to the city of Croton, then part of Ancient Greece, now in Southern Italy.

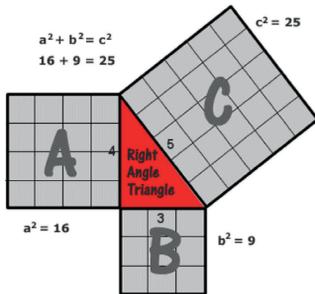
There his ideas fell on more fertile soil and he established the Pythagoreans. Pythagoras is thought to have died at the age of about 75 years, in about 495 BC.

WORKS

Maths

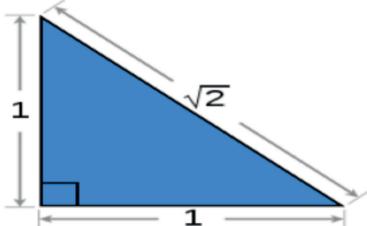
***Pythagorean theorem:

In mathematics, the Pythagorean theorem, also known as Pythagoras's theorem, is a fundamental relation in Euclidean geometry. The theorem of Pythagoras - for a right-angled triangle the square on the hypotenuse is equal to the sum of the squares on the other two sides. The Babylonians understood this 1000 years earlier, but Pythagoras proved it.



***Constructing figures of a given area and geometrical algebra. For example they solved various equations by geometrical means.

***The discovery of irrational numbers is attributed to the Pythagoreans, but seems unlikely to have been the idea of Pythagoras because it does not align with his philosophy the all things are numbers, since number to him meant the ratio of two whole numbers.



Pythagoras's theorem produces irrational numbers.

PYTHAGORAS

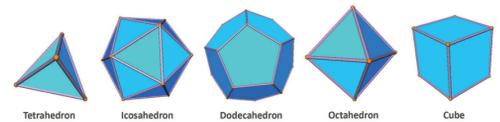
Born & Died: C. 570 – C. 475BC

Main Interest: Metaphysics, Mathematics, Musics, Astronomy

School: Pythagoreanism

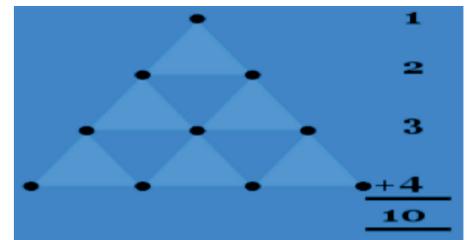
Notable Ideas: Pythagorean Theorem, Pythagorean Tuning, Golden Ratio, Musica universalis, Metempsychosis

*** Pythagoras himself established the existence of the first three solids. The five regular solids. It is believed that Pythagoras knew how to construct the first three but not last two.



The Platonic Solids

***Pythagoras was also credited with devising the tetractys, the triangular figure of four rows which add up to the perfect number, ten. As a mystical symbol, it was very important to the worship of the Pythagoreans who would swear oaths by it.



The Tetractys - a perfect Pythagorean symbol, both mathematical and mystical.

***The sum of the angles of a triangle is equal to two right angles.

***Pythagoras taught that Earth was a sphere in the center of the Kosmos, that the planets, stars, and the universe were spherical because the sphere was the most perfect solid figure. He also taught that the paths of the planets were circular. Pythagoras recognized that the morning star was the same as the evening star, Venus

Music

***He would have discovered that musical notes are indeed ruled by whole number ratios.

Astronomy

***Pythagoras was the first person known to have taught the earth was spherical, with antipodes and that it revolved around the sun
 ***Pythagoras appears to have believed Earth was at the center of the universe.

- He founded Pythagorean school
- Pythagorean theorem
- He would have discovered that musical notes
- The mathematical proof that $\sqrt{2}$ is irrational was found by a Pythagorean
- Mesmerism was practised by Pythagoras
- The Pythagoreans were the first people to realize that numbers exist in their own right
- Earth was a sphere in the center of the Cosmos
- Pythagoras is often referred to as the first pure mathematician

KORKMAZ YIGIT ANATOLIAN HIGH SCHOOL
 Physics Teacher: **HATICE KIRMACI**