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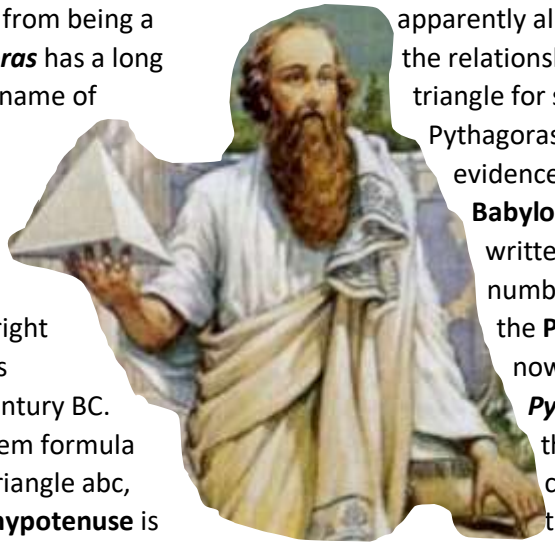
PHYTAGORAS

In the form of a right triangle we all know that the **Pythagorean** theorem is very influential in the plane shape. Not only wake up flat, so also wake up space. What is the **Pythagorean theorem**? Who is ***Pythagoras***? What are the interesting things in it? What's this for?. Mentioning the name ***Pythagoras***, many people, especially students, remember it as one of the formulas in the field of mathematics. But apart from being a formula name***, Pythagoras*** has a long story behind it. The full name of the formula is the **Pythagorean Theorem**. **The Pythagorean theorem** is a statement about the relationship between the sides of a right triangle. This theory was discovered in the 6th century BC. The ***Pythagorean*** theorem formula states that if in a right triangle abc, then the square of the **hypotenuse** is equal to the some of the squares of the other sides. So a mathematical formula can be formed, namely, $a^2 + b^2 = c^2$, and vice versa to measure the value of the variable "***a***" and "***b***" (base or height) the formula $a^2=c^2 - b^2$ and $b^2=c^2 - a^2$ can be formed. Before the formula was formed, there was an interesting story behind it.



The inventor of the **Pythagorean** theorem was **Pythagoras** himself who was born on an island called Samos, an island in **Greece** in 570 BC. During his life, he liked to travel to various places, such as Egypt and Babylon. During his travels, he gathered knowledge from the civilizations he visited. Later, he began to settle in Crotone, Italy. This is where Pythagoras founded a movement or school called the Pythagoreans. At this school, Pythagoras taught his followers that everything in the universe can be expressed in terms of numbers. Because of this, ***Pythagoras*** and his followers greatly revered numbers and the ratios that could be expressed by these numbers. At the school that he founded, he began to tinker with the knowledge he had accumulated while he was traveling, one of which was knowledge of the relationship between the sides of a right triangle. Based on historical records, people in the civilizations of **Babylon, Egypt, India**, and even **ancient China** apparently already had an understanding of the relationship between the sides of a right triangle for several thousand years. before Pythagoras was born. One of the historical evidence is a tablet belonging to the **Babylonian** civilization. On this tablet, written many combinations of 3 numbers that meet the requirements of the **Pythagorean** theorem or what we now call the **Pythagorean** triple. ***Pythagoras*** gets credit/award for this theorem because he is considered a person who brings this knowledge was transferred to the Greek civilization, which later became the center of science in its day.

Pythagoras was also promoted as the first to systematically document and prove this theorem. He was so happy when he succeeded in proving this calculation, according to legend***, Pythagoras*** sacrificed 100 cows! Since then, knowledge of the relationship between the sides of a right triangle is known as the ***Pythagorean Theorem***. Quoted from **WIKIPEDIA**,the name **Pythagoras** was associated with various mathematical and scientific discoveries, such as the ***Pythagorean*** theorem, the five shapes, the theory of proportionality, the spherical earth theory, and the idea that the east and west stars are the same planet, namely Venus. He is also said to have been the first to call himself a philosopher ("lover of wisdom") and divide the world into five climatic zones. However, classical historians still debate whether Pythagoras actually made

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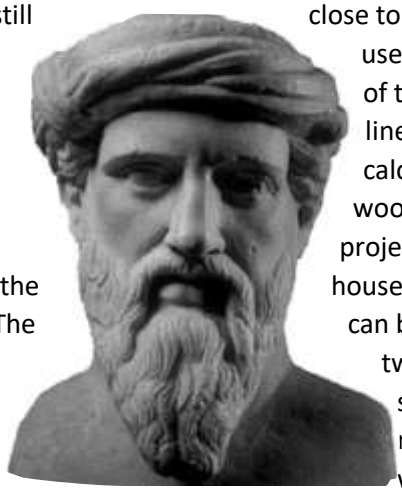
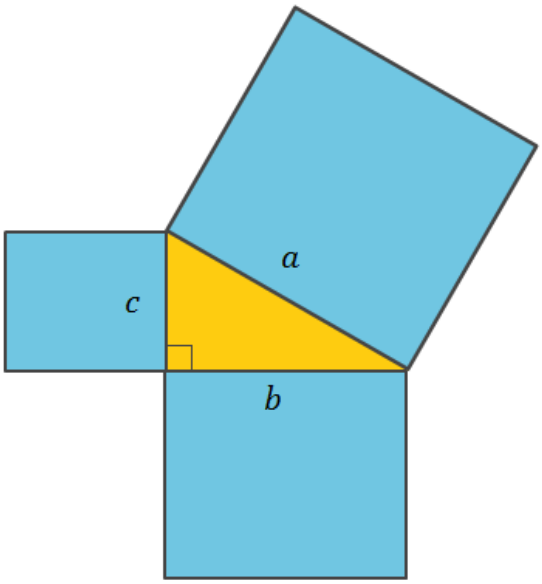
these discoveries, and many of the achievements attributed to his name may have existed before or were coined by his associates or successors. In addition, it is still debated whether he actually contributed to the field of mathematics or natural philosophy**. Pythagorean** thought influenced Plato, and Plato's dialogues (*particularly Timaios*) show the influence of the teachings of **pythagoreanism.** The **Pythagorean** notions of mathematical perfection also had an impact on Ancient Greek art. **Pythagoreanism** re-emerged in the first century BC among medieval Platonists, along with the emergence of **neo-pythagoreanism.** ***Pythagoras*** continued to be regarded as a great philosopher in the Middle Ages, and his philosophy greatly influenced scientists such as ***Nicolaus Copernicus, Johannes Kepler,*** and ***Isaac Newton.*** **Pythagorean** symbolism is also used by modern Western practitioners of esotericism, and his teachings as detailed in ***the Roman poet Ovid's Metamorphoses*** have influenced the modern vegetarian movement and he died around 495 BC.



After knowing the origins of the discovery of the **Pythagorean theorem**, what are its effects on our lives? Here are some of the benefits of ***Pythagoras*** in our lives, the first is to find out whether a triangle is acute, obtuse, or right. If the some of the two squared sides is equal to the square of the third side, which is the **hypotenuse**, then the triangle is a right triangle. Then the second to Help find the length of the missing side of the triangle. With this formula we can find the length of the third side of a right triangle. This formula also functions to find the length of the missing side of the square and rectangle of a triangular space. The third **Pythagorean** formula also helps to calculate the shortest distance between two points when we travel. This formula is a *Euclidean geometric* formula so it is close to aspects of everyday life. Then it is also useful as a basis for calculating the length of the diagonal connecting two straight lines. The ***Pythagorean*** formula is used to calculate areas of architectural, woodworking or physical construction projects, such as building the roof of a house. In addition, the ***Pythagorean*** formula can be useful for knowing the navigation of two distances. An example is if we are at sea and navigate to a point that is 300 miles to the north and 400 miles to the west, then we can use this formula to find the distance from the ship to that point. And this is the story behind ***Pythagoras*** the "father of numbers".



Reference list:

1. ***wikipedia foundation (***phytagorean facts and biography)

2. **Zenius Education** (the history of theorema phytagoras)

3. **Detik.com** (Phytagorean theorem function in life)

4. **medium.com , indozone** and **Zenius Edu.** (pictures reference)

warning: I took the reference in Indonesian and then translated it, it is not my right to claim all of this text, that's why I gave the reference list.