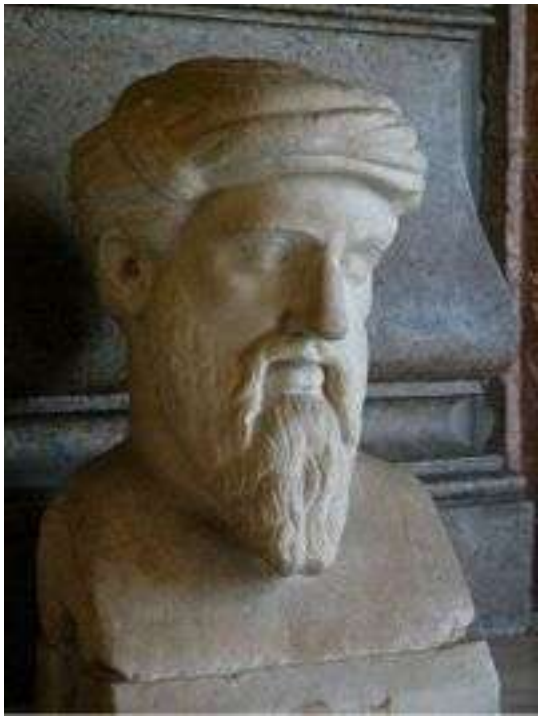
Ancient Philosophy

Pythagoras

Pythagoras



- pih-THAG-or-as
- Born on the island of Samos, c. 570 (northwest of Miletus and directly east of Athens).

Pythagoras

- Extensive travel to Egypt and Babylonia.
- His father engraved gems. Pythagoras was very familiar with shapes and solid bodies such as quartz crystals.

Pythagoras

- When he was about 30 he moved to southern Italy, Croton, one of the main colonies of Magna Graecia - the Greek colonies of Southern Italy from the 8th to 5th centuries.

Pythagoras

- Two important towns or colonies from a philosophical point of view were CROTON and ELEA in the 6th cent. Parmenides was at Elea and Pythagoras at Croton

- Pythagoras founded a school in which both young people of both sexes attended. His most prominent and important disciple was Philolaus who lived during Socrates' life.

Pythagoras


BLACK SEA
Thracia
Byzantium
Chalcedon
Propontis
Epidamnus
Illyria
Macedon
Abdera
Apollonia
Stagira
Lampsacus
Cyzicus
Mount Olympus
2917 m
Chalcidice
Troas
Phrygia
Troy
Tarentum
Elea
Sybaris
Thuri
Dodona
Larissa
Corcyra
Thessaly
Iolcos
Pagasae
AEGEAN SEA
Aeolis
Mysia
Mytilene
ASIA
Lesbos
Lydia
Phocaea
Phthia
Smyrna
Sardis
Euboea
Opus
Delphi
Chalcis
Chios
Clazomenae
Teos
Colophon
IONIAN SEA
GREECE
Thebes
Megara
Ephesus
Colossae
Samos
Mycale
Priene
Miletus
MINOR
Elis
Olympia
Corinth
Athens
Phlius
Mantinea
Argos
Aegina
Ceos
Delos
Caria
Halicarnassus
Cos
Sparta
Cnidus
Doris
Camirus
Ialysus
Lindus
Rhodes
Himera
Egesta
Messina
Reggio
Locri
Naxos
Etna
Sicily
Catania
Acragas
Leontini
Carthage
Gela
Camarina
Syracuse
AFRICA
0
200 km
100 mi

Pythagoras

- Political difficulties. Angry mob burned the school in 497.
- 5th century Pythagoreans - split. Akousmatikoi. Mathematikoi.
- 4th century - close relationship between Platonism and Pythagoreanism.

Pythagoras

Akousmatikoi and Mathematikoi

ah-kooz-MATI-coy mathe-MATI-koi

Milesians were *phusikoi* =

study-the –cosmos-through-nature-people = natural philosophers

“oi” = “ians” as in California → Californians

Pythagoras

- Akousmatikoi - venerated Pythagoras' teachings on religion and the proper way to live but had little interest in philosophy and mathematics

Pythagoras

- Mathematikoi - interested in mathematical, musical, astronomical knowledge. The kosmos is ordered, that ordering is a harmony - or fitting together or arrangement. That arrangement is numerical.

Pythagoras

- Focus moves away from the senses to the eternal. It is through the soul that one best contemplates the underlying reality - the Real.

Pythagoras

Some akousmatic doctrines

1) that the soul is immortal;
2) that it transmigrates into other kinds of animals;

3) that after certain intervals the things that have happened once happen again, so that nothing is completely new;

4) that all animate beings belong to the same family (Porphyry, *VP = Vie de Pythagore* 19).

Pythagoras

Some akousmatic doctrines

- **Dietary = No eating beans!**
- **Beans make it harder for people to concentrate. Now why would that be?!**

Pythagoras

Some akousmatic doctrines

The *acusmata* (their writings) indicate that the Pythagorean way of life embodied a strict regimen: religious ritual, diet, and in almost every aspect of life.

Pythagoras

Some akousmatic doctrines

Arbitrary taboos?

- **“one must put the right shoe on first”**
- **“one must not travel the public roads”**
- **“not to stir the fire with iron”**
- **“not to pick up what has fallen”**

Pythagoras

Some akousmatic doctrines

- **Training in self-control – the need to be silent.**
- **Later tradition reports that those who wanted to become Pythagoreans had to observe a five-year silence. (Iamblichus, *VP* 72).**

Pythagoras

The Mathematical Solution

- Everything could be represented through a number.
- Not as an abstraction, but as a real being, the generator of all things.
- Number is the essence and principle (*archê*) of reality.

Pythagoras

The Mathematical Solution

- Numbers are divided into even and odd; the even numbers unlimited, the odd ones limited.

- Since everything is a number, the elements of things are the evens and the odds, the unlimited (evil or worse) and the limited (good or better).

Pythagoras

The Mathematical Solution

This radical opposition explains the multiplicity in the world including its moral aspects:

Pythagoras

The Mathematical Solution

Justice is represented by the square (even multiplied by even)

Love and friendship, because they indicate perfect harmony, were identified with the number eight

Health with the number seven.

Pythagoras

The Mathematical Solution

- Even and odd numbers originated from the "One."
  - So does this mean that the numerical was viewed as a conceptual, incorporeal principle?
  - Or was the numerical viewed as physical, extended things, i.e., ontological substance?

Pythagoras

The Mathematical Solution

- Number as units are the primary material components of all things

- But since the One partakes of the limited/odd, number makes things what they are, i.e., it gives order and formal identity to all material things.

Pythagoras

The Perfect and Sacred Number

- "TETRACTYS" - pronounced as in "malpractice"
- The perfect and sacred number for the Pythagoreans is ten, which results from the principal combinations: 1, 2, 3, 4 = 10

Pythagoras

The Perfect and Sacred Number

"TETRACTYS"

- For the Pythagoreans there are ten heavens. To make up this number, they add to the traditional nine a tenth, which they call "anti-terra." The heavens all revolve around one central point which is called "Fire."

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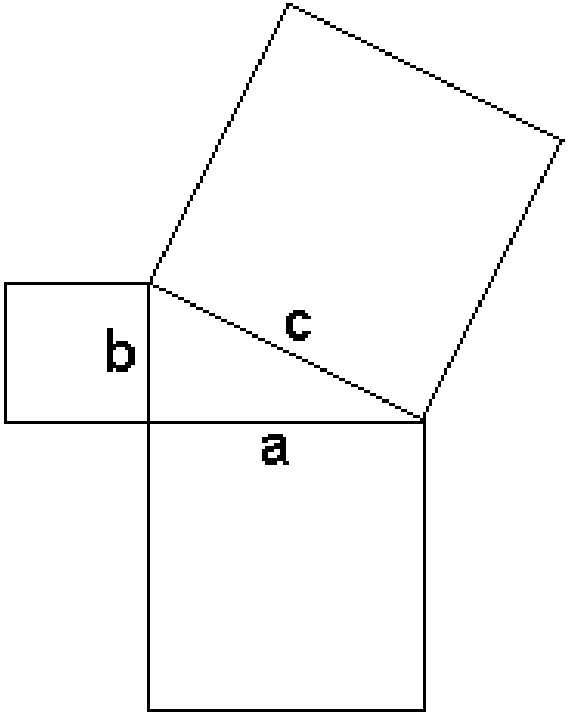
The Theorem

- The square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides enclosing the right angle.



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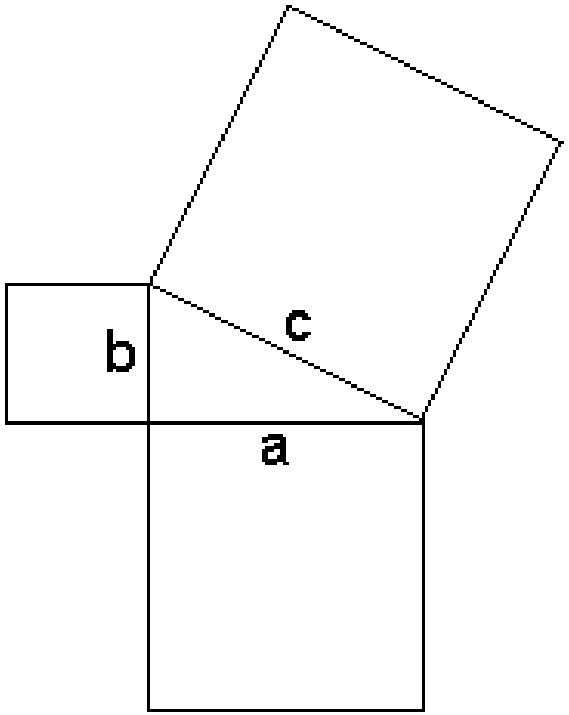
The Theorem

- **The sum of (the areas of) two small squares equals (the area of) the big one.**
- **In algebraic terms, a2 + b2 = c2 where c is the hypotenuse while a and b are the legs of the triangle.**



Pythagoras' Greatest Hits

- The Theorem
- An advance over the Milesians in move from the arche being some natural element to something conceptual

Pythagoras' Greatest Hits

- Thales, Anaximander, and Anaximenes were looking for a principle separate from BECOMING and distinct from any MULTIPLICITY, but yet would account for both.

Pythagoras' Greatest Hits

- But Pythagoras thinks that it is from the One that all the other numbers proceed. This is how we get multiplicity. But MULTIPLICITY ultimately is reduced to UNITY. Once we arrive at unity, all differences are eliminated.

Pythagoras' Greatest Hits

And once we arrive at unity, there is

Pythagoras' Greatest Hits

SILENCE