# Knowing the Truth, Absolutely

Bust of Pythagoras in the Capitoline Museums, Rome - wikipedia

In the late 6th Century BC, the great Ionian Greek philosopher, mathematician, and founder of a religious society, made an amazing discovery in geometry that bears his name to the present day, termed the Pythagorean theorem.

Most of the information about him was written down centuries after he lived, so that many of the accomplishments he is credited with may actually have been accomplishments of his colleagues and successors. Nevertheless the Pythagorean ideas had a significant influence on Plato, and through him, on all of Western philosophy.

It is said that Pythagoras was the first man to call himself a philosopher, a lover of wisdom. This means that his famous work, the Pythagorean theorem, is more than just a discovery in geometry, but involves a form of science that enables one to

understand aspects of truth that are hidden from the senses, but can be recognized in the mind to be absolutely truthful, and this without the aid of mathematics.
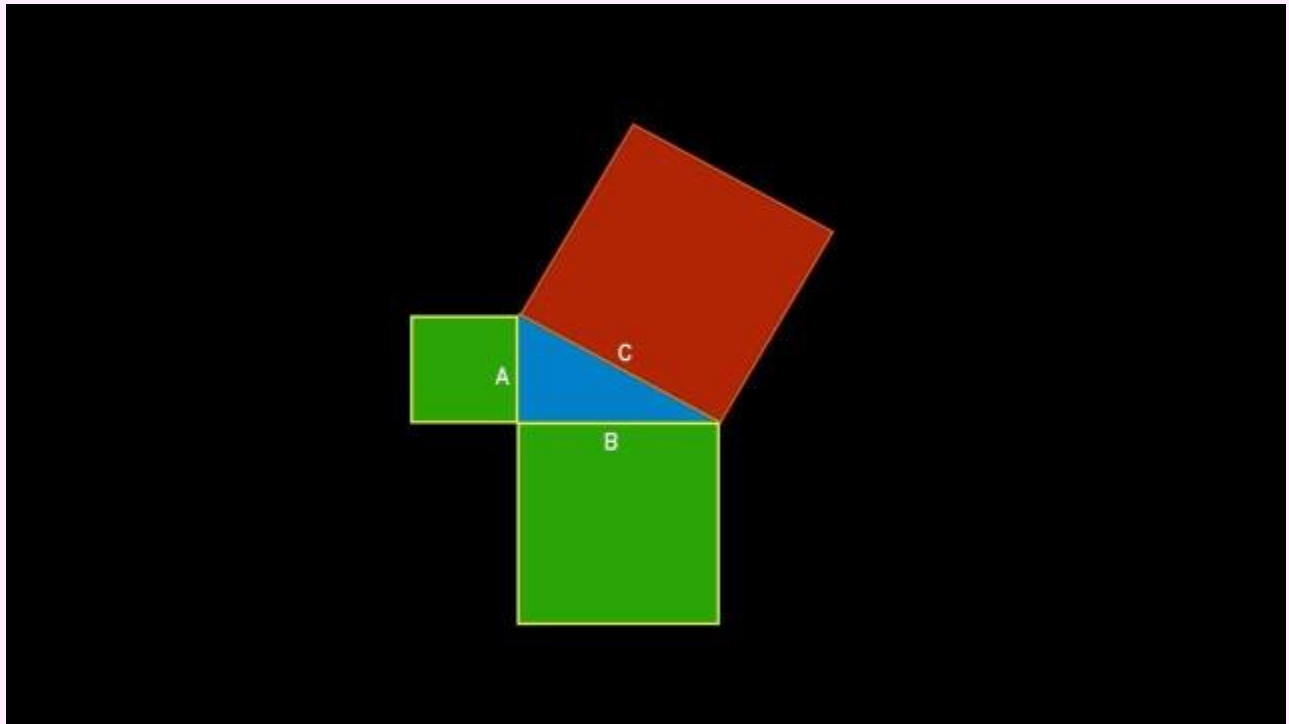
So, what is the Pythagorean theorem all about? Simply put, it is a theorem in geometry that states that in a right-angled triangle the area of the square on the longest side, the side opposite to the right angle, is equal to the sum of the areas of the squares of the other two sides.

At first glance, no rational reason is apparent that this should be the case. Of course we all know that the theorem is correct. It is taught in all the schools, isn't it. But how do we know this to be so, with absolute certainty? Pythagoras might have answered that it is possible for us to know this, because we are human beings that have the capability to see with the mind. When we do this, we also discover a bit more of what a human being is. And so, Pythagoras would say, "prove it to yourself that I am right," and thereby discover who you are as a human being.

Socrates
(470-399 BC)

On this basis Socrates begins one of the most influential dialogues of Western philosophy, regarding the argument for the inborn capacity in humanity, to know truth, which he calls virtue. He argues that there is no such thing as teaching and learning, but only remembering.

Plato in his academy, drawing after a painting by Swedish painter Carl Johan Wahlbom

Plato may have been a 'student' of Socrates, being almost 40 years younger. Plato conveyed some of the concepts of Socrates in his writings.


Plato in his academy, drawing after a painting by Swedish painter Carl Johan Wahlbom

Among Plato' writing is the famous Meno dialogue. In the dialog, in a similar academy setting, Socrates tells his friend Menon that even a boy who has no training in geometry and mathematics, is able to understand complex problems, and is able to understand with absolute certainty that what he understands is correct.

Socrates asks his friend Menon to select someone from his workers, and that he would prove his case in him.
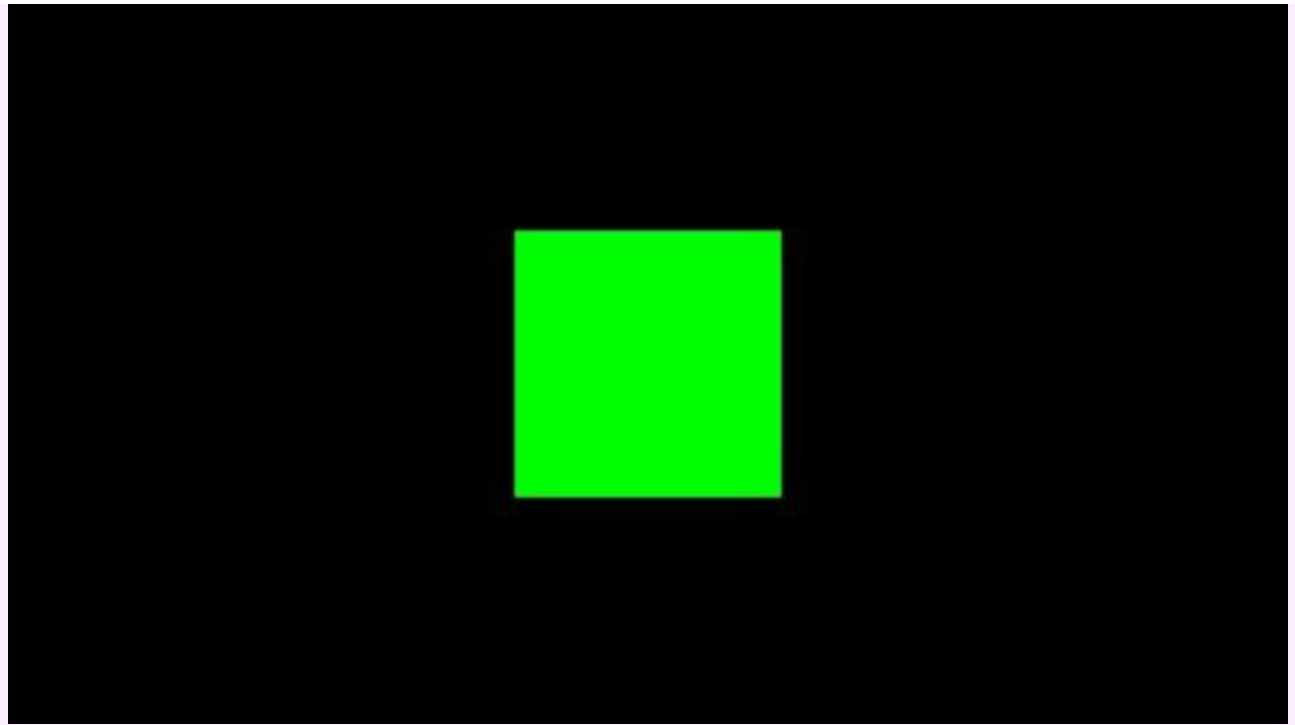
To proof his case, Socrates drew a 2-foot wide square on the ground, and proposed to the boy, whom Menon has selected, that he is able to create a larger square from it, that covers double the area.
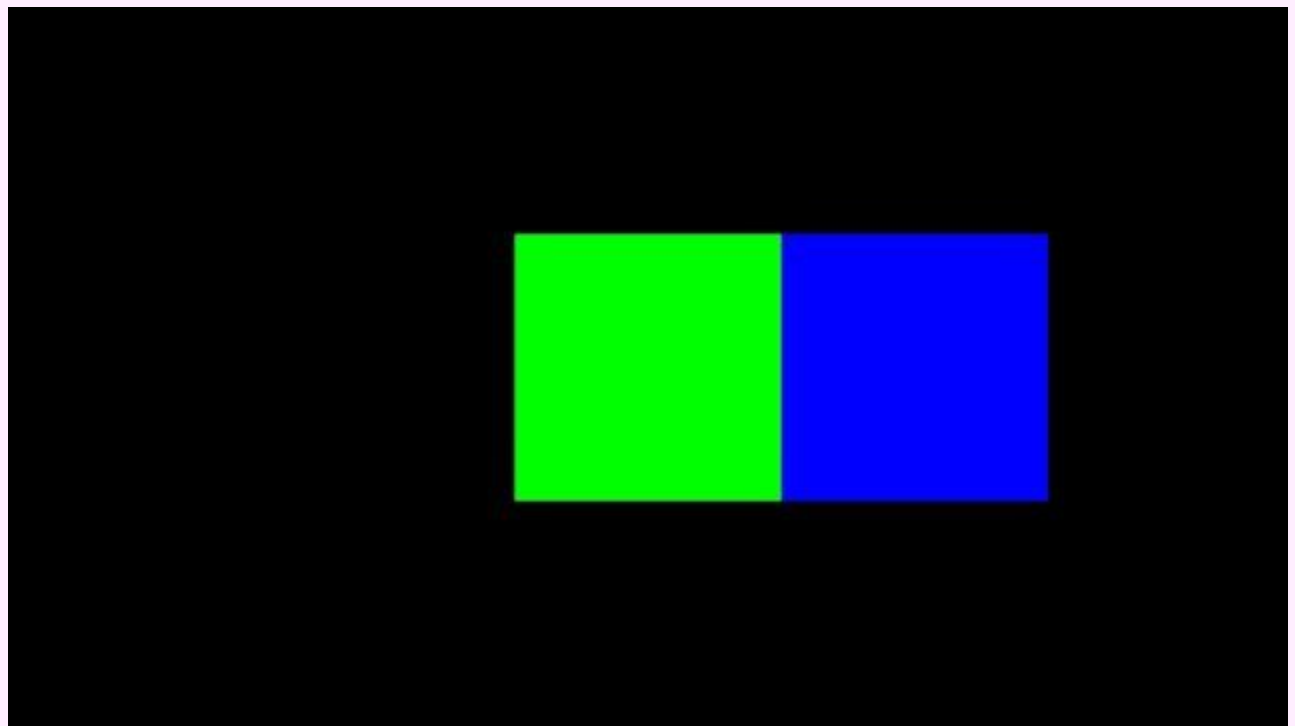
He proposed to the boy that if he drew another square of equal size beside it, the result would cover double the area, but it wouldn't be a a square anymore. So how does one solve the puzzle?
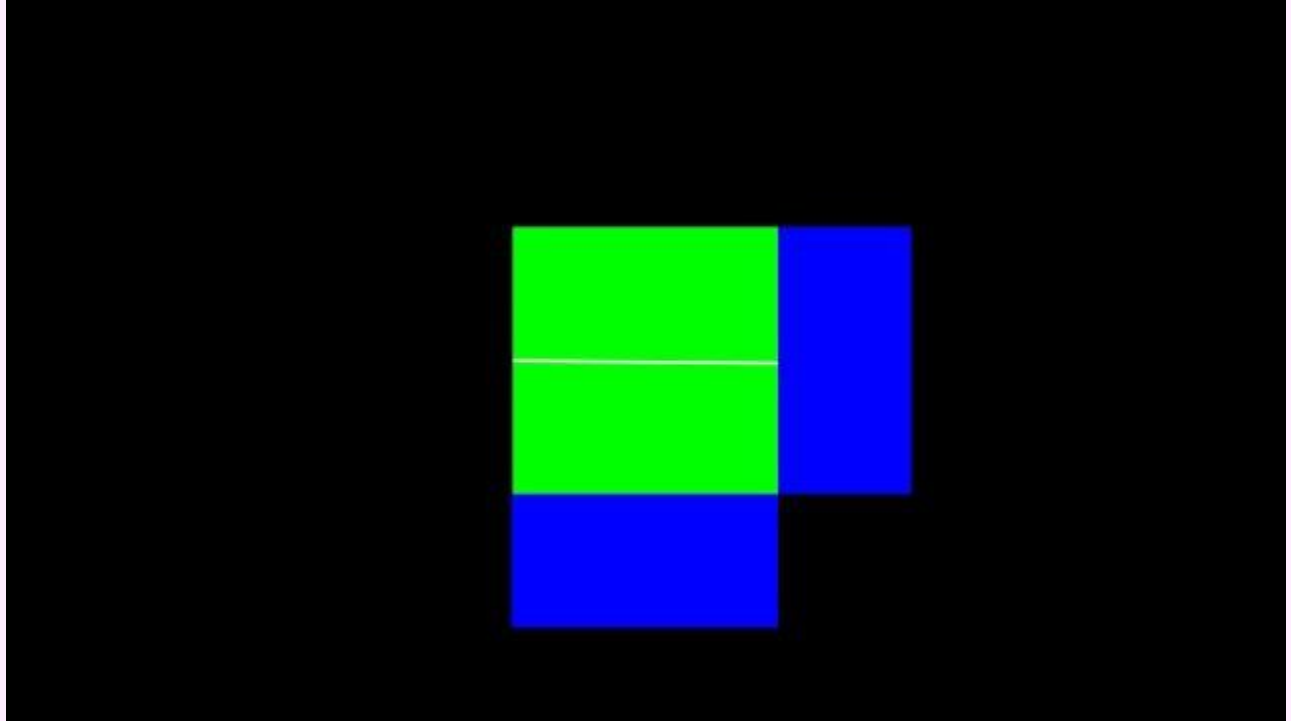
Socrates proposed that if one adds half the original square to either side of it, the result covers double the area, as required, and that its shape more closely resembles a square, but still falls short of being a square. Consequently, this approach doesn't work either, does it?
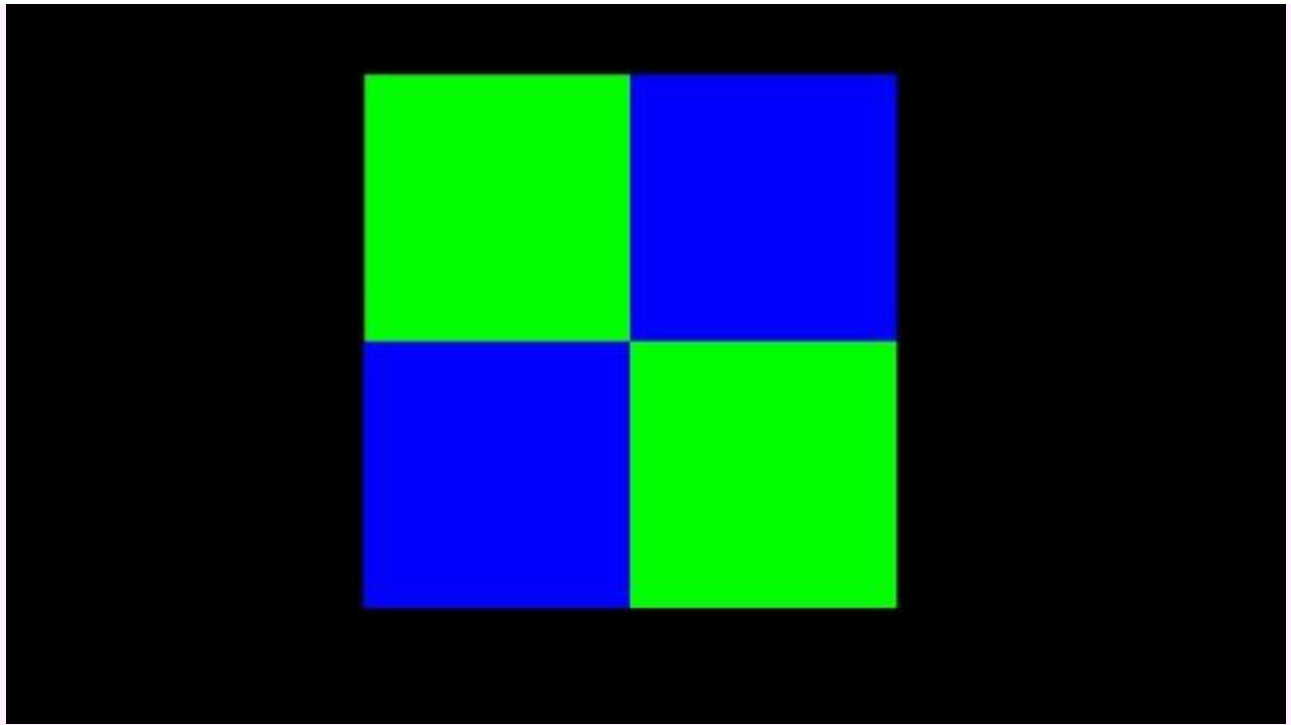
Then Socrates proposed to the boy that he should draw a large square that is 4 times as big as the original square.
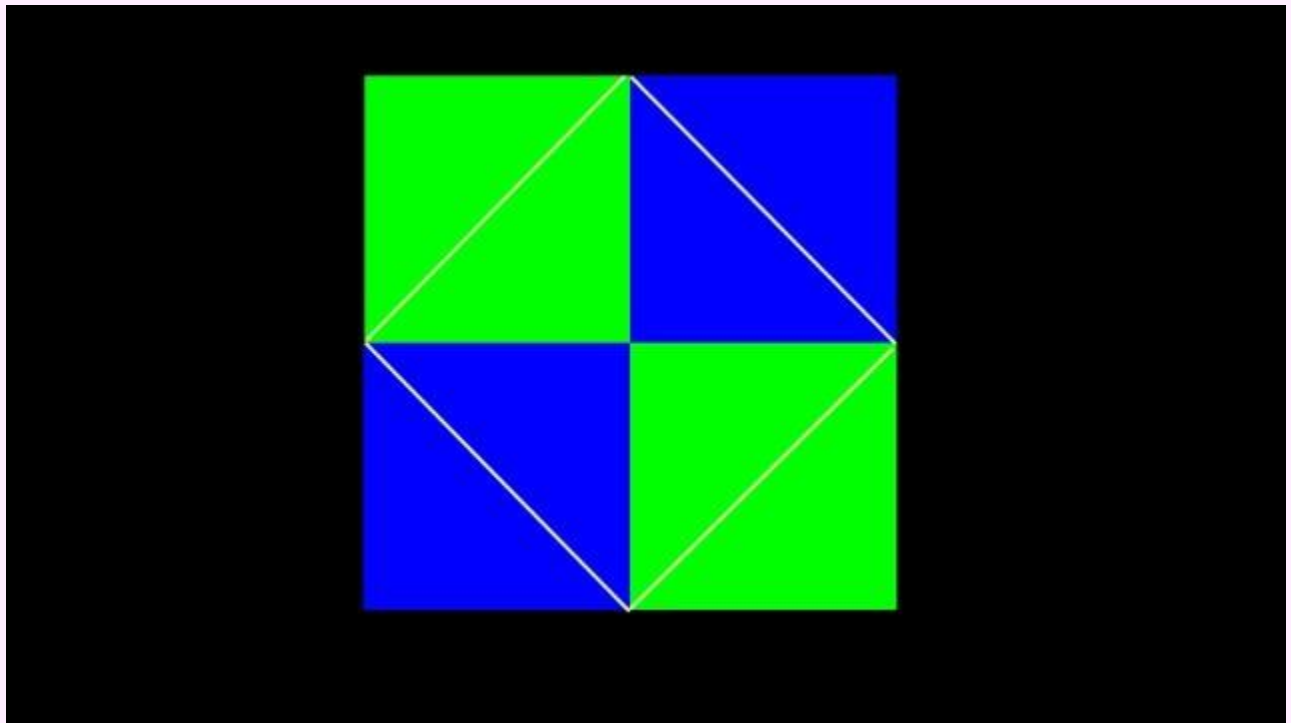
Then he asks the boy that he divide each of the four squares in half, by drawing a line from corner to corner, and that he does this in such a manner that the dividing lines together, form a square.

Once it was don, he asked the boy in essence: Is the resulting inner square, not twice as large in area as the original square?

The boy agrees that the inner square is twice as large, because the inner square contains 4 triangles, while the original square contains only 2 triangles.

Socrates asked then, "Can you say then with absolute certainty that the inner square is twice as big in area, than the original square?"

Of course it is, the boy answers. "The original square contains 2 triangles, the new square contains 4. It is twice as big in area. It's as simple as that."
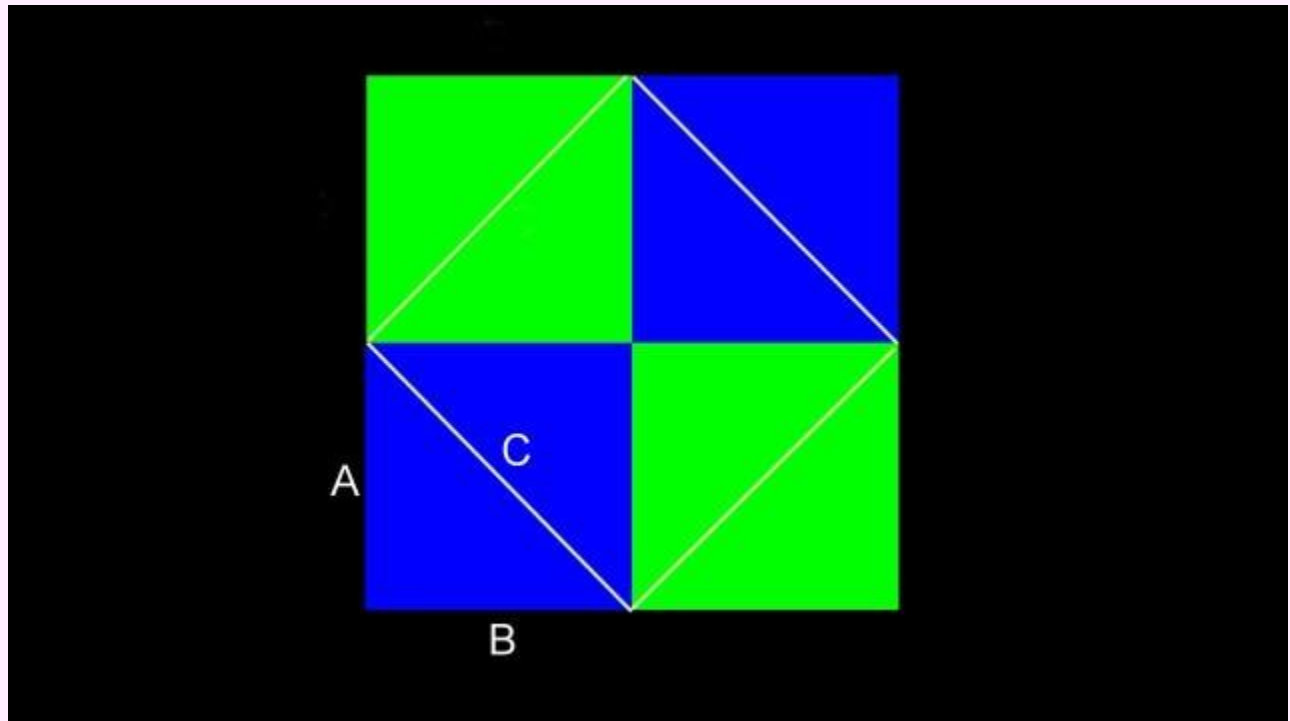
Socrates might have added, speaking to his friend Menon, that the boy has just delivered in principle a proof of the Pythagorean theorem. The theorem states that

the squares over the small sides of a right triangle, when added together, are equal in area to the square over the long side. In the case at hand, A-square is the size of the original square, likewise B-square. The two added together, add up to C-square that is twice as big. The boy proved Pythagorean theorem. Of course, the proof, in this particular case is simple, as A and B are of equal length.
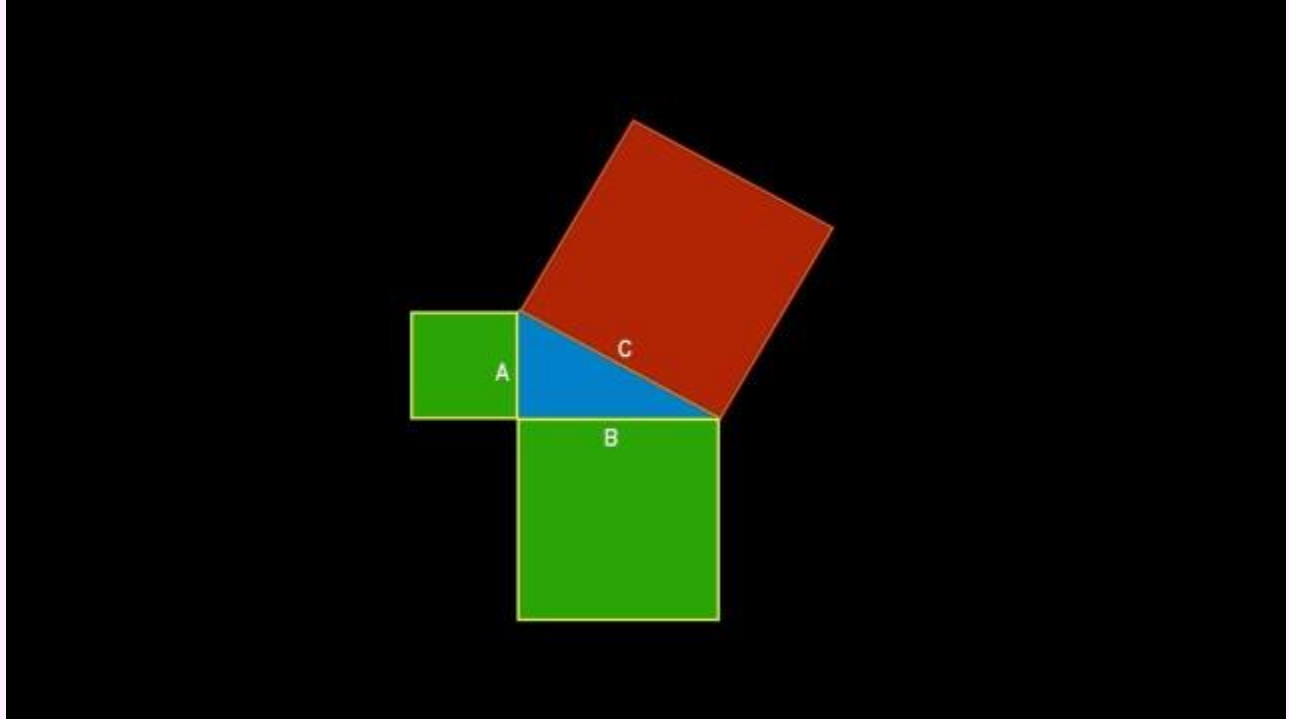
Socrates might ask his friend further whether the principle that is illustrated applies to all cases of a right triangle, no matter what their shape may be.

Can we answer this question for him?

I think that Pythagoras would expect this of us. But how can we prove this to be so?
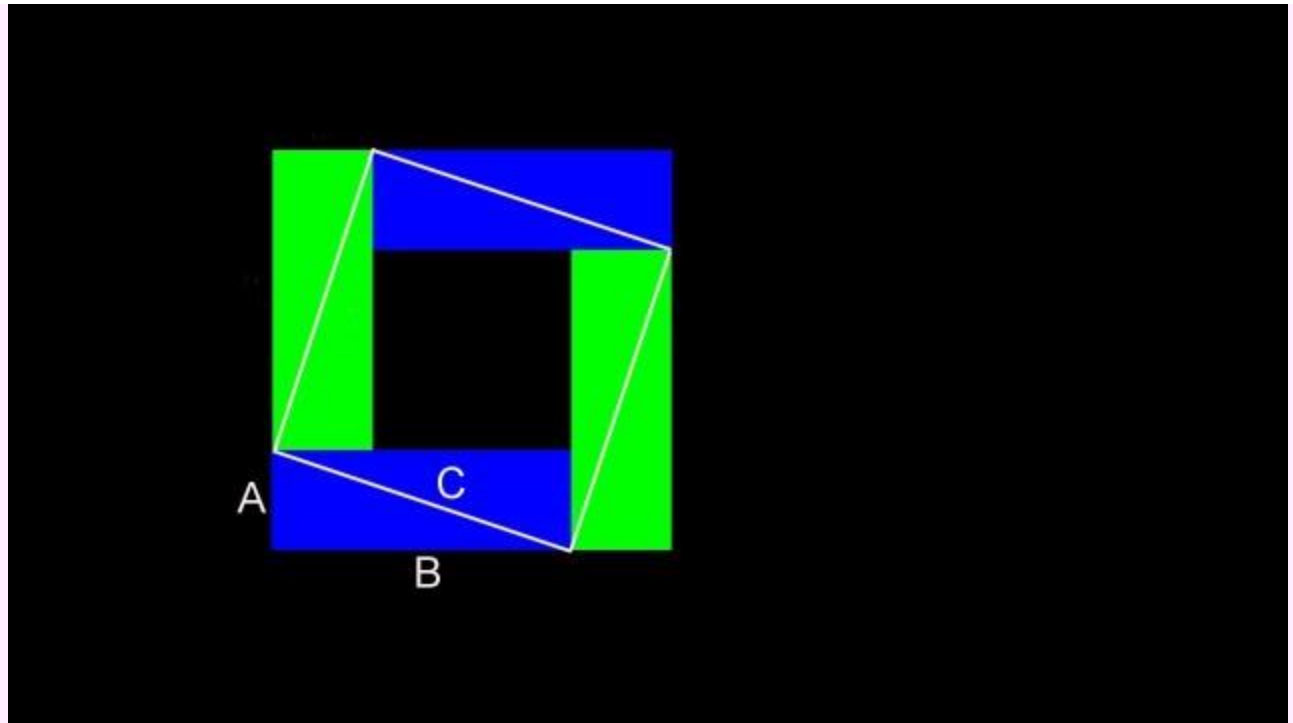
It is possible to do this fairly easily, by simply extending the principle presented in the Meno dialog, and applying it to all right triangles. In this case one would mirror the triangles into rectangles, and put four of them together, as in the Meno dialog. One would thereby simply stretch the squares of the Meno dialog, into rectangles. Would this be enough to prove the point?

Pythagoras proposed that the area of C-square is equal in size to the areas of A-square and B-square added together. Can we prove this to be so in this extended case?

Certainly we can. We can proof this the same way as before.
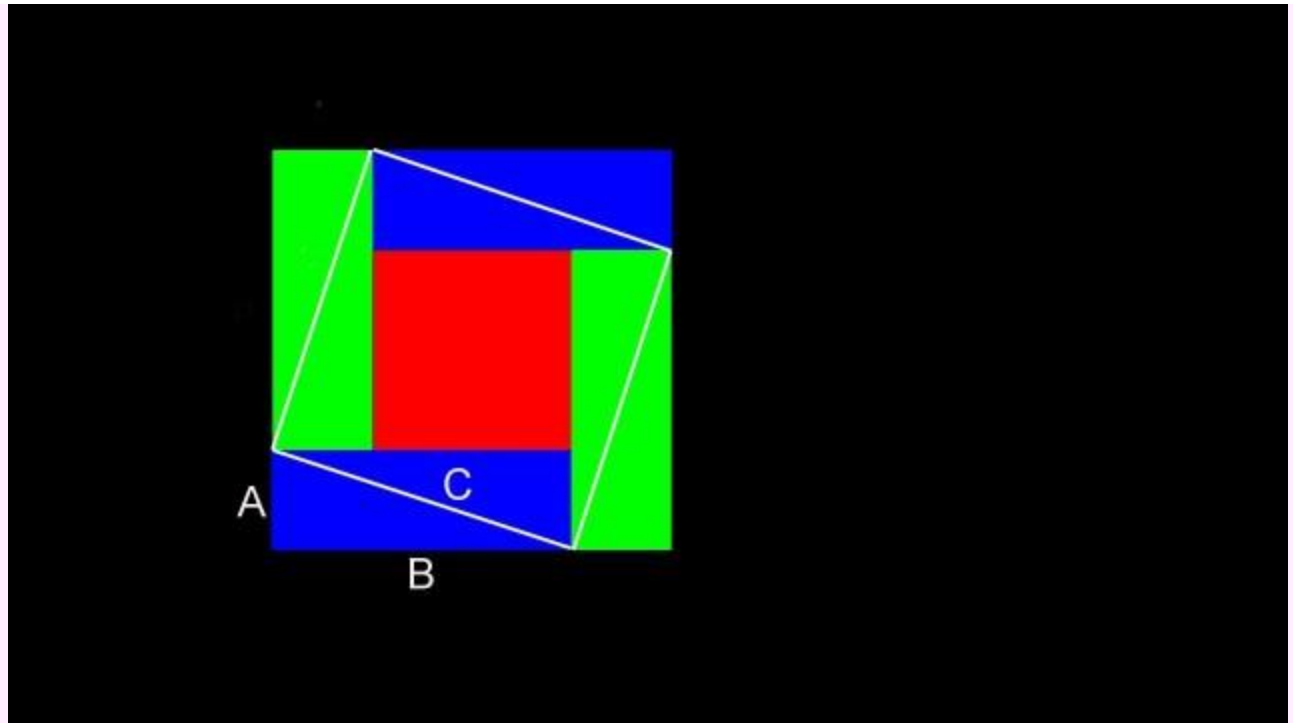
We can do this by counting triangles. The C-square is again made up of 4 triangles, plus the big red area in the middle. I propose that we now create a construct that is twice as large in area as C-square, and proof to ourselves that we can place two A-squares, and two B-squares into it. If we can do this, we have delivered proof of the Pythagorean theorem for all cases.

The proof lies in that we can prove that C-square covers precisely half of the area that we can place two A-squares, and two B-squares into.
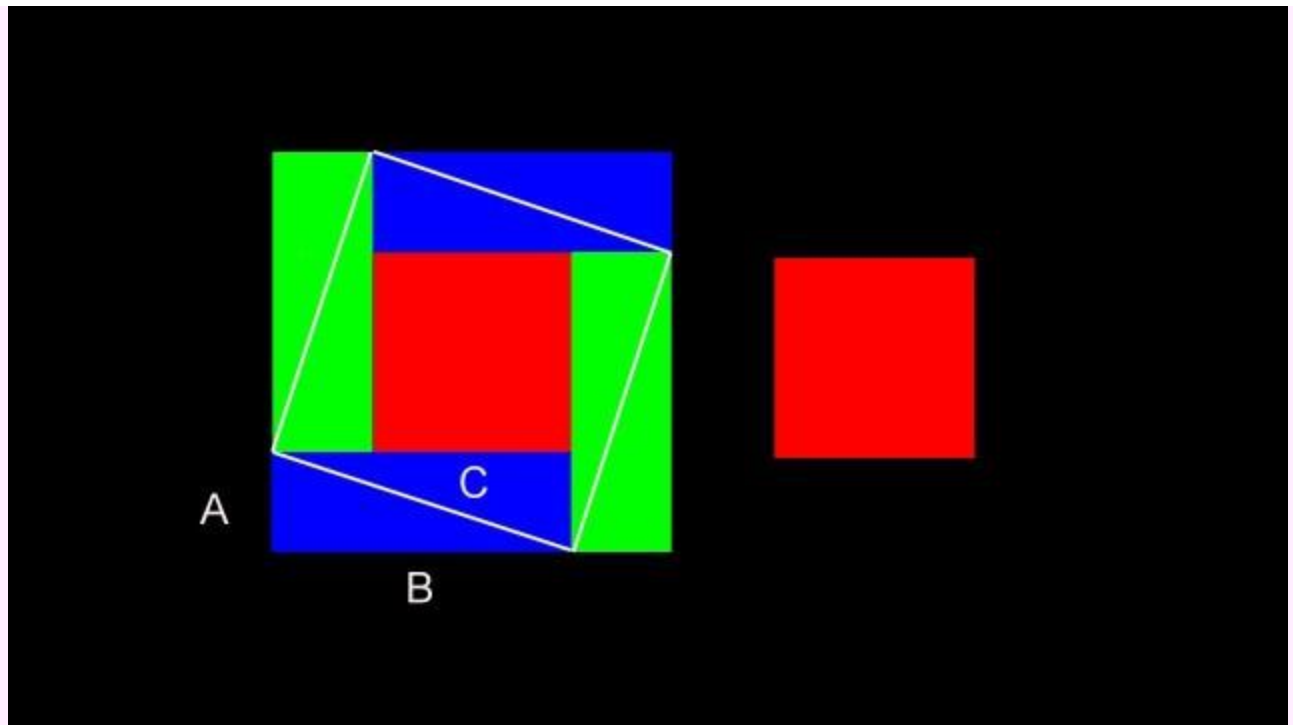
So, let's see if we can do this. Since C-square is made up of 4 triangles and the red center, we will have to create an area that contains 8 triangles, and in addition another square that is equal to the red center. The result is shown here.
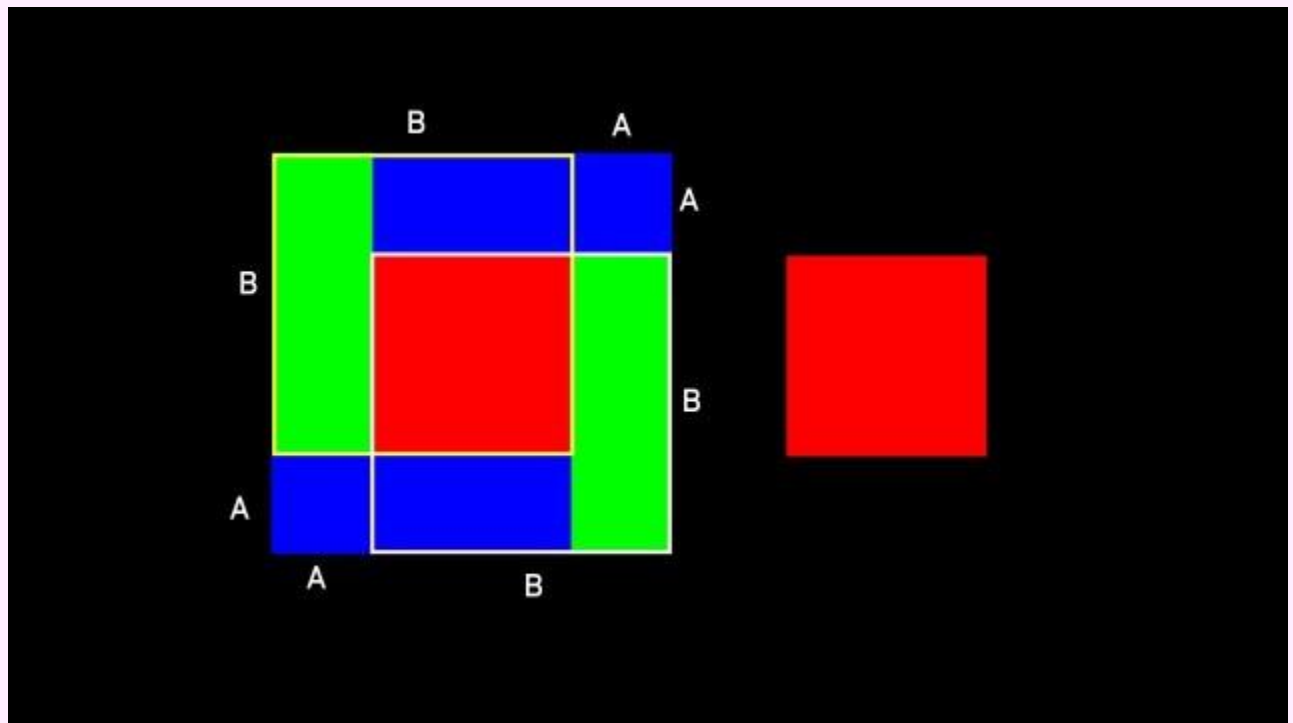
Now let us see if this works. Can we place two A-squares and two B-squares into this larger area. That's not hard to do, is it? We can place two of the big B-squares into the corners, drawn in yellow. As you can see, the two squares overlap the red center. The overlapped area happens to be equal in size to the red square set on the side. With this done, the remaining areas are of the exact size that we need to fit two A-squares into. Thus, the requirement that we set out to achieve, has been achieved with absolute precision.

By following the simple process that Socrates has started, we have discovered a principle of proof that applies to every possible shape of right triangles. And as I promised, no mathematical knowledge was needed to prove to ourselves that what Pythagoras had discovered more than 2,500 years ago is absolutely correct in all possible cases.
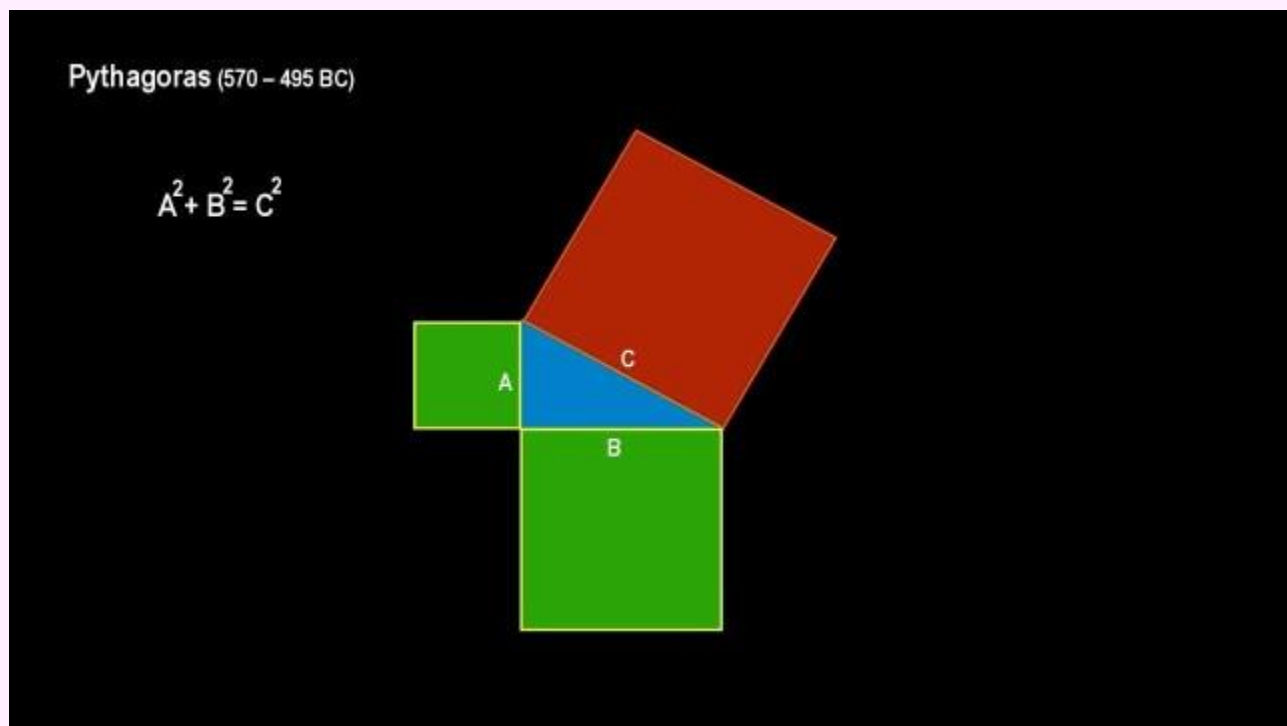
In the schools we are taught the mathematical formula only, that A-square plus B-square equals C-square. The formula is useful, of course, for practical application. Indeed, the formula is routinely applied on a wide horizon of applications. But few

people know why the principle that the theory reflects, is correct. They accept the formula on faith. That's what gets society into dangerous waters.

We don't know by what reasoning Pythagoras had developed his theorem, because everything we know about him was written down centuries after he had lived. From his time to ours, several hundred different ways have been developed to prove his theorem. Most of the methods to prove the theorem are extremely complicated, which they don't need to be. As far as I know, not a single one of the published methods is as simple as the one I have presented here, built on the Meno principle that enables a person with no special knowledge in mathematics and geometry, to simply look at the problem with the eye of the mind, and thereby to discover with absolute certainty, based on a few obvious facts, that Pythagoras was right. We are able to discover this amazing proof, because the quality of reason that it results from, is built into our humanity

In the proof that I have presented here, not a single aspect of it needs to be taken on faith, whether it be faith in geometry or faith in mathematics. And this is where its value lies, because when faith takes the place of understanding, humanity is rushing into a trap. Faith without understanding has become a huge trap in modern time, on many fronts, including in critical aspects of science.

Much of the world now lives on faith. People's faith is often carefully guided for political objectives, typically to hide the truth.

From War to War WE go

The time is now to say NO

"In Lies We Trust" has become a widely celebrated sport, a sport of forcing war..

Sometimes the doctrines are openly brutal, that demand society's acceptance on faith. The outcome is rarely less than exceedingly tragic.

hE15 promotion Amsterdam   E85 in the USA

The global warming doctrine for which humanity is now burning its own food in the midst of mass-starvation, is another tragic example.

Global Warming
Constant Sun
Energy depletion
Resource depletion
Beneficial depopulation
Winning by war
Fascist civilization
Distant Ice Age
Big Bang Creation

False Theories

Similarly tragic is the doctrine of the constant Sun, and of the far distant Ice Age, and the entropic universe doctrine of the Big Bang theory, and so on, and on, which are all plainly false theories that simple physical evidence proves to be false in every case. This does not mean that the truth cannot be recognized with absolute certainty, when the principles for the truth are explored and understood.

"Sun poster" by Kelvinsong - Licensed under CC BY-SA 3.0 via Wikimedia Commons
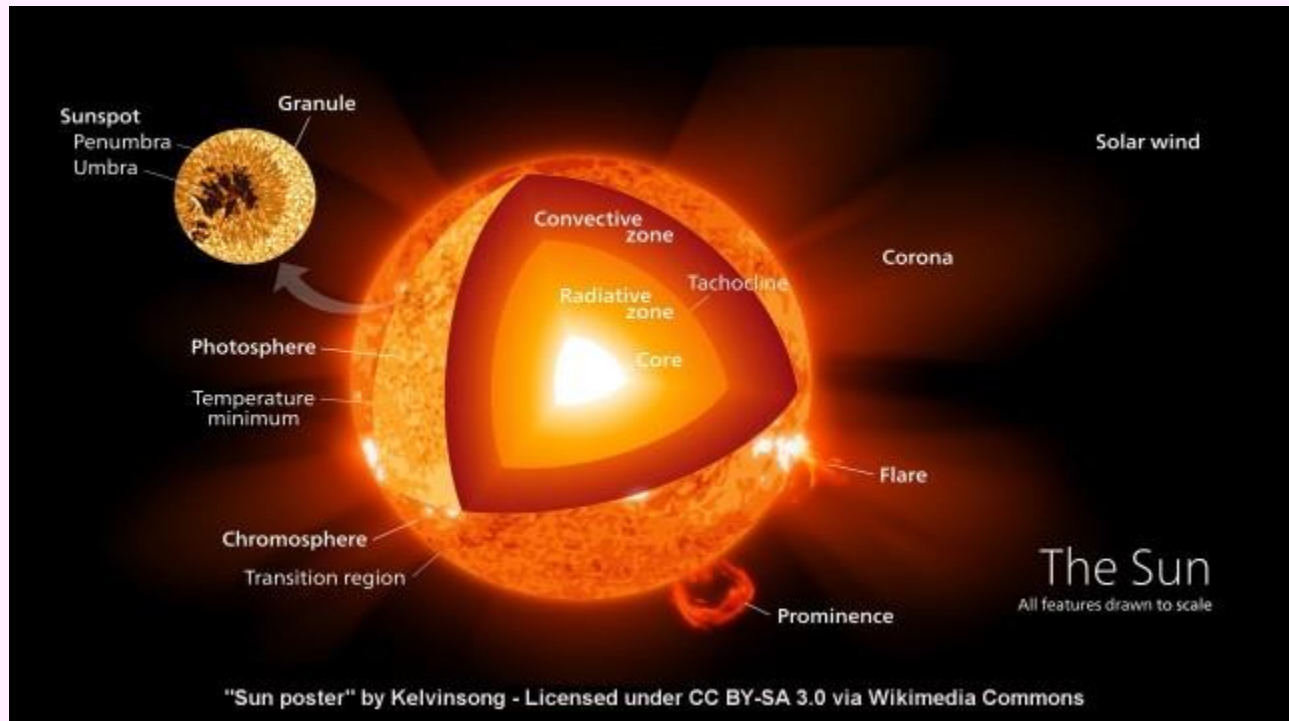
As one might expect, the false doctrines have all one factor in common, they require faith in mysteries for which no evidence exists, while contrary evidence does exist that adds up to monumental items of proof.

Plato gained his fame for his unyielding searching for the truth, raising humanity up with profound discoveries to great freedoms, shown here in the fresco of the Academy of Athens by Rafael.

Plato is pointing upwards. Aristotle, in contrast, puts humanity down, and keeps it small by saying that there exists no such thing as truth, that all is mere opinion.

Under the banner 'In Lies We Trust,' faith in lies has unleashed a series of bitter dark ages in which civilization was destroyed and society dehumanized and brutalized.

Nevertheless the truth does exist. We find it far and wide supported with monumental evidence that can be understood with the same absolute certainty with which the slave boy in the Meno dialog proved in principle the Pythagorean theorem. Once we break away from Aristotle's trap of faith without reason and understanding, to Plato's freedom in the truth based on reason and understanding, we are on the way to the greatest renaissance of all times. This renaissance in our age would unfold as the greatest Strategic Defense Initiative (SDI) for the defence of humanity that is urgently needed, which would enable us to prepare our world for the next Ice Age that is on the near horizon in potentially the 2050s timeframe.

The resulting strategic defence of humanity based on truth built on evidence and discovered principles, would with great certainty inspire a new sense of humanity in society that would eradicate empire and its poverty, its depopulation policy and nuclear war, together with its destructive monetarism along the way, as these would fall away as lesser challenges.

When agriculture becomes disabled beyond the 40 degree latitudes

The World Development Project

Creating far-flung floating agriculture modules across the equator
between the hurricane zones, connected to a network of intercontinental floating bridges

Disabled zone

???

safe zone

???

Wikipedia / NOAA   Disabled zone

And all of this is immanently possible if we care to make it so, because humanity is inclined in its very soul to give itself this chance for the simple reason that the process of discovering and of valuing the truth, is a built-in factor of our humanity that cannot forever remain denied.

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