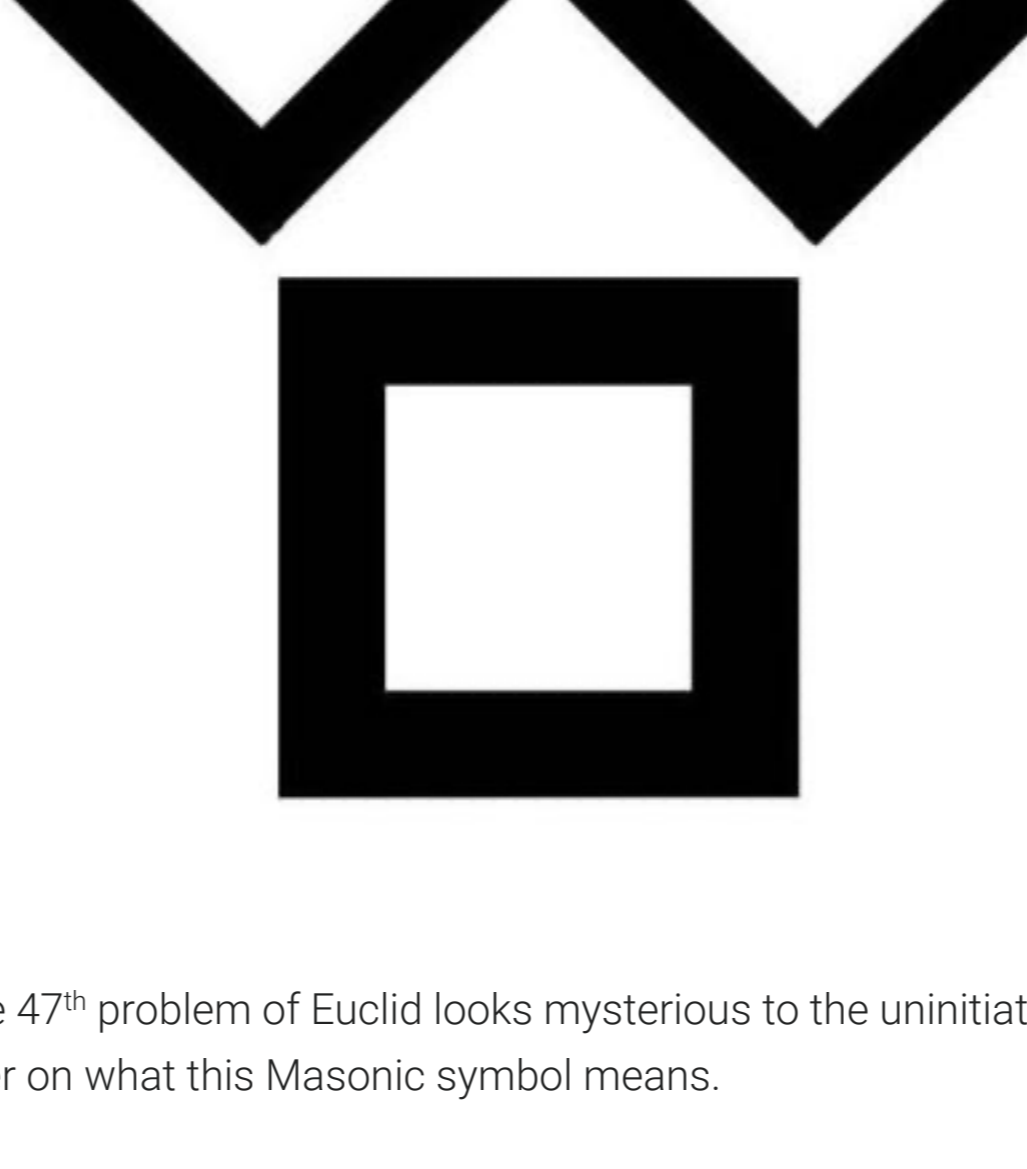


The 47th Problem Of Euclid

Mar 13, 2019

The 47th Problem of Euclid or 47th Proposition of Euclid is also known as the Pythagorean Theorem. It is represented by three squares.



The symbol of the 47th problem of Euclid looks mysterious to the uninitiated, and a lot of them often ponder on what this Masonic symbol means.

Some Masonic historians describe the 47th Problem of Euclid as something that connotes a love of the sciences and the arts. But that definition leaves a lot unsaid. In this article, we'll shed more light on the 47th Problem of Euclid. Our explanation will include the Masonic Square along with Pythagoras's Theory.

Euclid

Euclid is known as the Father of Geometry. He lived several years after Pythagoras, and he continued the work of Pythagoras. Euclid focused mainly on the 3:4:5 ratio puzzle. Some sources have it that he had to make a sacrifice of 100 cattle or oxen before he could solve the puzzle. Some other sources have it that the Egyptians had long solved the puzzle before he did.

The Pythagoras Theorem

The Pythagoras theorem states that in a right-angled triangle, the sum of the squares on the two sides is equal to the square of the hypotenuse. So, for a right-angled triangle with lengths of sides in the ratio 3:4:5, '5' represents the hypotenuse or the longest side.

3: 4: 5

3²: 4²: 5²

9: 16: 25

9 + 16 = 25

The first four numbers are 1, 2, 3 and 4. Let us write down the squares of these numbers.

1²: 2²: 3²: 4²

1: 4: 9: 16

When you subtract each square from the next one, you get 3, 5, 7.

4-1 = 3

9-4 = 5

16-9 = 7

The ratio 3: 5: 7 is very important. The ratio represents the steps in Freemasonry. They are the steps are the exact number of brothers that form the number of Master Masons needed to open a lodge.

3 Master Mason

5 Fellow Craft

7 Entered Apprentice

3: 5: 7 represents the steps in the Winding Stair that leads to the Middle Chamber.

The 47th Problem of Euclid is necessary for constructing a foundation that is architecturally correct as established by the use of the square. This is important to Operative Masons as well as Speculative Masons.

The 47th Problem of Euclid is a mathematical ratio that allows a Master Mason to square his square when it is out of square.

In the old days, old wooden carpenter squares had one longer leg because they were created using the 3: 4: 5 ratio from the 47th problem of Euclid. But carpenters of today use squares that have equal legs.

How the 47th Problem of Euclid is used to Create a Perfect Square

It is important to know how to create a perfect square that has no errors. The 47th Problem of Euclid is used for this. This is something that is very important to know for masons and other people involved in building construction. It has been important right from the time of the rope fasteners or rope stretchers of ancient Egypt who were also known as the Harpedonaptae.

The Harpedonaptae were skilled architects that were often called upon to lay out building foundation lines. They were well-skilled. They used mathematical calculations as well as astronomy to form perfect squares for each building.

There is a historical document that was written in leather in 2000 BC that can be found in the Berlin museum. The historic document talks about how these rope stretchers/rope fasteners or Harpedonaptae carried out their work.

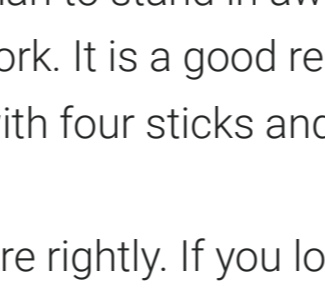
In those days, the cornerstone of a building was usually at the Northeast corner of the building. To work out the perfect Northeast corner of the building, the Harpedonaptae observed the stars and the sun and used this to lay out the North and South lines. The North Star called Polaris was specifically observed. At that time, it was believed that the North Star was fixed in the sky.

After they had laid out a perfect North and South line, they then used the square to create perfect East and West lines for the foundation of buildings.

The 47th problem of Euclid was used to establish the true East and West lines so the Harpedonaptae could find a perfect right angle to the North and South line that had been established by observing the stars.

Working out the 47th Problem of Euclid On Your Own

If you have four sticks and a piece of string, you can work out the 47th Problem of Euclid on your own. You will be able to create a perfect square with these. The string should be about 40 inches in length, and the four sticks must be strong enough to stick into soft soil. You will also need a black marker. The operative Masons of the old days used longer ropes that could help them mark out large foundations.



Here is what you have to do to mark out the 47th Problem of Euclid.

1. Place the first stick on the ground so that both ends point North and South.
2. Take the string and tie knots 3 inches apart in the string to have 12 equal divisions. The last two ends of the string should be tied together to give you your 12th All divisions must be equal for this to work. You should have about 4 inches of string left. If you have more or less than 4 inches of string left, you must remeasure the lengths between your knot.
3. Stab the second stick in the ground near the North and South stick and have a knot at the stick. Stretch three divisions away from the second stick 9 inches apart in any direction and stick the 3rd stick in the ground. Then, place the 4th stick, so it falls on the knot between the 4th part and the 5th part division of about 12 inches. This will create a right-angled triangle in the ratio 3: 4: 5. The angle between the 3 units and the 4 units is a right angle or a square.
4. You should move the 3rd and 4th sticks till they become a right-angle to the North and South stick.

That is all. Now, you can square your square and lay a cornerstone that is geometrically correct for your foundation.

Application of the 47th Problem of Euclid Today

The problem of Euclid which is a geometric ratio of 3: 4: 5 that can be used to create a right angle or 90° has several uses in today's world. It can be used to:

1. Navigate the ocean and get to the center of the ocean while still calculating how far away from land a man is.
2. Dig on opposite sides of a mountain and dig a straight tunnel through the center of the mountain with the tunnel meeting exactly at the center.
3. Measure the distance of the stars in light years after reaching out into space.
4. Mark boundaries and survey lands before constructing buildings.

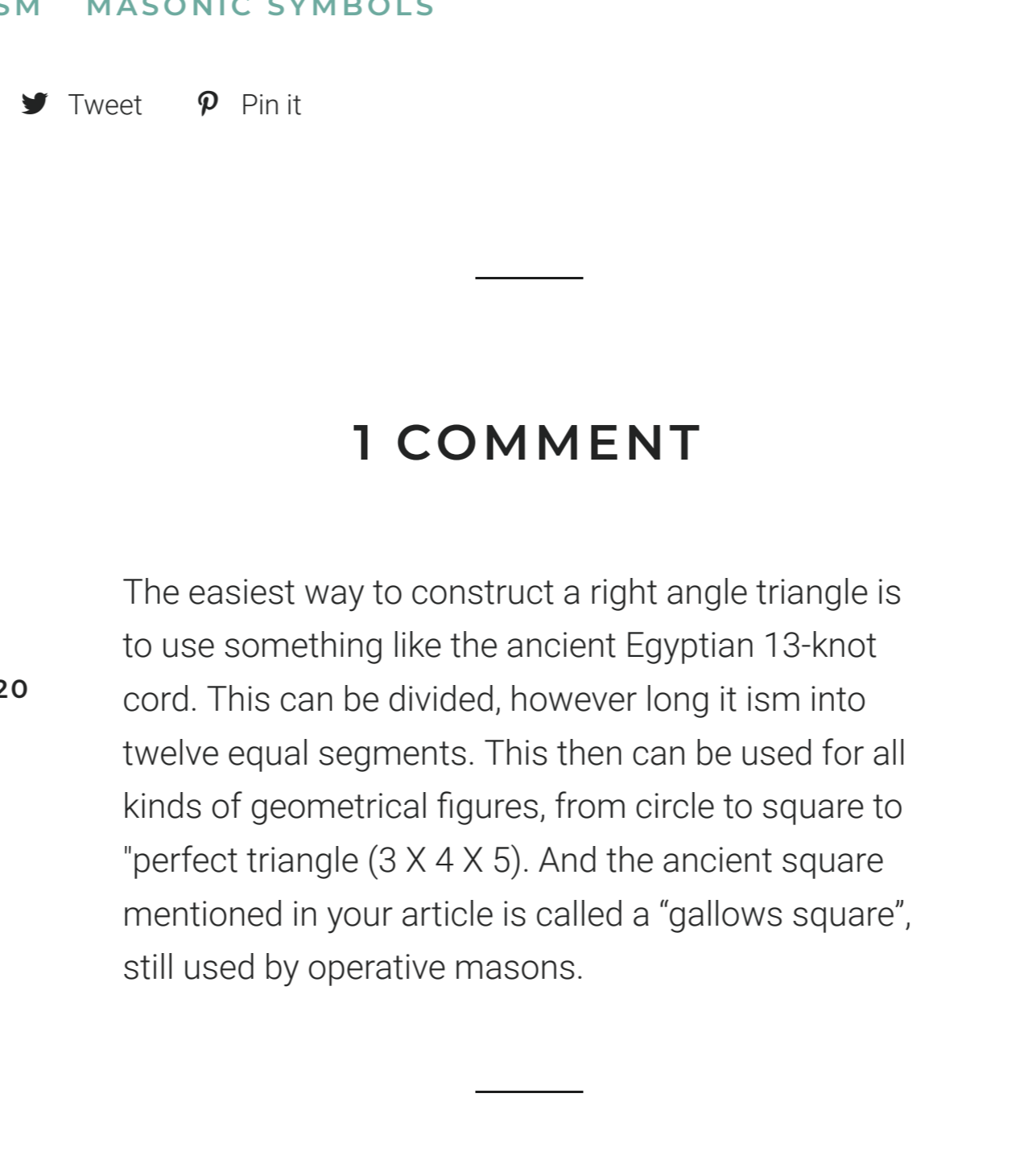
The 47th problem of Euclid is a perfect Freemasonry symbol. It teaches us to bow our head in respect to how the arts and the sciences work with religion.

The 47th problem of Euclid teaches man to stand in awe of God's given knowledge to man and how the sciences and the arts work. It is a good reminder of how you can navigate your way from any point on earth or sea with four sticks and a simple piece of string.

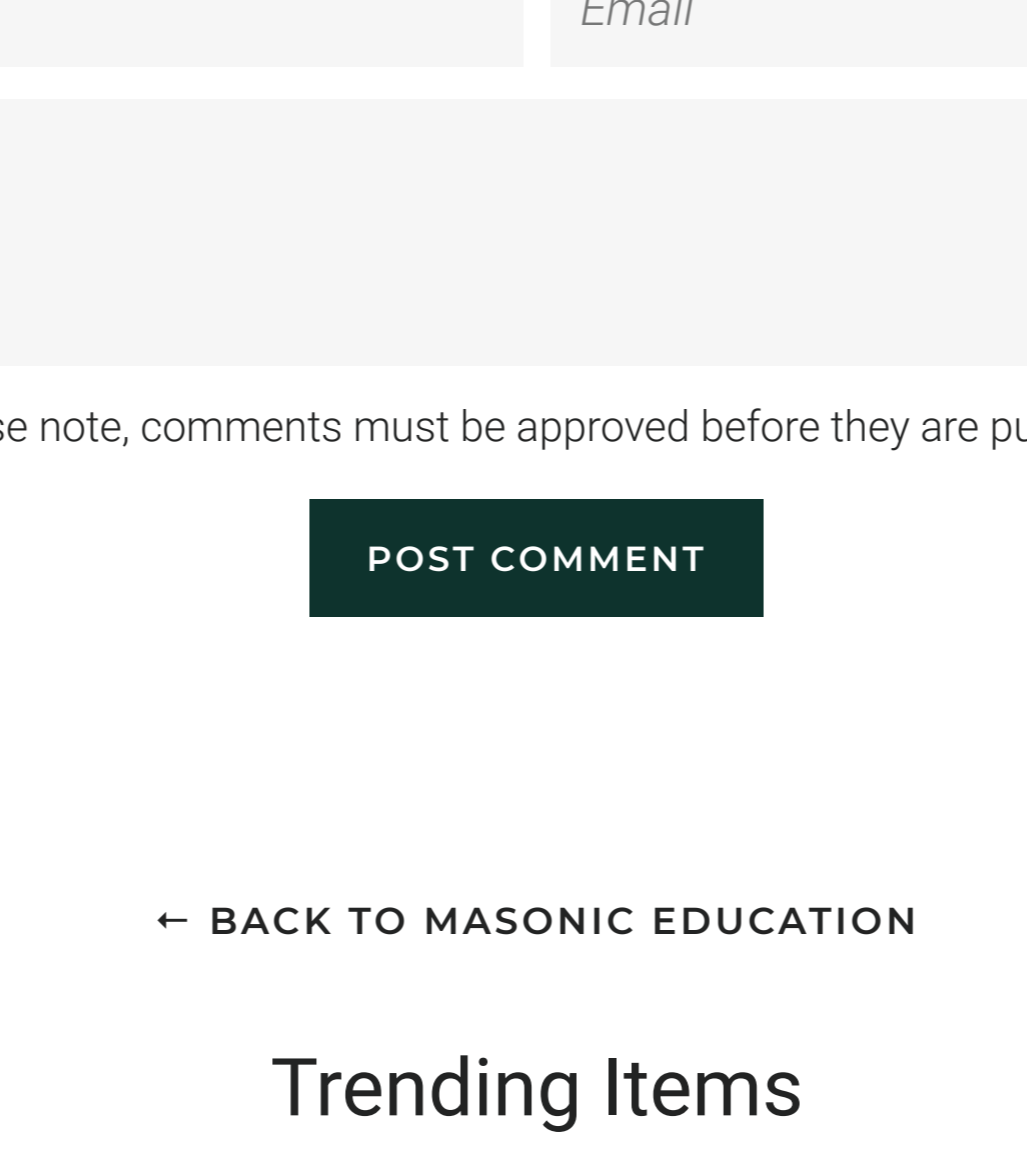
It teaches us how to square our square rightly. If you look at the Masonic symbol of the 47th problem below, you will notice three oddly-shaped black boxes.

You will notice that the boxes are arranged in a 3: 4: 5 ratio with a right-angled triangle within them. This should tell you that you have the power to square your own square within your inner chamber.

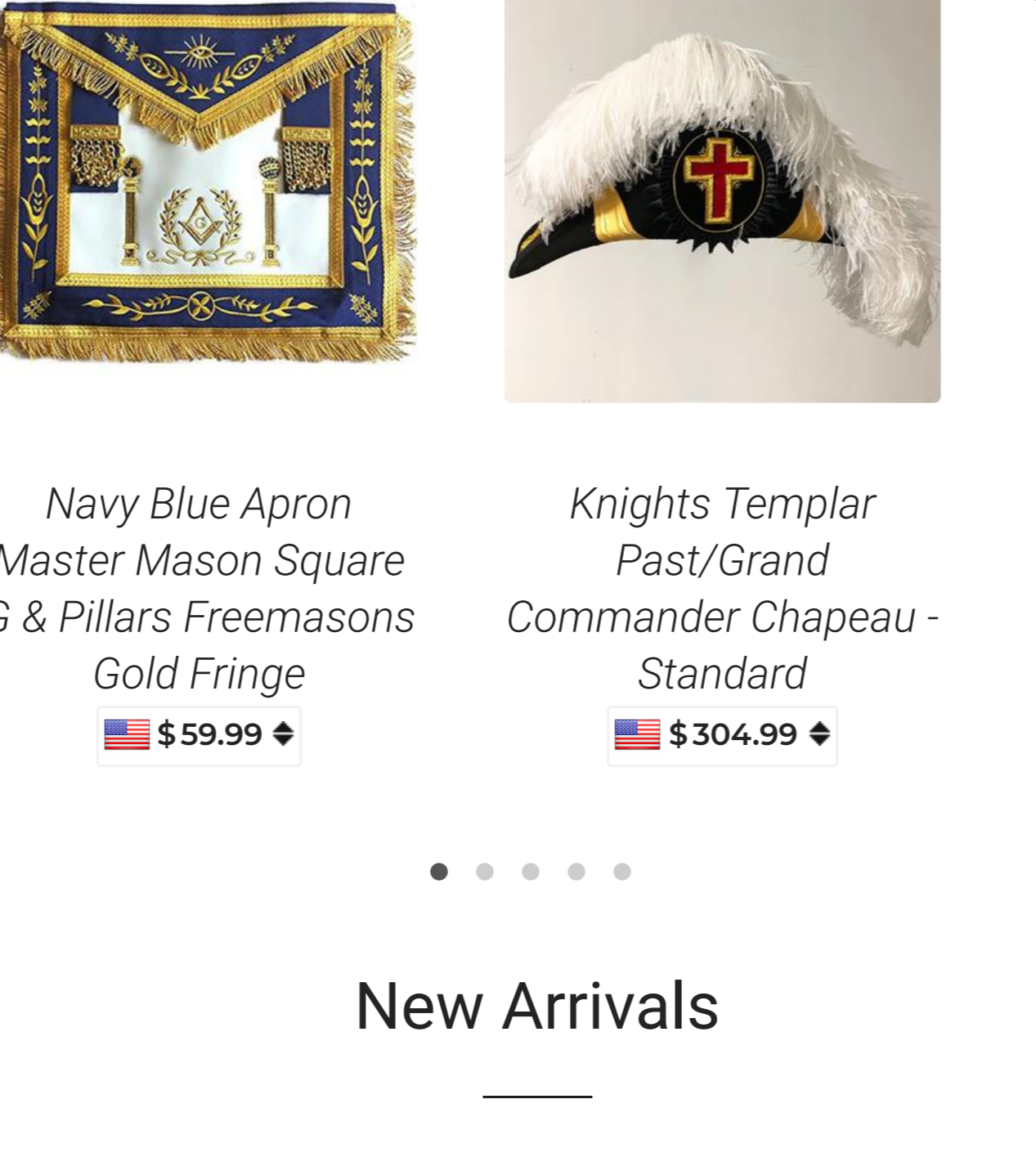
Here are some of Bricks Masons products that contain the 47th Problem of Euclid.



The 47th Problem of Euclid Masonic Lapel Pin



The 47th Problem of Euclid Masonic Sticker Decal Available in Colors



Blue Lodge Euclid's 47th Problem Pythagorean Theorem with Grid LAPEL PIN

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1 COMMENT

MICHEL SASTRE AUG 21, 2020

The easiest way to construct a right angle triangle is to use something like the ancient long it ism into twelve equal segments. This then can be used for all kinds of geometrical figures, from circle to square to "perfect triangle (3 X 4 X 5). And the ancient square mentioned in your article is called a "gallows square", still used by operative masons.

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