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#### THE FORTY-SEVENTH PROPOSITION OF EUCLID.

The true key to philosophic mathematics is the famous Forty-seventh Proposition of Pythagoras, erroneously attributed to Euclid. The Forty-seventh Theorem is stated thus: In a right-angled triangle the square described on the hypotenuse is equal to the sum of the squares described on the other two sides. Concerning this problem Plutarch writes: "Now universal Nature, in its utmost and most perfect extent, may be considered as made up of these three things: of Intelligence, of Matter, and of that which is the result of both these, in the Greek language called Kosmos, a word which equally signifies either beauty and order or the world itself. The first of these is the same with what Plato is wont to call the Idea, the Exemplar, and the Father; to the second of them he has given the name of the Mother, the Nurse, and the Place and Receptacle of Generation; and to the latter of them, that of the Offspring, and the Production. So again with regard to the Egyptians, there is good reason to conclude that they were wont to liken this universal Nature to what they called the most beautiful and perfect triangle; the same as does Plato himself in that nuptial diagram, as 'tis termed, which he has introduced into his Commonwealth. Now in this triangle, which is rectangular, the perpendicular side is imagined equal to three, the base to four, and the hypotenuse, which is equal to the other two containing sides, to five. \* \* \* The perpendicular is designed by them to represent the masculine nature, the base the feminine, and \* \* \* the hypotenuse is to be looked upon as the offspring of both: and accordingly the first of them will aptly enough represent Osiris or the prime cause, the second Isis or the receptive power, the last Orus [Horus] or the common effect of the other two. For three is the first number which is composed of both even and odd; and four is a square whose side is equal to the even number two; but five, being generated as it were out of both the preceding numbers two and three, may be said to have an equal relation to both of them, as to its common parents." (See Isis and Osiris.)

On the same subject Kircher writes: "Out of the simplest lines and figures the whole secret of corporeal nature emerges. Just as the Trinity of the circle (center, radius and circumference) shows the Divine Trinity, so the Divine Trinity's creative works appear in the trinity of the equilateral triangle, as aforesaid. The circle begets nothing of itself, as it is already complete, consisting as it does of an infinitude of sides. It is the greatest of all polygons, hence it is a solitary trinity. But the triangle is the beginning of all generation, being the progenitor of all other polygons or bodies, as has been shown. Next comes the isosceles, symbol of the earth and the firmament. Next, the right-angled scalene, which indicates the whole mystery of genetic nature. This triangle, as aforesaid, is a right-angled triangle of unequal sides, with one right angle and two acute angles. The right angle signifies the constant and immutable operation of natural law; of the other two, the greater means increased motion, and the third, rate of decrease. \* \* \* The sides are respectively 3, 4, and 5. Now  $3+4+5=12$ , which is the nature of the dodecahedron. Hence, just as numbers are implicitly contained in numbers, lines in lines and figures in figures, so all are in all; and this is here occultly expressed." (See *Œdipus Ægyptiacus*.) Kircher further adds that from the right-angled scalene proceeds the genesis of all mundane bodies and of the whole universe.

The Forty-seventh Problem is an important Masonic symbol and because of its close connection with the builder's art is often called the "carpenter's theorem." It is believed that many of the complicated mathematical details of the Great Pyramid were based upon now unknown applications of this theorem. The Forty-seventh Problem is the key to the relationship between the three major parts of man: spirit, body, and soul. In this analogy the number 3 symbolizes spirit, 4 body, and 5 soul. According to the alchemists the Forty-seventh Proposition set forth the proper proportions of salt, sulphur, and mercury necessary to the formation of the Philosopher's Stone. There is also a close correspondence between the three Grand Masters of the Masonic Lodge of Jerusalem and the three squares involved in the Forty-seventh Problem.