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Math in the Real World

Andrew Vazsonyi, Feature Editor

As a scientist, I have always considered Pythagoras' theorem and the discovery of irrational numbers as the epitome of the mathematical sciences.

In my last column I described my futile attempts to show people that Euclid did not mean that if you physically measure the angles of a triangle with a protractor, you will get 180 degrees for the sum. I tried to explain that if you measure the hypotenuse and the two other sides of a rectangular triangle, and calculate the squares, the square of the hypotenuse will not be equal to the sum of the squares of the two other sides. Here is a small sample of what people say about Pythagoras 27 centuries later.

A friend exclaimed, in a state of disgust, "Then why are we taught the Pythagorean theorem if it's all lies?"

Some told me that the theorem means nothing to them because they are not math-

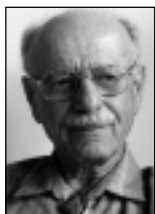
ematicians. Some admitted that when they saw the equation, their minds went blank, closed up, and they paid no attention to what I said afterwards.

One person explained the theorem did not surprise him at all. "Math has nothing to do with the real world," he said.

I presented to one friend the proof that the square root of two is irrational. The proof starts by assuming that it is rational and leads to contradiction. My friend exclaimed irritated: "Why didn't you tell me right at the beginning that the assumption is wrong."

But the most pertinent response was, "Who the hell cares?"

All of this gives me a stern warning when I think about curing mathphobia and innumeracy induced by high-school algebra, and my efforts to teach mathematical models. ■



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is an internationally recognized author, researcher and educator. He is the author of over 70 technical articles, and seven textbooks, in English, German, Spanish, French, Russian, Japanese and Hungarian. Dr. Vazsonyi received

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THUS SPOKE PYTHAGORAS:

$$A^2 + B^2 = C^2$$

