Towards a Formula for Primes

Source: http://sci.tech−archive.net/Archive/sci.math/2007−05/msg00901.html

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- *Date*: 6 May 2007 09:52:07 −0700

My pages on the Pythagorean Perimeters Theorem, which I discovered, are here:

http://www.wehner.org/pythag/
For the starting concept

http://www.wehner.org/pythag/ratios.htm
For further examples

The whole thing is based on DIOPHANTINE arithmetic.

In each case, there is a rectangle with a Diophantine ratio.

Using the procedure, one gets a Pythagorean triple.

When the rectangle is constructed on the smallest side of the triangle, its perimeter matches that of the triangle.

Here is an example:

The ratio 3:2 delivers the 8:15:17 Pythagorean BASE triple.

I say that it is a BASE triple, which could be called BASIC triple, because the 6:8:10 triangle is not unique − it is the 3:4:5 scaled by 2. However, 3:4:5 is a BASE triple.

For reasons that take too many words, the numbers 3:4:5, or whatever, of a BASE triple will always be COPRIME.

So we take the coprime pair 3:2 and get the coprime triple 8:15:17

Unfortunately, the pair and the triple are not coprime to each other. There are not − nor can there be − five coprime numbers. This is because the 3:2 rectangle is constructed (in this version) upon the smallest side of the triple, and will therefore be a scaled edition.

The 8:15:17 perimeter is 40.

A 3:2 rectangle constructed on side 8 is a 12:8 rectangle. Perimeter

40.

However, there is more to be found.

Because we have a coprime triple 8:15:17, we can now create six ratios from it.

8:15
8:17
15:17
15:8
17:8
17:15

ALL are coprime.

Each of these will expand out into a BASE triple.

So prime numbers are being brought into the results in a manner that they, due to the coprimality, are ISOLATED from one another.

Recursing around the algorithm should bring the extensio ad infinitum. Perhaps within this concept lurks the narrow gateway − the key − to entering into the solving of the problem of finding a test of, or formula for, primes.

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