The Prime Sequence Generating Algorithm

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Abstract:

In this abstract, a scheme for finding The Prime Sequence is elaborated.

Theory:

Procedure Start:

First of all we consider a set

$$S_1 = \{1, 2, 3\}$$

We now consider $S_1 \times S_1 = \{(1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3)\}$

We now consider $\{S_1 \times S_1(i, j)\} \rightarrow \{S_1 \times S_1(i * j)\}$ where $*$ represents the multiplication operator.

We now consider another set $R_1 = \{1, 2, 3, \ldots\ldots\ldots, [Cardinality\ y(S_1)]^2\}$

We now consider another set $P_1 = R_1 - \{S_1 \times S_1(i * j)\}$

Procedure End:

We can note that in this set, we note some new primes consecutive to 1, 2, 3.

However, we now consider only one among this newly found primes that is nearest consecutive to the set $S_1 = \{1, 2, 3\}$ and update our set

$S_1 = \{1, 2, 3\} \rightarrow S_2 = \{1, 2, 3, 5 (the \ \ first \ \ nearest \ \ consecutive \ \ prime \ \ to \ Set \ \ S_1)\}$

We repeat the above procedure again and find $P_2 = R_2 - \{S_2 \times S_2 (i * j)\}$ again.

However, we again consider only one among this newly found primes that is nearest consecutive prime element to the set $S_2 = \{1, 2, 3, 5\}$ and update our set

$S_2 = \{1, 2, 3, 5\} \rightarrow S_3 = \{1, 2, 3, 5, 7 (the \ first nearest consecutive prime to Set \ S_2)\}$

We again repeat the next consecutive prime finding scheme as mentioned above and can find as many primes as needed.

References:

1. Higher Algebra, H.S. Hall, S.R. Knight.
2. Modern Quantum Mechanics, J.J. Sakurai.