The Prime Sequence's (Of Higher Order Space's) Generating Algorithm

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Abstract:

In this abstract, a scheme for finding The Prime Sequence's (Of Higher Order Space's) Generating Algorithm is elaborated.

Theory:

Definition:

One should note that when we refer to the notion Of 'Prime Sequence Of Higher Order Dimension, say, 'R', we mean the complete set of numbers each of which cannot be factored {excluding itself and 1: these two elements must not be counted as product forming distinct factor elements, Furthermore, all such factors must be prime (in the 2^{nd} Order Dimension)} as 'R' product elements. For example, 6 is Prime Element in Third Order Space. From this definition, the 'Standard Prime Sequence' we refer to is the Set Of Primes in the 2^{nd} Order Space.

We now outline below, a procedure to find the Sequence Of Primes Of Any Higher Order Space.

Procedure Start:

First of all we consider a set

$S_1 = \{\alpha_1, \alpha_2, \alpha_3\}$ where $\alpha_1, \alpha_2, \alpha_3$ are the Sequence Of Consecutive Primes (Of R^{th} Order Space) from the beginning.

We now consider $\overbrace{S_1 \times S_1 \times \cdots\cdots \times S_1}^{R\,times}$

We now consider

$\overbrace{S_1 \times S_1 \times \cdots\cdots \times S_1}^{R\,times}(i_1, i_2, i_3, \ldots\ldots, i_{(R-1)}, i_R) \rightarrow \overbrace{S_1 \times S_1 \times \cdots\cdots \times S_1}^{R\,times}(i_1 * i_2 * i_3 * \ldots\ldots * i_{(R-1)} * i_R)$ where $*$ represents the multiplication operator.

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

We now consider another set $P_1 = R_1 - \overbrace{S_1 \times S_1 \times \cdots\cdots \times S_1}^{R\,times}(i_1 * i_2 * i_3 * \ldots\ldots * i_{(R-1)} * i_R)$

This above computed set will have some Prime Sequence elements of Spaces of order less than R. Therefore, in order to find the elements Of Prime Sequence of R^{th} order Space, we need to deduct all such Prime Sequence elements of Spaces of order less than R.

Procedure End:

We can note that in this set, we note some new primes (of R^{th} order Space) consecutive to $\alpha_1, \alpha_2, \alpha_3$.

However, we now consider only one among this newly found primes (of R^{th} order Space) that is nearest consecutive to the set $S_1 = \{\alpha_1, \alpha_2, \alpha_3\}$ and update our set

$$S_1 = \{\alpha_1, \alpha_2, \alpha_3\} \to S_2 = \{\alpha_1, \alpha_2, \alpha_3, \alpha_4 (the\ \ first\ \ nearest\ \ consecutive\ \ prime\ \ (of\ R^{th}\ Order\ \ Space)\ to\ Set\ S_1)\}$$

We repeat the above procedure again and find

$$P_2 = R_2 - \overbrace{S_1 \times S_1 \times \cdots \times S_1}^{R\,times}(i_1 * i_2 * i_3 * \ldots\ldots * i_{(R-1)} * i_R)$$ again.

However, we again consider only one among this newly found primes (of R^{th} order Space) that is nearest consecutive prime element (of R^{th} order Space) to the set $S_2 = \{\alpha_1, \alpha_2, \alpha_3, \alpha_4\}$ and update our set

$$S_2 = \{\alpha_1, \alpha_2, \alpha_3, \alpha_4\} \to S_3 = \{\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5 (the\ firstnearestconsecutiveprimetoSet\ S_2)\}$$

We again repeat the next consecutive prime (of R^{th} order Space) finding scheme as mentioned above and can find as many primes (of R^{th} order Space) as needed.

Examples:

Order Of Space	Sequence Of Primes Of (R^{th} Order Space)
2	2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, …
3	6 (3x2), 10 (5x2), 14 (7x2), 15 (5x3), 21 (7x3), 22 (11x2), 26 (13x2), 33 (11x3), 34 (17x2), 35 (7x5), 38 (19x2), 39, (13x3), 45 (9x5), ...
4	30 (5x2x3), 42 (7x3x2), 70 (7x5x2), 84 (7x4x3), 102 (17x3x2), 105 (17x3x2), 110 (11x5x2), 114 (19x3x2), 130 (13x5x2), ...
5	210 (7x5x3x2), 275 (11x5x3x2), 482 (11x7x3x2), 770 (11x7x5x2), 1155 (11x7x5x3), …
…	…

One can note that none of the primes thusly computed above could be expressed as a product of 'N' number of factors (that are prime in 2nd Order Dimension) wherein 'N' is equal to or greater than 'R'.

References

1. Higher Algebra, H.S. Hall, S.R. Knight.
2. Modern Quantum Mechanics, J.J. Sakurai.
3. http://www.vixra.org/abs/1502.0100 '*The Prime Sequence Generating Algorithm*'.

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