

One Step Evolution Of Any Real Positive Number {Version 2}

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Abstract

In this research investigation, the author has detailed the Theory Of One Step Evolution Of Any Real Positive Number.

Theory

One can note that any Natural Number ‘s’ can be written as

$$s = (p_1)^{a_1} \cdot (p_2)^{a_2} \cdot (p_3)^{a_3} \dots \dots \dots (p_{k-1})^{a_{k-1}} \cdot (p_k)^{a_k}$$

where $p_1, p_2, p_3, \dots, p_{k-1}, p_k$ are some Primes and $a_1, a_2, a_3, \dots, a_{k-1}, a_k$ are some positive integers.

We can write it further as

$$s = \overbrace{(p_1)(p_1)\dots(p_1)}^{a_1 \text{ number of times}} \cdot \overbrace{(p_2)(p_2)\dots(p_2)}^{a_2 \text{ number of times}} \cdot \overbrace{(p_3)(p_3)\dots(p_3)}^{a_3 \text{ number of times}} \cdot \dots \cdot \overbrace{(p_{k-1})(p_{k-1})\dots(p_{k-1})}^{a_{k-1} \text{ number of times}} \cdot \overbrace{(p_k)(p_k)\dots(p_k)}^{a_k \text{ number of times}}$$

We now consider One Step Evolution of any one p_1 or p_2 or p_3 or.....or p_{k-1} or p_k (among their $a_1, a_2, a_3, \dots, a_{k-1}, a_k$ number of occurrences respectively such that the increase in s is minimal. By One Step Evolution of p_j , we mean, if p_j is the l^{th} Prime number then we consider the $(l+1)^{th}$ Prime number as the One Step Evolved version of p_j . This will be illustrated by way of an Example.

Example:

$$s = 40,500 = (2)^2 \cdot (3)^4 \cdot (5)^3$$

which can be written as

$$s = 40,500 = (2 \cdot 2) \cdot (3 \cdot 3 \cdot 3 \cdot 3) \cdot (5 \cdot 5 \cdot 5)^3$$

Case 1: Now, considering One Step Evolution of 2 (of one among the two occurrences), we have

$$s = (3 \cdot 2) \cdot (3 \cdot 3 \cdot 3 \cdot 3)^4 \cdot (5 \cdot 5 \cdot 5)^3 = 60,750$$

Case 2: Now, considering One Step Evolution of 3 (of one among the two occurrences), we have

$$s = (2 \cdot 2) \cdot (5 \cdot 3 \cdot 3 \cdot 3)^4 \cdot (5 \cdot 5 \cdot 5)^3 = 67,500$$

Case 3: Now, considering One Step Evolution of 5 (of one among the two occurrences), we have

$$s = (2 \cdot 2) \cdot (5 \cdot 3 \cdot 3 \cdot 3)^4 \cdot (7 \cdot 5 \cdot 5)^3 = 56,700$$

Therefore, One Step Evolution of 40,500 is 56,700 as the aforementioned increase is Minimal in Case 3.

In this fashion, we can Evolve any given Positive Natural Number. We can note that any Positive Real Number can be written as $\frac{c}{d}$ where c and d are some Positive Natural

Numbers. Therefore, we can note that $E^1\left\{\frac{c}{d}\right\} = \frac{E^1(c)}{E^1(d)}$ where c and d are some Positive

Numbers and E^1 represents the One Step Evolution Operator.

Furthermore, one should note that $E^1(0)=0$ and $E^1(1)=1$.

References

1. http://vixra.org/author/ramesh_chandra_bagadi
2. <http://philica.com/advancedsearch.php?author=12897>