Number Functions Arising out of Number Linear Symmetry or Number Circular Asymmetry on a Number Line that Proves the Existence of the Exact Nature of Non-Trivial Zeros in A Riemann Zeta Function

Siddaiah Ramananda*

ACTP Academy for Science and Technology, Sarvodaya Education Society, Bangalore, India

Abstract

Different types of Numbers which might be Odd, Even, Prime and Zero which includes all Types of Numbers in the Elementary Number Theory have a Different Geometrical Representation on the Number Line which makes them belong to Symmetric or Asymmetric Groups which might be Divisible or Indivisible to give the Final Derivation that gives the Solution and Proof for the Basic Riemann Zeta Equation where the Value of Non Trivial Zeros is determined by ½ + xi where x is the Real Number and i is the Imaginary Number Component.

Keywords: Arithmetic; Number line; Dimensional; Riemann hypothesis

Introduction

Arithmetic is the Oldest Field of Mathematics with the Elementary Number Theory forming its Bed Rock and Foundation since times Immemorial but if Number Theory is used without any Geometrical Representation that is linked to any Cartesian Order made up of Four Dimensions accompanied by of course it's Topological Variations and the Mathematical Model of the Number Line by itself Numbers by themselves will appear to be completely Irrational without having any Mathematical Properties and Functions of their own.

So the Moment we treat all Classes and Types of Numbers in Arithmetic by using Number Lines in Two Dimensions and by using the 4 Dimensional Cartesian Order along with its Topological Order they turn into Rational Number Functions whose Structure can be altered through well-defined Mathematical Operations and the Moment that is done Many Unsolved Mathematical Problems including Riemann Hypothesis can be proved with remarkable ease [1-5].

The Link between Different Types of Numbers to Number Functions that are Represented on Different Types of Number Lines

Every Different Types of Numbers in Number Theory in the Field of Arithmetic have got a Link with One Another and that can be proved to be representative as Number Functions on different types of Number Lines.

One may ask the Question as to whether the Conventional Number Line we follow in Arithmetic is representative of the 4 Dimensional Cartesian Order which represents all the Dimensions We experience in the Real World and the Answer to that Question is yes.

The Four Quadrants defined by the Conventional Number Line with its Different Sign Values represent the Four Dimensions of the Cartesian Order with the First Dimension which has purely Increasing Linear Values made up of only Positive Sign Values making the First Quadrant where x and y are both positive and the Second Dimension by the Second Quadrant which has a positive x value but a negative y value caused by a reversal of increasing x value which produces a Perpendicularly Increasing y value that has a Negative Sign value and the Third Dimension by the Third Quadrant that defines a Point by the Positional Intersectional of all the Three Lines in Three Different Directions which can collapse to Zero due their Negative Sign Values

and the Fourth Dimension by the Fourth Quadrant where Negative shrinking x values can cause positive y values that is capable of producing a Wave Like Motion that defines the Arrow of Time itself.

This Act of Holographic Squeezing of a 4 Dimensional Cartesian Order into a Two Dimensional Number Line Plane forms the Basic Foundation of a New Branch of Mathematics formulated by me called as Cartesian Topology or the Mathematics of Dimensional Shifts way back in the 1990s which holds the key to the Unification of all the Forces and Laws of Nature to get to the Real Theory of Everything in Post Modern Physics.

Now let us get back to the Different Types of Numbers and find out first the Relationship they have with One Another before thinking of representing them as Number Functions on different Types of Number Lines which are different from the Conventional Number Line.

Odd Numbers always form Even Numbers when they are totalled together at the Binary Level.

Even Numbers always form Even Numbers even if they are Summated Together at any Level.

When Odd Numbers and Even Numbers are summated together at the Binary Level they form Indivisible Prime Numbers or Odd Numbers depending on which Sign Value the Odd Number Line supports during its process of Summation with the Even Number Line.

The Sum of Two Prime Numbers will result in an Even Number.

These Basic Properties of different Types of Numbers which might be Odd, Even or Prime in Nature will give us an Idea as to what Type of Number Lines can represent them as Number Functions and what Mathematical Operations can transform One Type or Class of Numbers into Another.

*Corresponding author: Siddaiah Ramananda, ACTP Academy for Science and Technology, Sarvodaya Education Society, Bangalore, India, Tel: 9739093801; E-mail: siddaiahramananda@gmail.com

If Addition is taken as a Single Dimensional Linear Motion on any Line of the Number System and Subtraction is taken as a Motion in the Opposite Direction and Multiplication as the Increasing Two Dimensional Space between any Two Perpendicular Number Lines and Division as the Decreasing Space in the Reverse and Indices that raises the Power of Numbers in Even Level as Squares and in Odd Level as Cubes drawn on the Number Line with the Roots representing the Division of the Squares and Cubes so formed the Representation of Different Types of Numbers as Number Functions on different Types of Number Lines can be set in Motion.

Now Each Class and Type of Rational Numbers can be represented as a Different Type of Number Line that has a Different Type of Number Function in the Following Way:-

Odd Number Function(Nfo)=+x for both the quadrants with no –x and no y as –y transformed from +y in First Quadrant and –y in Next Quadrant sums up for becoming zero to cause the Root Number to be as 1.

Even Number Function (Nfe)=-x is converted to +x on the Number Line –y is converted to +y on the Number Line to form a 1 +1=2

Positive Two Dimensional Space in all the 4 Quadrants with the Root Number for this Function becoming 2.

Prime and Imaginary Number Function (Nfpi)=+x gets converted to –x with –x changing to +x in its Quadrant to shrink to 0 to form a Single Perpendicular Line with only –y value. This will form a Dual Root Number Values of 2 +1=3 which is a Prime Number and -1 which can also be represented as an Imaginary Number i as in all the Four Quadrants as the Sign Values of all the x and y co- ordinates will be as follows:- (+x)(-x)(-y)(-y)=(-x)(+y)=Square Root of -1=i. Zero Circular Number Function (Nfo)=When –x becomes +x with +x in the First Quadrant remaining the same and +y becomes –y with –y in the Negative Quadrant remaining the same all the Quadrants will have a Total Value of Zero with Zero itself becoming the Root Number having a Number Line which becomes a Spinning Axis of a Circular Number Line that makes Dimensions to become Zero having both Positive Increasing and Negative Decreasing Sign Values making a Spinning Circle in Two Dimensions to become a Point Sphere in Three Dimensions with a Number Line which can reverse Directions and even collapse to a Zero Point and become both Horizontal and Perpendicular Lines at the same time. So in effect what these all means is this.

Nfo will give rise to an Odd Number Line, Nfe will give rise to an Even Number Line, Nfpi to an Imaginary Number Line that can give rise to a Curvature in Space and Nfo to a Circular Number Line which can also give rise to a Spherical Point Surface as shown by the Following Diagrams that are enclosed with this Article (Figures 1 and 2) [6,7].

Proving the Riemann Hypothesis Right by Using the Root Numbers Derived From Different Number Functions Caused by Different Types of Number Lines

Riemann Hypothesis is a Mathematical Conjecture formulated by the Great German Mathematician Bernhard Riemann in 1859 and is related to a Mathematical Function called as the Riemann Zeta Function whose value of Non Trivial Zeroes given by the Value of the Function lies on a Critical Line whose value is given by the Expression ½ + it where ½ and t form the Real Part in the Number Line and i forms the Imaginary Part which happens to be the Square Root of -1.
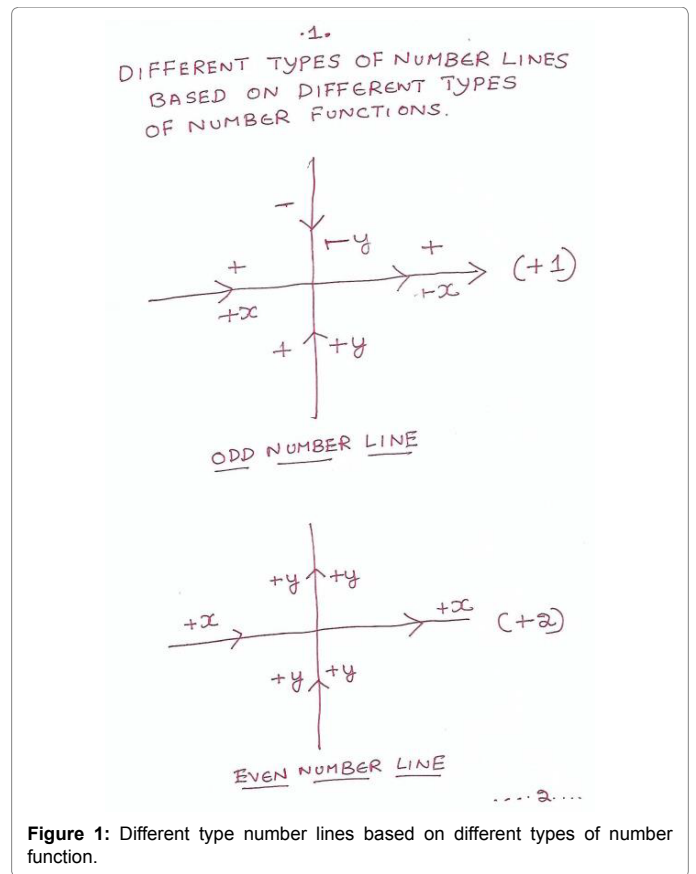

Figure 1: Different type number lines based on different types of number function.
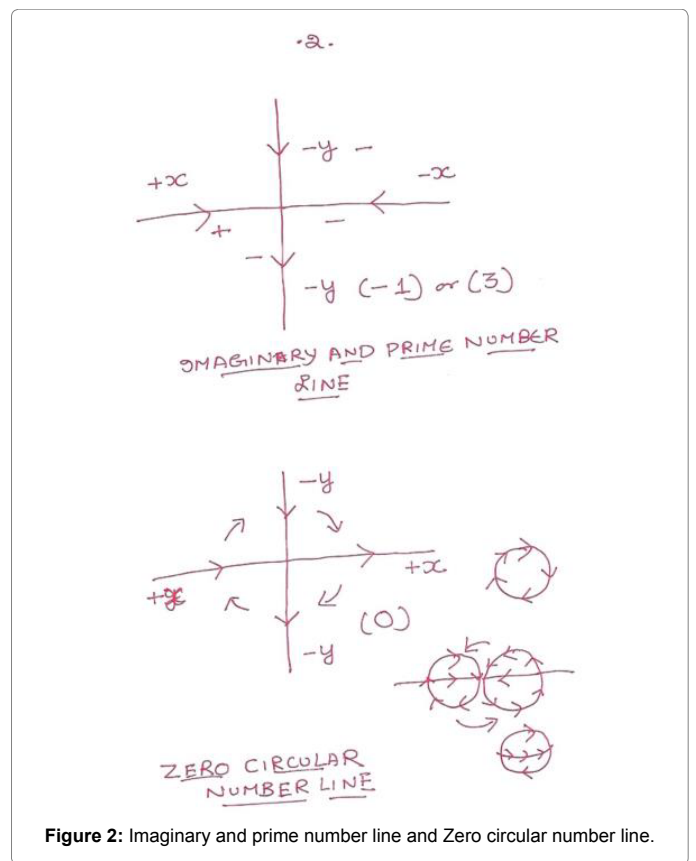

Figure 2: Imaginary and prime number line and Zero circular number line.

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The Riemann Zeta Function is by itself defined by the Following Equation:

Zeta(s)=1/Gamma s x Integral from 0 to Infinity of x to the power of s-1/e to the power of x-1 with reference to d x.

Where Gamma s=Integral of 0 to Infinity of x to the power of s-1 into e to the power of –x with reference to d x.

Although Trivial Zeros are found when s has values of certain even Integers like -2,-4 and -6 the Real Challenge comes when Non Trivial Zeros are found to exist only in a Critical Line defined by ½ + it where y axis is Imaginary by Nature and x axis is Real and by proving why the Non Trivial Zeros exist in only that Critical Line We in effect can prove the Riemann Hypothesis to be right.

If Non Trivial Zeros will have to result in the mathematical equation: ½ + it who's Values will form a Critical Line graphically between ½ and 1 in the Complex Plane then the Starting term of the Riemann Sequence which is 1 must be summed up with the Square of i which is the Imaginary Number in Question which in turn must be the Sum Total of the Rest of the Riemann Sequence which is other than 1.

So in short this is the Character of the Zero Number Line whose Root Number is Zero which in turn is the Sum Total of an Odd Number Line whose Root Number is 1 with an Imaginary and Prime Number Line whose Root Number is -1.

An Imaginary Prime Number Line can by itself be formed by putting together Odd and Even Number Lines together if the Root Number of the Even Number Line which is 2 turns Negative in Value and sums up with 1 which is the Root Number of the Odd Number Line which makes -2 + 1=-1.

So in short a Zero Number Line includes inside it all Number Lines which might be Odd, Even, Prime or Negative in Nature [8-10].

So if 1 – 1=0 the Odd Number Line must sink into the Negative Values of the Imaginary Prime Number Line through Axial Rotation which continues indefinitely in all the Dimensions to define the Zero Root Value of the Zero Number Line.

So if 1-1=0 then 1 -1/2-1/2=0 which means ½ -1/2=0.

½ + ½ x-1=0.

Since -1 is the Root Value of the Imaginary Number Line the Equation for the Riemann Hypothesis will become as Follows:-

½ + 1/2i=0.

Now i we know must become a Square to become Zero in a Riemann Zeta Function Sequence and hence half of the Square called i in a Complex Plane will have to be a product of a Real Number with an Imaginary Number which in short is ix.

Hence 1/2i=ix.

Hence ½ + ix define values of Zero in the Riemann Zeta Sequence. Hence this is the Proof of the Riemann Hypothesis.

Conclusion

The Proof of the Riemann Hypothesis which is considered as the World's Most Difficult Problem in Mathematics will change the very Nature of Mathematics itself giving rise to a New Branch of Mathematics of Dimensional Shifts which defines all Types of Numbers in 4 Different Symmetry Groups whose Values is defined on 4 Different Number Lines and this Branch of Mathematics could change the very Nature of Physics in the years to come to Unify all the Laws and Forces of Nature to create the Final Theory of Everything in Post Modern Physics.

References

1. Ramananda S (1995) The Principle of Monosymmetry - The Universal Law of Nature. Annual Meeting of the American Association for Advancement of Science.

2. Ramananda S (1999) Discovery of a New Mathematics - The Mathematics of Rulers or Dimensional Shifts. 33rd All India Mathematics Teachers' Conference.

3. Jaffe AM (2000) Riemann Hypothesis listed as one of the Seven Millennium Prize Problems. Clay Mathematics Institute.

4. Bombiere Enrico (2000) The Riemann Hypothesis. Clay Mathematics Institute.

5. Burton DM (2006) Elementary Number Theory. Tata McGraw-Hill Education. p: 434.

6. Alain C (2000) Non Commutative Geometry and the Riemann Zeta Function. Pp35-54.

7. Deninger C (2002) A Note on Arithmetic Topology and Dynamical Systems. Math NT 14:35-17.

8. Boyer CB (2004) History of Analytical Geometry. Mathematical Association of America Pp291.

9. Weinberg S (1992) Dreams of a Final Theory: the Scientists search for the Ultimate Laws of Nature. p: 340.

10. Schwichtenberg J (2015) Physics from Symmetry. Theoretical Mathematical & Computational Physics.