## **INTRODUCTION OF A CIRCULAR NUMBER LINE**

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## Abstract

The present paper introduces a circular number line, the superset of imaginary number line previously given by Yadav [1] and an imaginary circular plane, the superset of circular complex plane given by Yadav [2]. It also introduces the new concepts of imaginary circles and imaginary spheres. Taking different values of n, the natural numbers in in, we find that it takes all the values on the imaginary number line. Giving in the geometrical meaning as the sum of arithmetical distances, we find that the values of in lie on a circle and the imaginary number line lies on this circle, which gives the concept of circular number line. This circular number line is not a straight line but is a circle of imaginary radius. At last some axioms of Elliptical geometry and Euclidean geometry have been observed true in the paper. These axioms have been observed on the imaginary sphere and imaginary circle. The circular number line, imaginary circle and imaginary sphere will play a major role in explaining the concepts of Elliptical geometry and hyperbolic geometry as well as they will be very helpful in explaining the universe geometrically.

Key Words: Real numbers, Real number line, Imaginary unit 'i', Imaginary numbers, Imaginary number line, Imaginary circle, Imaginary sphere, Axioms of elliptical eometry, Hyperbolic geometry and Euclidean geometry etc.

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