

Shishir's Number Bangle

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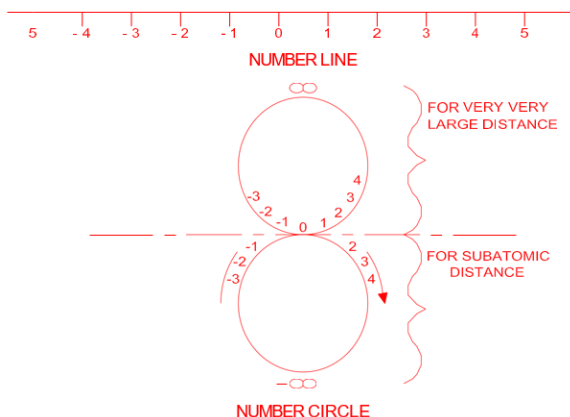
Abstract—The traditional number line is a straight line with infinite extend on both sides of zero tending to (-) infinity and (+) infinity. The author proposes concept of number circle, a circle with infinite radius (So it is a straight line.) Here, - infinity and + infinity will ultimately meet together at infinity!

Index Terms—Number line, Number circle, + infinity, - infinity.

Number line is the base of mathematics, $2+3$ means, start at number 2 and go beyond '2' by a distance '3'. So, the answer is the distance from ZERO. Here answer is '5'. Now in the case of $2-3$, we start at 2 and go to left instead of right. Now, we are -1 from zero. The answer is -1. We can imagine the number line is considered as a circle of diameter equal to infinity or zero curvature with the same results.

Now consider 'number circle' as shown in the figure. Here $2+3 = 5$ and $2-3 = -1$. But what at infinity?

Think of 'infinity+2'. Now the absolute minimum distance from zero is 'infinity-2' and not 'infinity+2'. Imagine '-infinity+2'. The absolute minimum distance from zero is '-infinity-2'. Thus, at infinity mathematics gets changed and can be understood just by changing our concept of number line to number circle of infinite diameter.



This concept is useful to understand physics when

distances are Very large (light years) and very small as in quantum physics.

Also imagine a closed sphere full of water. There is an explosion exactly at the center of sphere. The shock wave will travel from center to the boundary of the sphere. What happens exactly when the waves hit the boundary of the sphere? At that point the shock wave will end and a new wave will start from the boundary and end at the Centre. How to analyze that point and at that moment? Here, the concept of the number circle (Sphere?) will help. We have to change concept of infinity also. Infinity here does not mean 'distance'. Here infinity is end of some wave, series. So, in structural engineering while analyzing a circular shell stress at the apex are infinite! Actually, should be zero. Nobody talks about it.

Above paper is my imagination. I am not a mathematician. But study should be carried out by mathematicians regarding concept of NUMBER LINE. Instead of number line concept of Number Bangle is more rational. I think so.