

A Disproof of one of Cantors Cardinals.

In maths we are taught that Real numbers are of a greater Infinity in terms of how many there are when compared to Integers.

I intend to dispel this myth with a counter argument claiming that Integer Infinity is equivalent to Real Number Infinity.

First of all in order to demonstrate that any 2 Integers can be represented with a single unique Integer.

To Achieve this we use 2 Integer sequences.

Integer sequence 1.

1,1,2,1,2,3,1,2,3,4,1,2,3,4,5...

Integer sequence 2.

1,2,1,3,2,1,4,3,2,1,5,4,3,2,1...

Using these 2 Integer Sequences we get a unique pair of Integers for each Integer on the number line.

So now our first number in the Integer Pair will represent the Integer Component +1 to account for 0 and our second number will represent the digits in reverse of the float/decimal part of the real number.

So now for every decimal there will be an equivalent Integer. If you had all the Integers up to infinity to check you would in infinite time be able to find Pi or any other Real or transcendental number meaning that Cantor was wrong the 2 infinities are equivalent.

Note.

It would be interesting to find where Pi to various different accuracies appears on the integer line.