
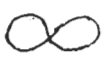


# Infinity In A Finite World

by Shaun David Hoffman

What you read here was proven mathematically in my paper "Useful Thoughts On Infinity".

Mathematicians have misunderstood infinity since they began trying to understand it. Do you think a hamster in a wheel is living in infinity  ? What if the hamster had

two wheels  ? Going past the same points over and over again, the path of the double circle infinity symbol, is the opposite of infinity; never passing the same point twice is infinity.

Numbers, by themselves, do not exist. If I say "ten", then you say "ten what?" Numbers, like words, are concepts of the mind, saying them or writing them down doesn't cause them to come into existence. "I know a person who is simultaneously (i.e. at the same time) taller than me and shorter than me." Those words were written, but such a person will never exist.

Every thing in our universe is finite; whether you believe the biblical age of the universe or the science age, it is finite. All distances are finite, ask an astronomer what the distance is to the farthest star and you will get a finite number. The tallest mountain has a finite height, the fastest rocket has a finite speed, the oldest rock has a finite age, and you can count the grains of sand on a beach (any beach), it would just take a long, but finite, amount of time. You can't put infinity in a finite world because it won't fit.

## Infinity in a finite world ②

A natural number which is also called a cardinal number is a whole number. The natural numbers (aka cardinal numbers) are: 1, 2, 3, 4, 5, 6, 7, ...

The real numbers are all of the cardinal numbers plus all of the decimal numbers. The real numbers are:

1, 1.1, 1.12, 1.13, 1.14, ..., 2, 2.1, 2.12, 2.13, 2.14, ..., 3, 3.1, 3.12, ...

When the mathematician Georg Cantor compared the real numbers to the cardinal numbers he got:

1	2	3	4	5	6	7	...	(Cardinal Numbers)
↓	↓	↓	↓	↓	↓	↓		
1	1.1	1.12	1.13	1.14	1.15	1.16	...	(Real Numbers)

He concluded that because the cardinal numbers had already gotten to seven but the real numbers had not even got to two there must be more real numbers than cardinal numbers and since both the real numbers and the cardinal numbers were infinite there must be some infinities that are larger or more numerous than other infinities. Cantor was wrong; I proved that Cantor was wrong in my math paper "Useful Thoughts On Infinity".

Cantor applied the logic of a finite world to infinity and got a finite answer about infinity which math professors continue to teach today because they don't understand infinity any better than Cantor did.

## Infinity in a finite world ③

The only difference between the real numbers and the cardinal numbers is that the cardinal numbers are getting to larger numbers faster than are the real numbers; you will never run out of real numbers and you will never run out of cardinal numbers, their quantities are both equal, they both equal infinity. In my paper:

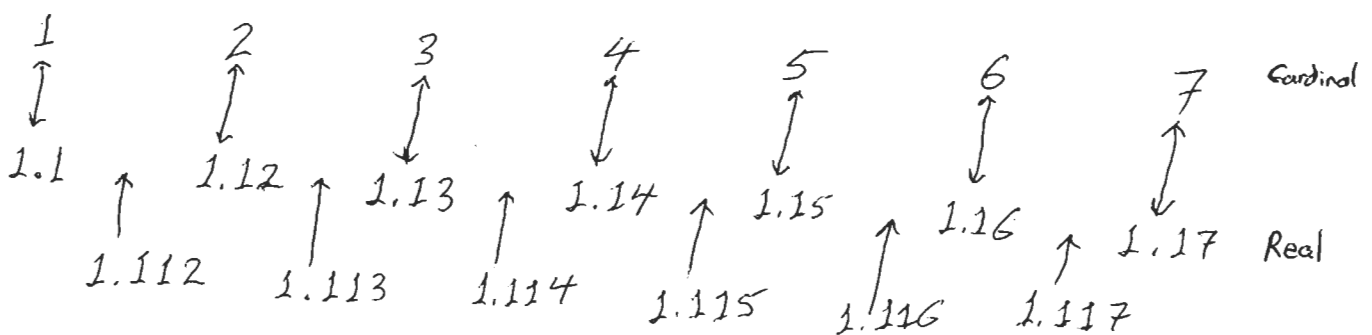
"Useful Thoughts On Infinity" I prove that all infinities are equal, however, they can be moving (ie expanding, traveling) ~~moving~~ at different rates of speed.

When doing the match up of Real Numbers to Cardinal Numbers:

1	2	3	4	5	6	7	...	[Cardinal Numbers]
↓	↓	↓	↓	↓	↓	↓		
1	1.1	1.12	1.13	1.14	1.15	1.16	...	[Real Numbers]

at any given point they always have the same number of elements in them, and no matter how long you continue to do that match up they will always have the same number of elements in them.

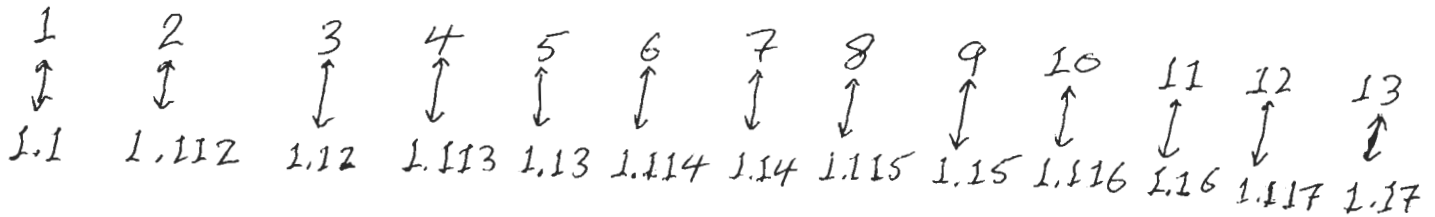
Some people who don't understand infinity will say what if I do this:



## Infinity in a finite world (4)

Those people will say: "Now it is clear that at point seven there are seven elements in the cardinal number group but there are thirteen elements in the real number group, hence it is larger and its infinity will be larger."

Those people did the wrong match up, they should have done:



Infinity cannot be thought of in finite terms, to think of infinity in this universe you have to think of something that is forever expanding, because once it stops expanding it is somewhere that can be reached <sup>or counted</sup>, and if it can be reached, then if it is at a distance from you that distance can be measured by a finite <sup>natural</sup> number, if it is a quantity that is not increasing then it can be counted by a finite natural number (aka whole number or cardinal number).

Once again, this was all proven by me mathematically in 1976 in my paper "Useful Thoughts On Infinity".

## Infinity in a finite world ⑤

The end result is that all things that are infinite ~~are equally infinite~~ are equally infinite even though some of those things are getting to finitely measurable distances or finitely countable amounts at different points in time.

Think of it this way, if person "A" gets into space ship A and heads off into space and person "B" gets into space ship B and heads off into space, and they each live and travel forever; if space ships A and B both launch at the same time and travel in the same direction, and space ship A is faster than space ship B, ~~then~~ space ship A will get to distance D away from Earth before space ship B will get to distance D, but there is no distance D to which space ship B will not get. Hence it is only at different points in time that they will be at different D's; there is no greater D that ~~A~~ A will get to that B will not get to. Therefore, they are both going as far, one is just getting there faster.