Mathematics Manuscript

by Dr. Irene Galtung

Forward

The manuscript was written entirely and solely by me; all ideas herein are mine. The original manuscript is hand-written by me in pencil and has a red cover…

If you figure out prime numbers, then you figure out the rest of mathematics.

…Inside a chocolate Kinder egg we know there is a surprise. What's inside mathematics? I say, something sweeter.

8 July 2016
Dr. Irene Galtung

Preface

Point 1

Giving a name to something which is not a number does not make that thing a number. For example, two people talk, Person A and Person B.

Person A: Let's count the whole numbers from 1 to 5.

Person B: Ok!

Person A: 1, 2, 3, chair, 4...

Person B: Chair? Chair is not a number.

Person A: Chair is a number. It's really obvious.

Person B: Huh?

Person A: 1, 2, 3, chair, 4, table, 5.

Person B: Table? Table is not a number.

Person A: Table is a number. It's really obvious…And you know what else??...I just came up with the most *beautiful*, wonderful mathematical relationship between chair and table!...It's a 500-page proof that shows how chair and table are related!

Person B: According to me, chair and table are not numbers.

Point 2

Nature is smart.

It will never reveal a TOE (Theory of Everything). If physicists, mathematicians (human beings…) would have a TOE, they would rape the planet, putting the knowledge to destructive use.[1]

[1] A few comments can be made about Point 2 of the Preface to the manuscript. (1) The point seems to suggest that nature does things on purpose, with intention; that we are ruled by nature (partially or totally); that nature (on its own, or together with some entity) has the final word. Point 2 of the Preface seems to say that we will not find a TOE (Theory of Everything), not because a TOE does not exist, but because nature/God/the gods/Creation hides it. The point seems to suggest that nature is capable of conscious intention…Here is what I have to say: one may interpret my Point 2 of the Preface as one wishes. Personally, I believe nature is smart. What is nature? What is smart? Well, maybe we will know one day; or maybe we already know. (2) Point 2 of the Preface might be incorrect. In actuality, someone might already have found a TOE, and does not realize they found it! Or they realized it and do not wish to make it public. Or they made it public. How would they truly know they found a TOE and are not mistaken? How does anyone

Point 3

Theory 1:
Mathematics is a game.

…It could be.

…Like for example, a card game. It has rules. One can do various things within those rules.

Theory 2 (mine):
Mathematics has to do with truth.

...There might be many truths.[2]

...Maybe yes, maybe no. Maybe there is only 1 truth in mathematics.[3]

---

know anything is truly correct? Assuming truth exists, one might accidentally or intentionally bump into truth, a truth? Perhaps even if truth exists, it is impossible to discover any truth. Would one have to be omniscient (know all things) to know whether something is the truth? Take science for example, it seeks to uncover truths. Karl Popper (1902-1994) stated that one cannot prove a scientific theory, one can only disprove (in other words, one cannot prove anything in science). But even that is up for debate, even that might be incorrect. Maybe it is possible to prove a scientific theory. (Moreover as has been pointed out, if you do disprove something, you are actually proving something. You are proving that something else is false). But even the idea that everything is debatable, is debatable. (The idea that for example, any statement is debatably true, untrue, or even true and untrue at the same time). There might be absolute truths that are undeniable. And then again, maybe not (even a simple statement like "I am pregnant" could be contradicted by saying for example, "In another universe you're not pregnant, so the sum of those two means you're somewhere in between being pregnant and not being pregnant," or, "All of reality is imagination. You're imagining you're pregnant. You're not really pregnant." Who knows, maybe that person is right). Even the idea (by Karl Popper) that a theory is only scientific if, and only if, it is falsifiable -- is up for debate. (Falsifiable does not mean false; it means if the scientific theory is false, then it could in principle be shown to be false by observation or experiment). But that is also not necessarily true. It is possible that no scientific theory (as defined by Karl Popper) has ever uncovered a truth (either because there is no truth to uncover, or because all scientific theories proposed so far are in actuality false, or because that scientific method will never lead to uncovering a truth). On the contrary, it is possible that "unscientific theories" (defined by Karl Popper as, all other theories that are not scientific theories) have uncovered truths, or come much closer to uncovering a truth. In other words, the unscientific theories might be more scientific than the "scientific theories"!…So everything might truly be up for debate. So all "facts" are opinions? Or, as stated above, there might be no truth about anything because truth does not exist. Or there might be several truths. Or the truth might be changing from second to second? Or? (3) Benjamin Pierce (1809-1880) defined mathematics as "the science that draws necessary conclusions". That could be up for debate, too? (4) What is a TOE (Theory of Everything)? (Well, it's not a finger.) (TOE…finger…) (Ok, I'm kidding.) (Then again, maybe it is a finger. Everything is up for debate?). A TOE is a single theory that will explain everything about the universe. It has also been defined as a hypothetical single, all-encompassing, coherent theoretical framework of physics that fully explains and links together all physical aspects of the universe…This assumes a framework of physics will lead to an explanation of all physical aspects of the universe. Does a TOE have to make sense? Can it be self-contradictory? Why not? Maybe truth is self-contradictory. Moreover, any idea/theory/non-idea could be right, might be the truth? Thinking in terms of right/wrong, truth/falsehood (or degrees of right/wrong, or degrees of truth/falsehood, or simultaneously right/wrong, or simultaneously true/false), might be the wrong perspective -- and that might be wrong too because of the word "wrong"? Or several contradicting TOEs might all be right at the same time? Or a TOE might not come from a human mind?...Ok, my Point 2 of the Preface (specifically, that we will never find a TOE) might be incorrect. It is, however, what I believe.

[2] There might be several truths (contradicting each other, or not) and they might all be correct.

[3] On the contrary, mathematics could be many things, one could give it any definition one wants? What is truth? (See footnote 1, comments (2) and (3)). (Albert Einstein (1879-1955) said, "As far as the laws of mathematics refer to reality, they are not certain; and as far as they are certain, they do not refer to reality." Maybe. Maybe not; maybe it is certain and does refer to reality, but the correct laws of mathematics have not been used yet.) (Or maybe there is only 1 truth in mathematics, only 1 correct way of understanding mathematics, but the truth changes? In other words, independently of how one (whether human or non-human) views mathematics (it is possible that animals count, for

Point 4

For years and years, mathematicians have said and "proved" things in mathematics. For example, mathematicians have "proved" that there are an infinite number of prime numbers; they have "proved" that some infinities are larger than others; and they have "proved" that $1 = 0.9999\ldots$ ($0.9999\ldots$ means 0.9 repeated; in other words, repeating the single digit "9" forever).

I make three statements in the manuscript.[4]

1. There is a finite number of prime numbers.
2. It is not true that some infinities are larger than others.
3. $1 \neq 0.9999\ldots$

example; that birds calculate the distance they have to fly, as another example), mathematics is real, it exists; however maybe mathematics suddenly changes, is changing every second, or will change in the far future, or was different 10 minutes ago, or before 13.8 billion years ago (the apparent age of the universe)? In other words, maybe the laws of mathematics are not always the same, at any given point in time?...(I do not believe mathematics changes, ever since mathematics came into existence). In addition (haha…addition, subtraction, multiplication…), mathematics does not need to be about numbers? Like my dialogue in Point 1 of the Preface to the manuscript, talking about whether a chair or a table is a whole number? Is there only 1 right way to count whole numbers? Is mathematics all about initial axioms, definitions? Perhaps the only correct mathematical theory is a theory that has no numbers whatsoever?...This is what I believe: if you figure out prime numbers, then you figure out the rest of mathematics.

[4] Why are any of these statements important, interesting? Why those 3?...(1) The manuscript proposes to be original, important and correct. Simultaneously, it is a theory, just like any other theory in mathematics proposed by any other person (child or adult): it could be wrong, it could be right; it could be a little bit wrong, a little bit right; or something else entirely (see footnote 1, comments (2), (3) and (4) on truth, right and wrong). The debate is open. Perhaps one would have to be omniscient (know all things) to know whether something is the truth. Perhaps not. In any case, the manuscript proposes to be correct. (2) The manuscript's three statements are important and interesting. I believe if you figure out prime numbers, then you figure out the rest of mathematics. (3) If mathematics can be defined any way one likes, then any invented rule is welcome; if mathematics has to do with truth, then it is not ok to invent any rule one likes. Does mathematics have anything to do with truth? (4) Finally, this brings me to an important point. Is mathematics like faith, like religion?...If mathematics has to do with truth, how do you know which theory/theories/future theories, to believe?...If mathematics has nothing to do with truth, do you then choose to believe in the mathematical theories (for example, calculus, topology and fiber bundles) that seem the most fun, in the same way one would choose a favorite card game with fun rules? (5) As a side-note, I like card games.

Statement #1

There is a Finite Number of Prime Numbers

It is popularly believed that the number of prime numbers is infinite.

For example, in 300 BC, Euclid said there are an infinite number of prime numbers. My manuscript sets out to state the opposite, namely that there is a finite number of prime numbers.

Definitions, Popular Beliefs and the Truth[5]

→ These days it is popularly taught that 1 is not a prime number.
Prime means first. Prime also means most important. With such a definition (for example, that prime means first), can one teach that 1 is not a prime number?

→ I want to say the following.
Just because something has been repeated by someone for days or years, does not make it true. This is true:

1. Mathematics is as simple as a Kinder egg (the chocolate that has a nice surprise inside).

2. A calculator or computer is not needed to find the largest prime number.
As of January 2017, the largest "known" prime number ($2^{74,207,281} - 1$) has 22,338,618 decimal digits.
Two points: (1) I do not believe this is a prime number. In fact, a computer found that "prime number". (2) It is not the largest known prime number. The largest known prime number, I assert, is 1. I will explain this in the manuscript.[6]

3. Do not believe everything you hear in mathematics.

4. Pencil fades. And that is ok. True statements last forever.

5. Please do not plagiarize. Also, please do not use my statements to make publicity for the Kinder egg, or anything similar.

6. There is a reason why some things are better left unsaid. And that is that human beings have often used numbers for bad causes. No need to flip the pages of history to know that. Mathematicians, too, have been shown again and again to put "mathematics"/computations to bad use, morally bad purposes. My statements only reveal something sweet.

[5] I mention the truth. What is truth? Please see footnote 4, comment (3). And footnote 3. Please see those feetnotes. (I'm kidding. Please see those two footnotes).
[6] This is original work. No one else looked at mathematics in this way.

7. Mathematicians, like economists, created a language, which others cannot understand. Not only is that unkind; what they are saying is also factually incorrect. Logicians (and logic is very logical and simple!) are guilty of this un-understandable language as well.

8. ☼Mathematics does not lie. Anything with a complicated name in mathematics is hiding, intentionally or unintentionally, a wrong statement. Mathematicians lie too, sometimes, to get money and/or fame, etc.

9. Just because a mathematical theory is popular, or has been published, does not make it factually correct.

10. Before we return to my Statement #1 (the number of prime numbers is finite), I need to say a few more things.
    …It is not true that mathematics is better understood by men. That is totally sexist.
    …It is not true that science is better understood by men. That is totally sexist. (Science is mathematics).
    …It is not true that mathematics is imaginary, in our minds.[7] Look at trees, for example, and you will see the mathematical sequence that has been named the "Fibonacci" sequence.[8] The sequence should not be named after him. After all, the sequence existed before Fibonacci was born.[9] For now, I refer to it as the "Fibonacci" sequence, so it is understood.
    …It is not true that mathematics is difficult. It is as easy as opening a Kinder egg. It is sweeter than opening a Kinder egg.
    …It is not true that mathematics is uninteresting. If it has appeared uninteresting, it is because mathematicians of the past have, intentionally and unintentionally, made wrong statements/"proofs" in mathematics.

11. And lastly, mathematics is….
    Yes, what is it?
    Let us open the Kinder egg = let us understand mathematics.
    ☼

→ I will start by listing 17 important facts about mathematics.[10] But before I do this, I will return to the "Fibonacci" sequence. I say it should not be named that way. Finders

[7] What does it matter if mathematics is only in our minds (or in animals' minds, for example; it is possible, as written in footnote 3, that animals count; that birds calculate the distance they have to fly, etc.)? What does it matter if mathematics is in nature?...Why does anything matter?

[8] It has been said the "Fibonacci" sequence can be found, for example: in branching in trees, the arrangement of leaves on a stem, pineapples, artichokes, ferns, pine cones, and the family trees of honeybees. (Normally, we speak of human beings as having family trees and we chart the great-great-grandparents, etc. But you can also chart the family tree of a honeybee).

[9] The "Fibonacci" sequence was named after Leonardo Fibonacci (about 1175 – about 1250). It is the following sequence: 1, 1, 2, 3, 5, 8, 13, 21, 34… It is constructed like this: every number after the first two is the sum of the two preceding ones (1 + 1 = 2…..1 + 2 = 3…..2 + 3 = 5…..etc.). (Sounds a bit like biology, yeah? A baby is born from two parents ("every number after the first two is the sum of the two preceding ones").

[10] Why 17? Because I like prime numbers. 17 is a prime number.

keepers?[11] That sequence "found itself" way before a human being found it. Still not convinced? If the sequence could "talk", maybe it would want to decide its own name. I am guessing but I do not think it would want another person's name. However, as I said, I will refer to it as the "Fibonacci" sequence for now, so it is understood.[12]

Now I list the 17 important facts about mathematics.

1. The Birch and Swinnerton-Dyer conjecture is false.
2. The Hodge conjecture is false.
3. The Collatz conjecture is false.
4. The Navier-Stokes Problem is false.
5. Perelman's proof of the Poincaré conjecture is false.
6. The Poincaré conjecture is false.
7. The Riemann hypothesis is false.
8. The Yang-Mills problem is false.
9. The Twins Prime conjecture is false.
10. The Ulam spiral is false.
11. The Goldbach conjecture is false.
12. Mochizuki's proof of the abc conjecture is false.
13. The abc conjecture is false.
14. The P vs. NP problem is false.[13]
15. Wiles' proof of Fermat's Last Theorem is false.
16. Fermat's Last Theorem is false.
17. And last but not least, $E = mc^2$ is false.

[11] It is said that the sequence was noted in the 6th century by Indian mathematicians.
[12] As a side-note, if the sequence could "talk" and its name happened to be Fibonacci, that would be quite funny.
[13] I invented the aphorism: "Can you create a puzzle so hard it cannot be solved? No. All puzzles are predictable. Life is not."

→ Many statements in “mathematics” are false, but the list above mentions some of them.[14]

→ This manuscript will show the truth about prime numbers, which as a consequence shows that a lot of statements in “mathematics” are false.

→ The manuscript is quite short.

→ By the way, the manuscript is necessary and sufficient to understand mathematics.

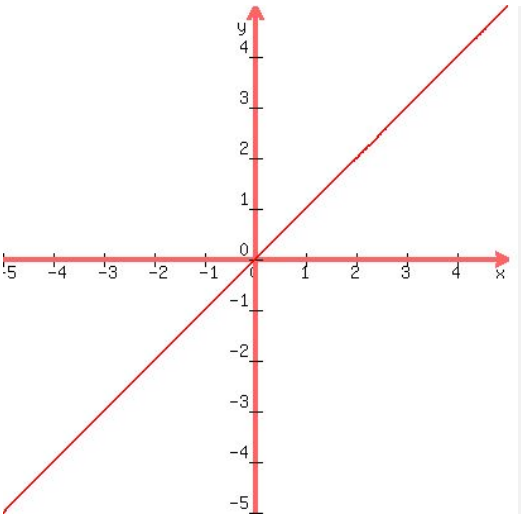
→ Where have all these years of mathematics on Earth led us to? To things like the 17 (incorrect, I say) statements above that are considered great mysteries, breakthroughs, in mathematics.

→ Take for example a graph many of us have been taught in school.

$y = x$
(That’s already a mistake!)
(That’s like saying an elephant = parrot.)

The truth is $x = x$
$y \neq x$
y can never be x
and x can never be y
The truth is $y = y$

This is the graph for $y = x$. It is false.[15]



[14] Why these 17 statements are false will be seen later.
[15] Before you start protesting, hold your horses.

This graph might look "nice" but it is false.
…You might strongly believe y = x but that does mean it is factually correct. In fact, it is incorrect.

→ Again…where have all these years of "mathematics" led us to? The use of "mathematics" has led us to the world we see today. I say "mathematics" because real (factually correct) mathematics cannot be used for bad purposes. It is impossible.

→ Now the important point
is that **zero (0) is not a number**.[16]
...Nothingness is a lie. We are here on this planet, so there is --- something. Even if you want to argue that maybe none of us are real and it is all imagination, there is still --- something that is not real or being imagined. Even if you argue that maybe that is what nothingness looks like, it looks like "something", there is "something". There is total certainty that there is something. Even if you want to refute that statement, there is --- something refuting that.[17]
…Of course, you could use zero (0) in the sense of none, like this salad has no/zero (0) tomatoes, as an example. Indeed, zero (0) is a useful symbol (for example, 1,000, one thousand, has three 0's, three zeros).[18] Likewise, zero (0) is used in arithmetic (for example, 16 – 16 = 0). It is also used in 0.9, for example.[19]
…Still, zero (0) is not a number. It is a concept, like envy or laziness.

---

[16] Zero is a number, it's really obvious? Sound familiar? See Point 1 in the Preface to the manuscript, where Person A says chair and table are really obviously whole numbers; Person A counts the whole numbers from 1 to 5 (1, 2, 3, chair, 4, table, 5). In fact, Person A just wrote a 500-page proof that shows how the numbers chair and table are related.

[17] However, let us still argue against all this. (1) I write above that there is total certainty that there is something in this world (therefore, not nothingness). One can still say: I don't believe it, I believe nothingness exists; that might sound contradictory because if nothingness exists, then by existing, it is something; but first, that's not necessarily true (nothingness could exist and it doesn't necessarily mean that by existing it can no longer be characterized as nothingness); and second, anything is possible (so even if it sounds, or is, contradictory, it could still be true; we don't know the truth; and nothingness could be the truth/a truth). Yes, one could say that. Furthermore, one could say: something and nothingness can co-exist; it doesn't have to be that if there is something, then there is no nothingness; or if there is nothingness, then there is no something; it doesn't have to be that you can only have one or the other; maybe you can even have degrees of nothingness and something; maybe something exists in this world, and nothingness exists in another world, and both worlds co-exist at the same time; any combination of theories is possible. True, one can say all this, too. I would say: the moment there is something (in this world, or in any world), it means there is no nothingness (nothingness would be absence of something)…(2) I write above that nothingness is a lie…Even if it is a lie, so? One can still imagine nothingness. And lie? Why a lie? A misunderstanding maybe? And even then we do not know if it is a misunderstanding, because we do not know the truth, so nothingness might be the truth/a truth…I would say: it's a lie; there is total certainty that there is something, therefore not nothingness.

[18] Zero (0) (the concept) is used as a placeholder. For instance, 508: it means 8 in the units column, zero (0) (the concept none) in the tens column, and 5 in the hundreds column. Here zero (0) as a placeholder signifies that 508 is not 58, for example.

[19] Here is a little history of zero (I considered giving no history…zero history of zero, but decided on little): the idea of none/nothing is old and hard to date in history; the idea of zero as a placeholder (see footnote 18) might already have been used by the Sumerians in Mesopotamia, 4,000-5,000 years ago; it is said zero was used as a placeholder between 400 and 300 BC in Babylon; it is said the Mayans also invented zero as a placeholder around 350 AD; however, the idea of zero as a number (not just as a placeholder) maybe first appeared in 5th century AD, in India; it is said, a few centuries later the idea of zero as a number reached China and Middle East (773 AD); it is said the idea reached Spain in the 11th century through the Moors; it is said, from the 16th century zero was commonly used as a number in Europe. Today, zero (0) is used in physics, in binary in electronic devices, etc.

….Zero (0) is the concept of non-existence. You would sort of have to not exist, to be an expert (not little bit expert; I mean, expert) on non-existence.

…Mathematicians say, for example, 6/0 = error. But 0/6 = 0.
0/6 is total nonsense. 6/0 is also nonsense.
It would be similar to saying what is 6/envy or 6/laziness.
…Zero (0) is a concept, not a number, I say.
…The difference between a concept and a number is like the difference between an elephant and a parrot. It is like the difference between a prime number and a composite number. One will never be the other. No "buts, ifs, or ands".[20]
…The moment you give a name to a number it exists. However, giving a name to something which is not a number does not make that thing a number (like zero (0) for instance)[21]…What came first  , the name (for a number) or the number? The number. There are children and adults who do not know the name of a number; that does not mean the number does not exist.[22] More on this later.

→ Let us now turn to my Statement #1 (the number of prime numbers is finite) and definitions.[23]

1. Natural numbers are positive integers (positive whole numbers) (1, 2, 3…), denoted as $\mathbb{N}$. I agree.[24]

2. Natural numbers > 1 that are not prime numbers are called composite numbers. I agree, apart from this:
   …I say there are two types of prime numbers: positive prime numbers and negative prime numbers.
   …It is said that a prime number is a positive integer (1, 2, 3…) greater than 1 (so not 1) that has exactly two positive divisors, 1 and the number itself. So, mathematicians have kicked the number 1 out as a prime number; look at old mathematics textbooks and you will see the number 1 was considered a prime number. I say, the above definition on what

[20] Is the test for a number that you have to be able to point at it? Like pointing at 1 piano, 2 chocolate bars…? No that is not what I mean.
[21] If mathematics can be defined any way one likes, then any invented rule is welcome; if mathematics has to do with truth, then it is not ok to invent any rule one likes (footnote 4, comment (3)).
[22] Regarding whether mathematics is only in our minds, see footnotes 7 and 8.
[23] How can you identify a number? What is the test for a number? Numbers are used to count, among other things. Numbers include positive and negative numbers; there are no other types of numbers.
[24] Sometimes natural numbers are defined as including the number zero.

is a prime number is random.[25] It lacks logic. Why not include the number 1 as a prime number? Mathematicians (many)[26] now exclude the number 1.
…Definitions are important.
…Human beings love to argue. Especially to contradict the truth. Especially when the truth works against them.
I say, in mathematics there is no arguing.🌞
Want to argue?
…As stated above, I say there are two types of prime numbers: positive prime numbers and negative prime numbers.
…I say:
a positive prime number is a positive integer (positive whole number) (1, 2, 3…) that has only two divisors, 1 and the number itself. If "1 and the number itself" happen to be the same number, that is all right.
In fact, the number 1 (it is the only number that is this way) has only two divisors, "1 and the number itself": the two divisors "1 and the number itself" (1) happen to be the same number, 1.
🌞
…I say, a negative prime number is a negative integer (negative whole number)[27] (-1, -2, -3…) that has only two divisors, 1 and negative the number itself.
…I say that aside from the above-mentioned positive prime numbers and negative prime numbers, there are no other types of prime numbers.
…It is said that the only even prime number is 2. I say this is false. There are two even prime numbers (2 and -2).
…Thus, I say 1 is a prime number.
See the above-mentioned definitions to understand.
…I return to the original discussion above, where I wrote that "natural numbers > 1 that are not prime numbers are called composite numbers". I wrote that I agree, apart from the above-mentioned statements. Hence, I say now, negative composite numbers exist, too. I say that negative integers (negative whole numbers) (-1, -2, -3…) < -1 that are not negative prime numbers are called negative composite numbers.

3. I say that there is a number larger than infinity; it is the largest number.[28] Before I elaborate on this, I need to mention more points.

[25] It was done because 1 as a prime number would mean the "fundamental theorem of arithmetic" (which guarantees unique factorization over the integers only up to units) would have to be re-formulated; it also caused problems for the "sieve of Eratosthenes" (an algorithm); and it did not have the right relationship with "Euler's totient function". (As a side-note…a divisor is a number that divides an integer evenly; there is no remainder.) (As a side-note to the side-note…I thought about making a separate footnote for the side-note, but I decided since it is about remainders, it will remain here.) (That's supposed to be a little joke.)
[26] It is said that Henri Lebesgue (1875-1941) was the last professional mathematician to call 1 a prime number.
[27] Sometimes whole numbers are defined as including only positive integers (1, 2, 3…), and not negative integers (-1, -2, -3…). Sometimes zero (0) is included as a whole number. Zero (0) is not a number. Integers are numbers that are not fractional numbers. The word integer comes from Latin, meaning "whole". Negative integers are negative whole numbers (-1, -2, -3…); positive integers are positive whole numbers (1, 2, 3…).
[28] Infinity concerns the boundless, endless; something that has no end.

4. ☼I say that infinity is a number; it is the same sort of number as natural or real numbers.[29] Natural numbers were defined above. What are real numbers?
…I say
that real numbers are, all, existing numbers.[30]
…I say
"imaginary numbers" (for example, $i^0 = 1 ... i^2 = -1 \ldots i = \sqrt{-1}$) are
not
numbers. They are nonsense. A total waste of time. I repeat what I wrote above: giving a name to something which is not a number does not make that thing a number.
…You see, $i^0 = 1$ (see examples I gave of "imaginary numbers") is incorrect. It is another sneaky way of saying y = x. 1 = 1. $1 \neq i^0$.
…You say "imaginary numbers" have been useful? Useful for whom? I repeat, what has "mathematics" led us to today? I also repeat, $i^0 = 1$ is factually incorrect. 1 = 1.
…I repeat what I wrote above: I say that real numbers are, all, existing numbers. I say that unreal numbers do not exist. Simply by being a number, a number exists and hence is real. Earlier I wrote "more on this later", regarding numbers' existence. I continue this here…Are there numbers that exist that we have not named yet? I say we have named all numbers (they are denoted by these digits…1, 2, 3, 4, 5, 6, 7, 8, 9, 10…and as mentioned earlier, by adding zeros; such as 100, which has two 0's, two zeros), or by adding a decimal point (any combination will make a number…for example, 70). We have also made symbols for certain numbers (for example, π pi for 3.14159…and for example ∞ for infinity). We have many numbers through, for example, addition/multiplication/division, etc. For example, 1/3 = 0.3333…I say we have named all numbers that exist…Are there numbers that do not exist yet and therefore have not been named yet? Are there numbers that used to exist and do not exist anymore? I say, all numbers have always existed, exist and will always exist, ever since numbers came into existence. I believe all numbers came into existence at the same time. Just because we cannot conceive/understand a number does not mean it does not exist.

…Real numbers are denoted by ℝ. I agree. As I wrote above, I say there is a number larger than infinity; it is the largest number. I also said that before I elaborate on this, I need to mention more points. Here is another point.

5. Georg Cantor said the set of integers is countably infinite; he said the set of real numbers is uncountably infinite…I say that statement is totally wrong. Infinity is infinity, and it is always the same size. In fact ☼it is a number. All sets of numbers are countable. Here's another point.

6. Newton studied at my university, but he was wrong. Leibniz was wrong, too. Calculus is wrong. A lot of "mathematics" is incorrect.

[29] I'm saying the exact opposite of what convention says. Convention says infinity is a concept, zero is a number. I'm saying infinity is a number, zero is a concept.
[30] This is not how real numbers are conventionally defined: (a) real numbers are said to include all rational numbers and all irrational numbers; (b) real numbers don't include imaginary numbers. In my view, if imaginary numbers are indeed numbers then they are included in real numbers. (But "imaginary numbers" are not numbers. Numbers include positive and negative numbers; there are no other types of numbers). Real numbers are all existing numbers, I say.

Consequences

→ I say that because of these mistakes, there are (1) many unanswered questions in mathematics; and (2) some things do not make sense in mathematics. If it does not make sense in mathematics, it is because it is incorrect.

Further Points

→ I say that it is wrong to say (as is said by mathematicians) that prime numbers become rarer as the numbers progress.[31] In any case, one cannot say that unless one knows the largest prime number (in other words, we have no idea what happens to prime numbers when they get very, very large and even larger, and whether they become rarer as the numbers progress/increase). Moreover, mathematicians tend to say the number of prime numbers is infinite;[32] in that case there is no largest prime number and it is a guess whether prime numbers become more frequent, or not, as they increase.[33] My guess is they become more frequent as the numbers progress. I say, the number of prime numbers is finite, and therefore it might be possible to verify whether prime numbers become more frequent as they increase.

→ Is the answer to my Statement #1 (the number of prime numbers is finite) in composite numbers (both negative and positive composite numbers)? If you find ("Eureka!" in Greek means "I have found it!")…(What are you trying to find in life? Money, fame?...Don't tell me, it's just a question)…Returning to what I was saying, if you find the largest prime number, then you find the largest prime number. There is no other way, I believe. You will not find it by looking for the largest composite number (remember, composite numbers are numbers such as…6, 8, 9, 10…) (prime numbers are numbers such as 1, 2, 3, 5, 7, 11, 13, 17, 19…). You may think that by finding the last composite number, you will find the last prime number because it will be after it. Maybe, maybe not. Maybe composite numbers (…6, 8, 9, 10…) suddenly come to a halt when they get larger and larger, until the largest composite number appears, but prime numbers just continue increasing ☀and increasing, until the largest prime number appears! Way beyond the last composite number, in other words, there may be many prime numbers. In any case you will only, and me too, find the largest prime number if it exists (and even if it exists, perhaps we cannot find it). In other words, if other mathematicians (not me; and I'm a mathematician) are right, and the number of prime numbers is infinite, we will of course never find the last prime number because it does not exist.

---

[31] They say this because, for example, if you apply the "sieve of Eratosthenes" (an algorithm) (one of several prime number sieves, for finding all prime numbers up to any given limit) you will come to this conclusion. By the way, this is the same "sieve"/algorithm that is a reason why mathematicians kicked out 1 as a prime number! (The "sieve" does not work if 1 is included as a prime number (see footnote 25)). In other words, "mathematics" makes mistakes (for example, not including 1 as a prime number) and then builds on these mistakes, creating more mistakes (for example, the above "sieve" that leads one to conclude that prime numbers become less frequent as the numbers progress).

[32] For example, mathematicians say Euclid proved this in 300 BC.

[33] See, however, footnote 38, where the "guess" is based on the "sieve of Eratosthenes".

Searching for the Last Prime Number

→ A few facts:
…4 is the first positive composite number.[34]
…1, 2, 3…are examples of positive prime numbers.
…1 is the first positive prime number.
…Some people are very obsessed with π pi (3.14159…), but really it is not that special.[35]

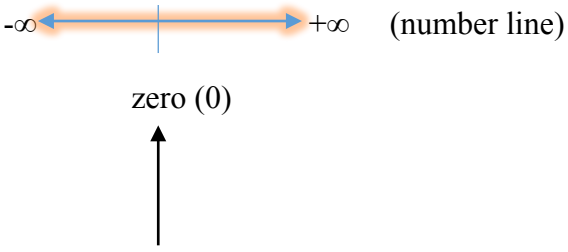
→ The objective is to find the last prime number. For those who do not think it exists, it exists.

→ Because of the intentional and misleading errors in mathematics (mathematicians also lie; some, like economists, cover up their mistakes in garbage language)…Because of the intentional and misleading errors in mathematics, we first need to answer a question (you see, lies waste a lot of time; lies must be countered however).

→ The question that needs to be answered first, before we search for the last prime number (and believe me, lies do not lead to truth; truth leads to truth), is the following:

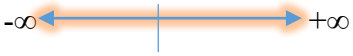
What would mathematics look like without the error of including the number zero (0)?

…I say, all numbers would exist, from negative infinity (-∞) to positive infinity (+∞), without the break in the middle with the number zero (0). As stated above, I say zero (0) is not a number.



Inserting zero (0) on the number line is like abruptly inserting any other concept on the number line, thus erroneously interrupting the number line. For example,

[34] Examples of positive composite numbers include 4, 6, 8, 9, 10…
[35] All numbers are interesting. I believe: if even one number would be missing, all numbers would cease to exist.

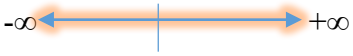


(number line)

envy

is mathematically wrong, too.

Likewise, for example,



(number line)

lazy

is mathematically wrong, too.

The Truth[36]

→ If physicists, mathematicians (human beings…) would have a TOE,[37] they would rape the planet, putting the knowledge to destructive use. Quantum mechanics is wrong. Totally. Look at what I say about the concept zero (0). Zero (0) is not a number. It has no place in mathematics, apart from the uses I talked about earlier (for example, 100 has two zeros, two 0's).

→ There is 1 universe, I believe. The universe is everything that exists. Even if you believe that there are many universes co-existing simultaneously, or that there is no universe at all, or ½ a universe, or whatever your belief is, everything that exists is that universe. As mentioned earlier in the manuscript, there is no doubt that something exists in this world. All that exists is the universe. What about that which existed, you say, and ceased to exist?[38] Or that which does not exist yet?[39] Or what if, you say, the "truth" changes, for example universes come in and out of existence, so at any given time what exists changes?[40] The quantity of what exists could be changing? Indeed, for example, people say, the universe is expanding. Expanding into what? What's on the "outside"? What is there to expand "into"/towards?[41]

I answer, everything that exists is the universe.

→ As I wrote above, there is 1 universe. I believe. 1 is a prime number.

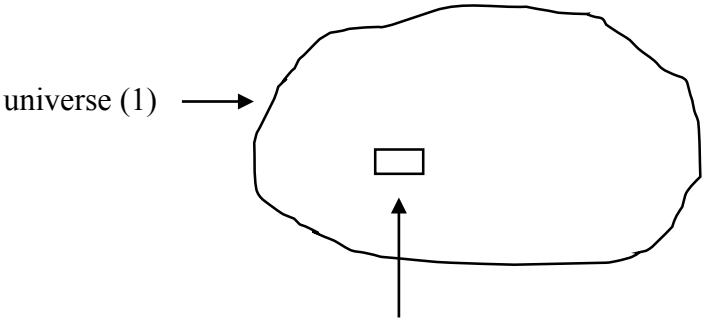
---

[36] Please see footnote 4, comment (3), and footnote 3, on what is truth.
[37] Theory of Everything. See footnote 1, comments (2) and (4) on what is a TOE.
[38] For example, a mosquito died. Is the universe now smaller?
[39] Tomorrow is no guarantee.
[40] Does the "truth" change? Does the truth change?
[41] If one discovers things outside the universe, then that wasn't the universe. Then the universe includes those things "outside", since the universe is everything that exists.

→ **Now here's the point:**

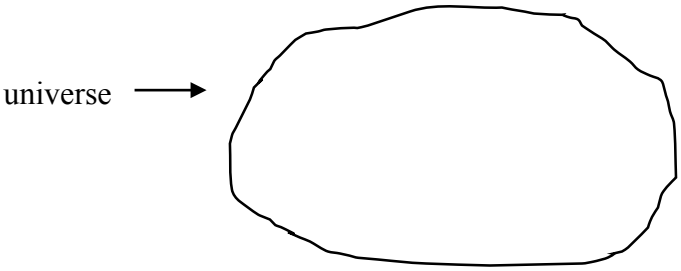
Imagine somewhere inside 1 (the universe) is 0.9. Imagine that because 0.9 does not realize it is inside the universe (which is 1) it is convinced that it is 1, but it is 0.9. It is inside the universe, which is 1!

→ That does not mean that inside the universe one cannot count things. For example, I can correctly state that I have 1 eraser. Still, is it really 1 eraser?[42] To simplify (please do not take this drawing literally; it is used to make a point). Let's say this is the universe (which is 1).



the eraser I'm talking about
(turns out it's not 1! It could be 0.002)

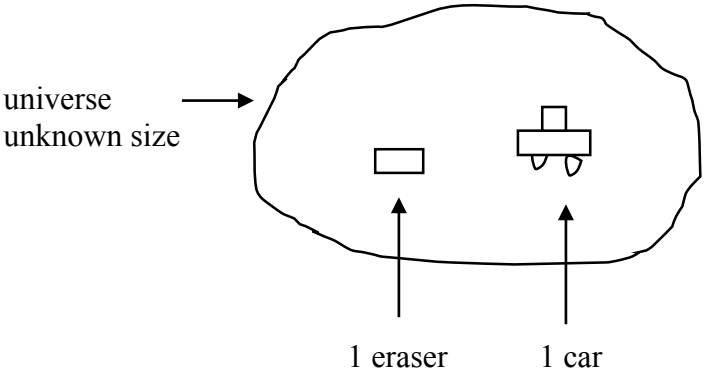
I can convince myself and everyone else it is 1. But in reality it is maybe 0.002.
The drawing above is simplified because the universe might not have a border.



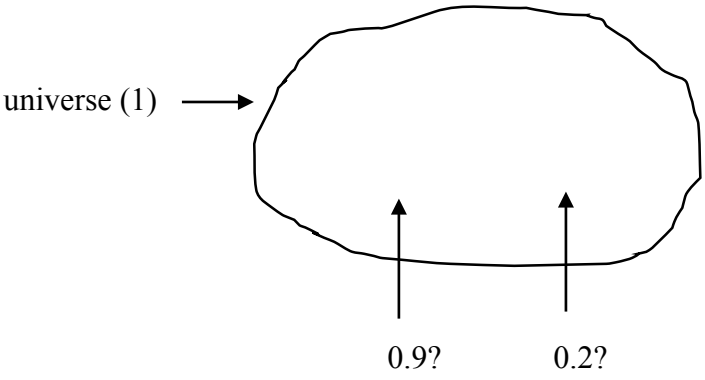
If the universe did have a border, what is outside of it?

[42] Let's say you're holding an eraser. You're convinced you're holding -- 1 -- eraser. Actually, you're inside the universe, which is 1. This means the eraser could actually be 0.002 for example (meaning 2/1,000). In other words, what numerical part of the universe does the eraser represent? For example, let's say Earth represents 1/5 of the universe. What numerical part of the universe does the eraser represent? (…It cannot be 1. It must be a positive real number less than 1). So, the eraser is 1 eraser, and at the same time it is not 1 eraser because it is inside the universe, which is 1. Both are correct; one on its own, is false...On another note, what numerical part of the universe does a thought represent? Do thoughts come in different sizes? How do you count thoughts? All these questions/thoughts are part of the universe.

→ ☀☀☀Mathematics depends where you start. You can start with the eraser. 1 eraser. 1 car. Etc.



But start with 1 universe, and then it is not clear where the other numbers are.[43]



→ There is 1 universe, I believe. It cannot be divided. 1 is a prime number. The universe is infinite. The universe is everything that exists. Infinity = 1.

[43] I believe mathematics depends where you start. (As written in footnote 6: this is original work; no one else looked at mathematics in this way). You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe. Both are correct; one on its own, is false. If, for example, you start by counting what exists in the universe (1 eraser, 1 car, etc.), you have a universe of unknown size. If you start with 1 universe (in other words, we know the size: it is 1), then it is not clear where the other numbers are (the positive numbers less than 1, for example) (…and yet, all numbers are inside/part of the universe)...If you count from 1 universe, where is the number 0.9 for example? Where is the number 0.2? 0.9 means 9/10 (it means 90%). Where is 90% of the universe? 0.2 means 2/10. It means 1/5. It means 20%. Where is 20% of the universe? If 0.9 is in the universe, 0.2 cannot be in the universe (the universe is 1). If 0.2 is in the universe, 0.9 cannot be in the universe. Not all positive numbers less than 1 can be in the universe at the same time (if you count from 1 universe).

Conclusion

1. Statement #1

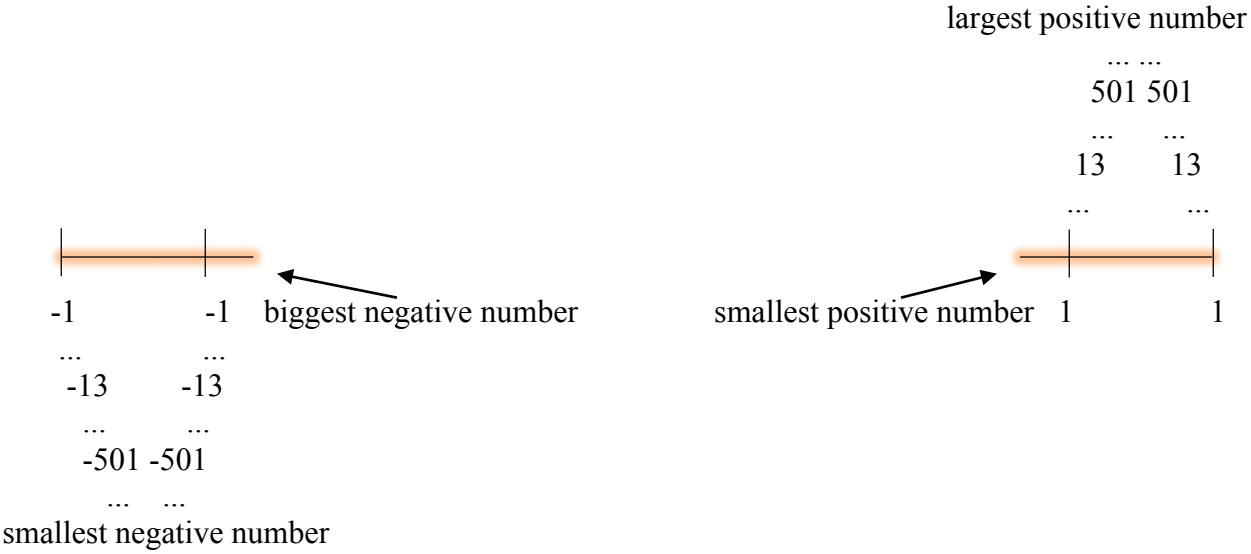
The number of prime numbers is finite.

Here is what I think: here is a list of positive prime numbers and positive composite numbers from smallest to biggest.

(1, 2, 3, 4……..4, 3, 2, 1). In the middle is the largest number. It is bigger than infinity. Infinity = 1.

In other words, here is the correct number line (number lines, there are two of them). The two number lines (one for negative numbers, one for positive numbers), in fact never meet. (The two number lines are number segments, not lines. A segment is finite; a line is endless in two directions. We'll continue using the term number line, since it is understood.) (The pictures are not drawn to scale. Also, the pictures have a pyramid-like shape; actually, all numbers are on the number line).

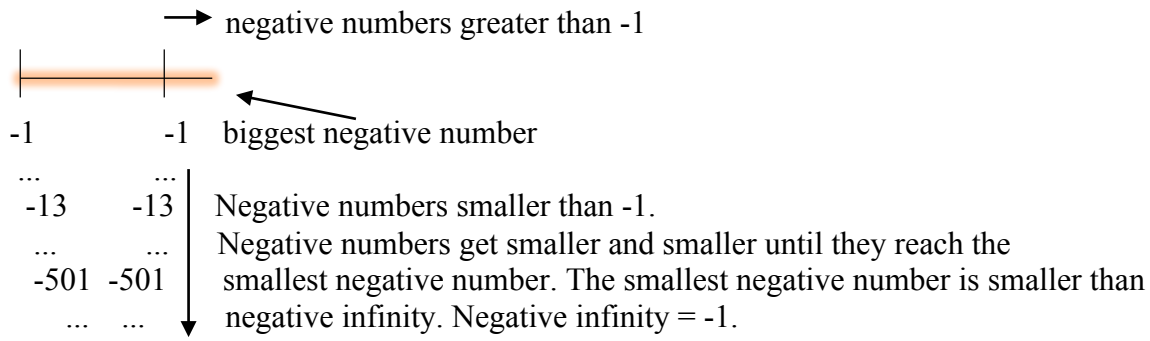
Here are all the numbers that exist in the universe:



There is a finite number of numbers.
The number of prime numbers is finite.

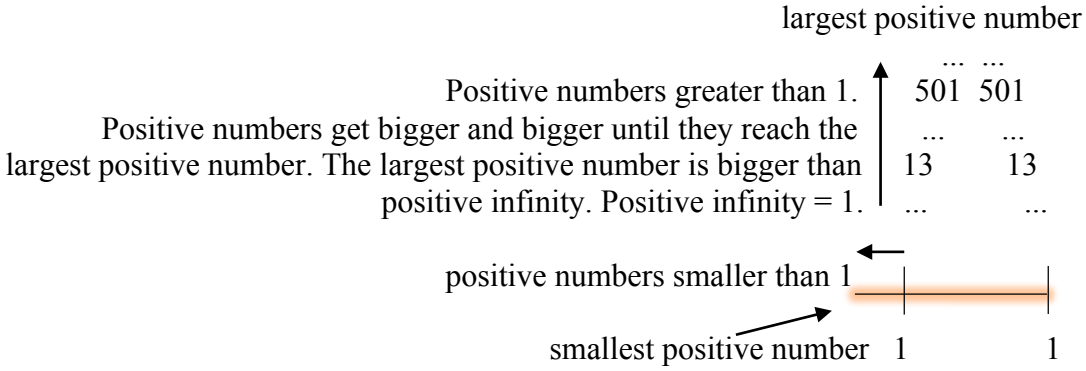
In other words,

here is the number line for negative numbers, explained.



smallest negative number

Here is the number line for positive numbers, explained.



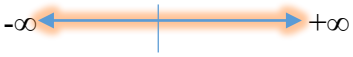
Let's Talk about "Mathematics" and Mathematics

As stated, the manuscript is necessary and sufficient to understand mathematics.
As stated, if you figure out prime numbers, then you figure out the rest of mathematics.

Here are 11 points.

1. The current number line is incorrect.

(a) It includes "things" which should not be included (we cannot say the current number line includes numbers which should not be included, since they are not numbers) (for example, zero (0) is not a number), (b) it omits numbers which should be included, (c) it connects numbers which should not be connected.



(current number line)

zero (0)

The current number line refers to the number line used today for real numbers.

There are several number lines used in "mathematics". They're all wrong.

Examples include: the Cartesian coordinate plane, where the horizontal x-axis and vertical y-axis are both number lines and intersect at the "number" zero (0); and the complex plane, a geometric representation of complex "numbers", made by the horizontal real axis and the vertical imaginary axis, which intersect at the "number" zero (0).
Zero (0) is not a number.

Why is zero (0) not a number?

(a) Imagine the smallest possible positive number (counting downwards, here are examples of numbers getting smaller and smaller (0.05…0.00002…0.0000001…etc.)). What is the smallest possible positive number? The smallest possible number just gets smaller and smaller? The assumption that it gets smaller and smaller until it reaches the number zero (0) is a big assumption and is wrong. (This assumption is seen in the current number line: 0 is half-way in between -1 and 1). In actuality, the smallest possible number just keeps getting smaller? It never disappears and suddenly becomes nothing. There is no first positive number after zero (0) because zero is not a number! It would be the same as asking what is the first positive number after chair.

(b) How about 16 – 16 = 0. Do I disagree with that? No. I am not saying zero (0) cannot be used. I am saying it is a concept, not a number. Let us look at 16 – 16 = 0. First, let us look at it abstractly, for example using only our minds. We make the calculation and get zero. I say, we get the concept zero; none. Second, let us look at it in the physical world. Let us choose physical units, for example 16 chocolate bars on a counter. Someone steals them and eats the 16 chocolate bars. There are zero, none. However, what is on the counter now is not nothingness. In place of where the chocolate bars were, there is air, etc. There is no number zero on the counter. So, 16 chocolate bars on the counter – 16 chocolate bars = zero (meaning none) + air, etc. Does this seem irrelevant, just a matter of perspective, how you look at something? The point is you never get the number zero; there is always something…Ok, but one could say: forget the physical world, let us think about it abstractly; let us imagine the number zero, "nothing"…That brings us to what I said, nothingness is a lie; there is total certainty something exists, so we do not know what nothingness looks like (so it is hard to imagine what it looks like). **Still, even though the assumption is false (the assumption that the smallest possible positive number gets smaller and smaller until it reaches the number zero (0)), one could nevertheless decide to define numbers based on this false assumption? No.**

...Zero (0) has been defined as a number with certain characteristics (it is an even number! It is half-way in between -1 and 1 on the current number line, etc.).

...**The current number line denies the existence of, for example, the smallest positive number. It exists.**

...Zero (0) is not a number.

(c) What would happen if you subtract the universe from the universe? Would you get the number zero? Universe – universe = 0? I say, in this scenario all has ceased to exist; so all numbers have ceased to exist, too; so you would also not get the number zero. As I wrote, zero is not a number; it is the concept of non-existence.

(d) At the moment (using the current number line), numbers miraculously come from zero (0). This is incorrect. There is a smallest positive number and a biggest negative number. (The vocabulary one uses for negative numbers is confusing. To clarify for example, -9 is said to be a smaller negative number than -6) (-9 < -6).

(e) The current number line is claimed to be endless, in two directions. That is to say, negative numbers extend endlessly from the number zero (0). Negative numbers get endlessly smaller, extending towards negative infinity. From the same number zero (0), positive numbers extend endlessly. Positive numbers get endlessly bigger, extending towards positive infinity. (A critic of the current number line might say: shouldn't the negative and positive numbers cancel each other out then, given they come from the same number zero (0)? Only the number zero (0) remains?

...I answer: if there is a mistake in mathematics (if mathematics is about truth, then there is such a thing as a mistake), then you'll build on the mistake, creating more mistakes. So the question, whether the numbers would cancel each other out (just like any "mathematical" question using false/wrong number lines), will only result in more and more mistakes.

(f) (Another critic of the current number line might say: shouldn't the number line be endless in 4 directions, instead of 2? It is said there is no smallest positive number; you can always find a smaller positive number. If that's so, then positive numbers should get smaller and smaller endlessly. They never reach the number zero (0). So the number line for positive numbers should be endless in 2 directions (numbers get endlessly bigger, and, they get endlessly smaller). In the same way, with regard to negative numbers, it is said there is no biggest negative number, so the number line for negative numbers should also be endless in 2 directions (negative numbers get endlessly bigger, and, they get endlessly smaller). And the number zero (0) is never reached, so that number can be a number line on its own. So, there are three number lines).

…I answer: the current number line is incorrect. Zero (0) is not a number. Numbers don't get endlessly smaller or endlessly bigger.

(g) This manuscript marks the end of zero (0) (as a number). The end of its history.

Zero (0), the concept, is fine. For example, although zero is not a number, it is able to get together with other numbers and create a number!

...Zero (0) (the concept) is used as a placeholder.

...For instance, 508: it means 8 in the units column, zero (0) (the concept none) in the tens column, and 5 in the hundreds column. Here zero (0) as a placeholder signifies that 508 is not 58, for example. Some numeral systems (written notation to represent numbers) do not need zero (0) as a placeholder to express numbers (for example, 508 in Roman numerals is DVIII) (meaning 500 + 8).

...Zero (0) is used as a symbol, for example.

...Zero (0) as a concept is at times used as a starting point (for example, in measuring distances, angles, time, latitudes/longitudes).

...Zero (0) can mean none.

2. "Mathematics" is factually incorrect. It's wrong.

All "proofs" in "mathematics" are wrong.
All the "number lines" are wrong (for example, the Cartesian coordinate plane, illustrated towards the beginning of the manuscript with the graph y = x. The graph uses zero (0) as a number. Zero (0) is not a number. The graph is false).

As I wrote towards the beginning of my manuscript, the 17 statements listed are false (for example, Wiles' proof of Fermat's Last Theorem is false). The 17 (incorrect, I say) statements are considered great mysteries, breakthroughs, in "mathematics".
All 17 statements use zero (0) as a number. They all use wrong "number lines".
The only correct number line is the one of real numbers. Zero (0) is not a number.

7 of the 17 statements are Millennium Prize Problems: the 7 mathematical problems were formulated by the Clay Mathematics Institute in 2000. The Institute awards US $1 million for a correct solution to any of the 7 problems.

The 7 mathematical problems are: (1) Birch and Swinnerton-Dyer conjecture (false); (2) Hodge conjecture (false); (3) Navier-Stokes Problem (false); (4) Poincaré conjecture (false) (and Perelman has been said to have proved (!) it is correct. The Poincaré conjecture is false. And Perelman's "proof" is false); (5) P vs. NP problem (false); (6) Riemann hypothesis (false); and (7) Yang-Mills problem (false).

The 7 mathematical problems all use zero (0) as a number. They all use wrong "number lines".
The 7 mathematical problems are false/wrong/factually incorrect.

"Mathematics" is factually incorrect.
For example:
Calculus is wrong.
Newton's "mathematics" is wrong; Leibniz's "mathematics" is wrong; the "mathematics" used in quantum mechanics (quantum mechanics deals with atomic and sub-atomic levels) is wrong.
They all use zero (0) as a number. They all use wrong "number lines".

Euler's identity (a "mathematical" equation) is wrong. The equation states $e^{i\pi} + 1 = 0$.
Euler's "mathematics" uses zero (0) as a number. It uses wrong "number lines".
Euler's "mathematics" is wrong.

Mathematics is factually correct. This manuscript is necessary and sufficient to understand mathematics.

3. Mistakes in "mathematics" create more mistakes, which mathematicians can try to patch up, consequently however creating more mistakes.

You can call what you're doing mathematics, but it's not.

The following is an example of mathematicians patching things up, building on mistakes and trying to make things hang together, by building more things (such as "discovering"/creating "numbers"): *p*-adic "numbers" appeared in the 19th century. In the *p*-adic number system, for a given prime *p*, the field $\mathbb{Q}_p$ of *p*-adic numbers is a completion of rational numbers (...sound nice? Sound mathematical?). In 1994, *p*-adic numbers, among other things, were used to "prove" Fermat's Last Theorem (which was formulated in 1637). In other words, a few centuries after Fermat's Last Theorem was formulated, mathematicians "discovered"/created other numbers that would allow the theorem (which is also wrong, I say) to be "proved".

A bit like a card game, and to win, you invent a new rule.

As I said, Wiles' "proof" of Fermat's Last Theorem (1994) is, false.
It uses zero (0) as a number. It uses wrong "number lines". (As does Fermat's Last Theorem).

4. ------ I put it to you that all seeming paradoxes in “mathematics” are either a play on words, or incorrect conclusions resulting from mistakes that have been built on other mistakes. The same goes for “science”. Science is mathematics. Science seeks to uncover truths.

Are all truths about mathematics? No. For example, the fact that I can’t think of an example. 🌞

5. Is “mathematics” useful? What about technology, etc.?

Does “mathematics” do more good than bad? More bad than good?
Does “mathematics” train the brain?
Has technology done more bad than good? More good than bad?
What’s the balance sheet? Can it be calculated “mathematically”, by the same wrong “mathematics”?

We have technology. Technology has been used in medicine. Technology also created new illnesses. Technology at times saves lives. Technology also created ways to kill people and bomb our Earth.

You do the math.
Is “mathematics” useful?

...**“Mathematics” is fun? It’s factually incorrect. For example, “mathematics” denies the existence of certain numbers, like the smallest positive number and the biggest negative number.**

It’s possible to prove things in “mathematics”? No.
...“Mathematics” is built on mistakes. It can never lead to a proof.
...Mistakes in “mathematics” create more mistakes, which mathematicians can try to patch up, consequently however creating more mistakes.
...The current number line: (a) includes “things” which should not be included, (b) omits numbers which should be included, (c) connects numbers which should not be connected.

...In other words, it: over-includes, omits, and connects.

...This is like, when someone (on any topic): over-includes (adds lies), omits (subtracts truths), and connects (makes connections between one thing and another: says one thing is related to another when it’s not; says one thing leads to another, when it doesn’t. An example of this is: excuses).

I’m typing on a computer. As I said, **the original manuscript is handwritten.** The original manuscript is necessary and sufficient to understand mathematics. The fact that it is handwritten shows that a computer is not necessary to write a necessary and sufficient mathematics manuscript.

6. "Mathematics" has led to scientific laws? No.

------ I put it to you, that whatever scientific "law" has been discovered, will at some point be disproved.

This manuscript is about mathematics.
As I wrote, science is mathematics. What is mathematics?
Science seeks to uncover truths.

"Science" is based on factually incorrect "mathematics". "Science" is false.
(My next book is about science 🌞).

Here are 3 comments about science:

Comment 1.
To say something is approximately true, you would have to know what is true; then you can see if you were approximately correct, or very incorrect (intentionally…or unintentionally misleading). Likewise, to say something is more approximately true, you would have to know what is true.

Comment 2.
If the tools used to test/make measurements are inaccurate, they will keep inaccurately confirming what you inaccurately state.

Comment 3.
What about technology? Does technology show "science", "mathematics" work?
Again, I said technology at times saves lives. Technology also created ways to kill people and bomb our Earth. Technology created new illnesses. You do the math. Does "mathematics" -- "work"? Does "science" "work"? How will you make the calculations (the advantages vs. the disadvantages of technology)? Will you make the calculations with the same factually incorrect "mathematics"?

...I would call "mathematics", Be Careful Activity.
...I would call technology, Be Careful Activity.
...I would call "science", Be Careful Activity. (Examples of "science" include: "chemistry", "physics", "economics").

7. Let's talk about the correct number line (number lines).

In my manuscript, I wrote, "Searching for the last prime number".
🌞
...The last prime number is 1.
...1 is a prime number. (We discussed the definition of a prime number towards the beginning of the manuscript). Definitions are important.
...Otherwise, we wouldn't have found the biggest prime number in the world!
...1 is the biggest prime number. 1 is also the smallest prime number.
...1 is the largest, known, prime number. 1 is also the largest prime number. 🌞 Mathematics depends where you start. You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe. If you start from 1 universe, the largest prime number is 1: there is nothing bigger than the universe; the universe is everything that exists. 1 is also the last prime number.

Why is this important? Because if mathematics has to do with truth, then there might be many consequences.
Because if chair and table are numbers, one can write many things. One might find that salad is connected to fork, plate and table, if and only if the table has half a leg.
(Point 1 of the Preface to my manuscript).

I said, it's not true that mathematics is difficult. It's as easy as opening a Kinder egg.

What is mathematics? Is it numbers?
🌞Mathematics does not lie.
Mathematics has to do with truth. There is only 1 truth in mathematics.
(Point 3 of the Preface to my manuscript).

1 is a prime number.
We divide numbers. We add lies. We subtract truths.

The universe cannot be divided, I wrote.
...It can, but when we do, it's not the entire truth. Mathematics depends where you start.
...For example, when you hold an eraser, you hold 1 eraser; at the same time, you do not hold 1 eraser because the eraser is inside/part of the universe, which is 1. Both truths are true at the same time; one on its own, is false.
...This means the eraser could actually be 0.002 for example (meaning 2/1,000). In other words, what numerical part of the universe does the eraser represent? For example, let's say Earth represents 1/5 of the universe. What numerical part of the universe does the eraser represent? (…It cannot be 1. It must be a positive real number less than 1).

...What does it matter? Is it impractical to view things in this way? We, can, divide the universe. We can also be aware of both truths. As I wrote, this does not mean we cannot count things. It's just not the whole truth. One truth (you hold 1 eraser) without the other truth (you do not hold 1 eraser because the eraser is inside the universe, which is 1), misses part of the truth; one truth on its own is, false…So now, how do we know we are not missing another truth? The manuscript is about mathematics -- how do we know we are not missing a mathematical truth? I would say, as written earlier: first, if you figure out prime numbers, then you figure out the rest of mathematics; second, the manuscript is necessary and sufficient to understand mathematics.

Does mathematics have something to do with the universe? Does the universe have something to do with mathematics?
...As I wrote, mathematics depends where you start. You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe. If you start by counting what exists in the universe, you have a universe of unknown size. If you start with 1 universe, we know the size: it is 1. It is always 1.
...Infinity = 1. (There is nothing bigger than the universe). The universe is infinite.

Let's talk about infinity.
...Infinity = 1.
...I'm saying the exact opposite of what convention says: convention says infinity is a concept, zero is a number. I'm saying infinity is a number, zero is a concept.
...I said ☀️infinity is a number; it is the same sort of number as natural or real numbers.
------ I put it to you, that if you can find something bigger than what you thought was the biggest, then what you found before wasn't infinity.
...The universe is everything that exists; there is nothing bigger than the universe. The universe is infinite.

Would the universe exist without mathematics? Would mathematics exist without the universe?

I believe some questions will remain.
(Point 2 of the Preface to my manuscript).

There is 1 universe.
...There is no universe?
...No. As I wrote, there is total certainty that there is something. The universe is, everything, that exists. Someone can say, nothing exists. First, that comment is something. Second, it denies our existence. Third, it's a lie. Nothingness is a lie. There is total certainty there is something.

...The total certainty that there is something has consequences. For example, not everything is possible. It is impossible that there is, not, something!

...So we have one truth. Is the rest belief? The manuscript proposes to be correct.

...There could be nothingness in the future? Once something exists, you cannot have nothingness. You can call it nothingness, but what you have is "nothingness" + a past. That, is something.

...One can deny history, one can lie about history, but once something existed, even if history would be erasable, you can't get nothingness. One could say: a history and an anti-history could combine and make nothingness, and in this way you did get nothingness after something ceased to exist. I would say even then you don't get nothingness because something you call history and anti-history would have existed. You cannot get nothingness after something existed.

...There could have been nothingness in the past? Did the universe always exist?

...There could be more than 1 universe? Universes might be coming in and out of existence? For example, there might have been 2 universes yesterday, 5 universes now?

...Everything that exists is the universe: so if there were 2 universes, that is actually 1 universe; you miscounted. Everything...that exists is the universe. If there are 5 universes, again that is actually 1 universe.

...What about what doesn't exist? What doesn't exist, doesn't exit (except as a thought). Thoughts are part of the universe.

...What about what doesn't exist and hasn't been thought of? Again, that thought exists. Thoughts are part of the universe.

...What about things that don't exist yet? Tomorrow is no guarantee. (The thought, however, about things that don't exist yet, exists).

...What about things that existed? The universe is everything that -- exists. (The thought about the past, exists). Is the past gone?

...There could be less than 1 universe? There could be ½ a universe? Universes could have ceased to exist, and then started to exist, start/stop/start, etc., with nothingness in between?

...Again, the ½ universe is miscounted. Everything...that exists is the universe. It's not ½. It's 1 universe.

...Universes could have ceased to exist? Again, once something exists, you cannot have nothingness. You can call it nothingness, but what you have is "nothingness" + a past. That is something. There is 1 universe ("what exists" might be changing…Still, all that exists, is the universe).

...Could nothingness be outside the universe, or next to the universe, or inside the universe? There is no nothingness (except as a thought). The fact that there is something, means there is no nothingness.

...Can anything be outside the universe? That thoughts exists. Whether a thought is factually correct is another matter.

I say, the only correct number line is the one of real numbers.

What is the number line?
...The number line contains all numbers that exist. A number is only a number if it is on the number line.
...I showed the correct number line. It turns out there are two number lines (one for negative numbers, one for positive numbers). And they never meet. And, they're segments, not lines.
...**We will see that everything that exists is all the numbers that exist. (We can -- count -- everything that exists; that does not mean that everything that exists is a number).**

...For example, if more things started existing in the universe, new numbers appeared? No.

...Or for example, if the total number of things that exist in the universe decreased, we lost some numbers? No.

So the world, the universe, is just numbers? No.
...For example, there's the matcha latte green tea I'm drinking.

All numbers are interesting. I believe: if even one number would be missing, all numbers would cease to exist.
...Just because we cannot conceive/understand a number does not mean it does not exist.
...There are children and adults who do not know the name of a number; that does not mean the number does not exist.
...We human beings might not have thought of a number; that doesn't mean the number doesn't exist. For example, the smallest positive number and largest positive number were left out.
...Just like a child who doesn't know $\sqrt{2}$ exists, it doesn't mean the number doesn't exist. I'm not talking about the way the number is written ($\sqrt{2}$). I mean a child who never thought of, or was never taught, the existence of $\sqrt{2}$ (meaning 1.4142…).

How can you identify a number? What is the test for a number?
...Numbers are used to count, among other things.
...Numbers include positive and negative numbers; there are no other types of numbers. (For example, "imaginary numbers" are not numbers).
...Real numbers are all existing numbers. (Unreal numbers don't exist. Simply by being a number, a number exists and hence is real).
...All numbers are real (examples include -4, $\sqrt{2}$, 16.8).

How real are numbers?
...(As a side-note, if someone owes you money, you probably definitely believe in positive numbers. If you're in debt, you probably wish negative numbers weren't real).

...Do numbers exist independently of human thought? I believe so. I believe all numbers came into existence at the same time. I say, all numbers have always existed, exist and will always exist, ever since numbers came into existence.
...A number/some numbers, didn't suddenly start existing later, nor did any number ever cease to exist.
...Numbers are not concepts; they are real and tangible.
...Do numbers exist independently of any thought (not only human thoughts) (It's possible that animals, insects, birds, etc., count; for example, it's possible that birds calculate the distance they have to fly)? (If animals, insects, birds, etc., count, do they also think of negative numbers? I believe there are animals, insects, birds, etc., that understand loss, subtraction, taking away).

Let's talk about negative numbers and subtraction.
...Numbers are used to count, among other things. How do negative numbers fit in with counting?

(a) We use negative numbers for example, to measure temperature, and for debts/money. Do subtractions that result in negative numbers make sense? It can make sense. (For instance, let's say it's -3°C, and it becomes one degree colder. That's (– 3 – 1= – 4), meaning -4°C). (…As for this example: 1 sheep – 5 sheep = ?...Does one get a negative number? No. I would say the equation is incorrect)…With regard to debt, perhaps one wishes it wouldn't make sense, then one wouldn't owe any money! One could say, negative numbers don't really exist (it's just in our mind!), I've just cleared all my debts!...Negative numbers do exist. As said, zero (0) as a concept is at times used as a starting point (for example, in measuring distances, angles, time, latitudes/longitudes). (As for volume, everything physical has volume, no matter what someone says). The question remains, do subtractions that result in negative numbers make sense? This is particularly relevant, since I say: zero (0) is not a number; there are actually two number lines (one for positive numbers, one for negative numbers); and the two number lines never meet. (For example, I agree 16 – 16 = 0. Zero (0) is used in arithmetic, for example. How can an arithmetic equation result in the concept zero (0) if the two number lines never meet? Understanding the concept none, doesn't necessitate zero (0) to be a number. Zero (0) as a number is a lie. Zero (0), the concept, is fine. In effect, they (negative and positive numbers) do meet in human constructions like in measuring temperature (which goes from negative numbers to positive numbers, passing through (the concept) zero (0), half-way between -1 and 1) (indeed for instance, 0° does not mean nothingness/none. In Celsius for example, 0° is the concept of the freezing point of water at 1 atmospheric pressure)…Subtractions that result in negative numbers can make sense. Monetary debts are real (for example, -$1 - $3 = -$4). Still, this doesn't mean the two number lines meet. In fact, they don't.

(b) Subtraction is the difference between two numbers. One can write for example, 16 – 1 = 15. Or one can write, 16 + (-1) = 15. (In other words, one can write the equation as subtracting a positive number from a positive number, or adding a negative number to a positive number). So it is possible to find the difference between two positive numbers (for example, 16 and 1), using only positive numbers (not negative numbers) ((16) – (1) = 15). I find the equation…16 + (-1) = 15, silly. It makes subtraction look like an addition.

Subtraction is subtraction. It is done in "mathematics" in order to fulfill the "ring axioms" (sound nice?), which says for example, x + 0 = x. This equation is incorrect. Nothingness (meaning zero (0) as a number) is a lie.

...If I agree subtractions can result in negative numbers (like in the example above about temperature, (– 3 – 1= – 4)), then we could define the number line just like we define temperature, from negative numbers to positive numbers, passing through (the concept) zero (0), half-way between -1 and 1? No. As I wrote, 0° does not mean nothingness/none. Zero (0), the concept, is fine. Zero (0) as a number is a lie.

(c) Subtraction is removing objects from a collection.

(d) Negative numbers can also mean subtracting from the universe. For example, universe – universe (universe minus universe)...What about universe (defined as everything that exists) – (universe + 6) = ?...Does one get a negative number? One cannot subtract more than everything that exists.

...What about universe + 6? That thought exists. Again, the universe is, everything, that exists: if something is outside the universe, that something is part of the universe; it isn't outside the universe.

There is a finite number of numbers.

...There is a largest positive number, and a smallest positive number. There is a smallest negative number and a biggest negative number.

...Infinity = 1. (Positive infinity and infinity are the same).

...Negative infinity = -1.

...I call the largest positive number also: the largest number, and the last number. The largest number is bigger than infinity.

...I call the smallest positive number also: the first number.

...There are the same number of numbers between the first number and 1, as there are numbers between the first number after 1, and 2. Etc.

There is a finite number of numbers. Numbers don't get endlessly smaller or endlessly bigger.

...**The idea that you can always find a bigger or smaller number is -- an idea/opinion/belief. It's incorrect.**

...It might be that a human mind is not able to count the numbers, but that does not mean there are an endless number of numbers between 1 and 2, for example. It also doesn't mean there is a finite number of numbers between 1 and 2.

...**Is the largest number also a belief?**

...**The manuscript proposes to be correct.**

I wrote, **we will see that everything that exists is all the numbers that exist. (We can -- count -- everything that exists; that does not mean that everything that exists is a number).**

(a) What is the number line for positive numbers?

...The size of the number line for positive numbers does not expand, or contract. (Also, the size of the number line for negative numbers does not expand, or contract). In other words: as I wrote, a number/some numbers, didn't suddenly start existing later; nor did any number ever cease to exist.

...Even though a human mind cannot count all things that exist in the universe, it does not mean it cannot be done: it is everything that exists (that number).

...Does the quantity of what exists in the 1 infinite universe change?

...The quantity of what exists might be changing. For example, we gain new thoughts; we lose extinct species of animals.

...Thoughts keep accumulating.

...Everything that exists (how ever big that number is; how ever much it might be changing or not, increasing or decreasing), is in the 1 infinite universe.

...Does the size of the 1 infinite universe change? Infinity = 1. Does the size of 1 change?

...I don't believe the physical universe is expanding (as is claimed). (Whether it is expanding or not, does not change the correct number line).

...I think the physical universe is finite. I think the universe is infinite. (The universe is everything that exists. It is not only physical things).

...Again, I said: if you can find something bigger than what you thought was the biggest, then what you found before wasn't infinity.

...The universe is everything that exists; there is nothing bigger than the universe. The universe is infinite.

...Does the size of the 1 infinite universe change? Is the universe expanding, for example? Was the universe bigger yesterday? Can the infinite universe get infinit-er? More infinite?

...I answer, infinity is infinity, and it is always the same size. In fact it is a number, 1. ("What exists" might be changing…Still, all that exists, is the universe). Something cannot be more infinite, or less infinite. It is either infinite, or not.

...In that case, does the size of 1 change?

...We return to the number line for positive numbers.

...Whether the quantity of what exists in the 1 infinite universe is changing or not (increasing or decreasing), doesn't affect the correct number line -- it doesn't make new numbers appear, or delete numbers.

...**There are numbers that haven't been used.** They exist on the correct number line I showed (an example of a number that hasn't been used is the largest positive number). **Like a thermometer, certain numbers haven't been used.**

...**The total number of things that exist in the universe (changing or not) has never reached, for example, the largest number. In this sense, there are numbers that haven't been used -- all the**

numbers have always existed, exist, and will always exist, ever since numbers came into existence.

> ...For example, to visualize, let's say there are 10 positive numbers (1, 2, 3, 4, 5, 6, 7, 8, 9, and 10) in the universe. Let's say no other numbers exist. Let's say there are only 3 things that exist in the universe. The total number of things in the universe has reached the number 3. In this sense, there are numbers that haven't been used.
>
> > ...Don't the 10 positive numbers exist, too? So there are more than 3 things that exist?
> >
> > ...I answer: **like a thermometer, certain numbers haven't been used.** Everything that exists is all the numbers that exist (10 numbers). We can -- count -- everything that exists (3 things). Not everything that exists is a number.

...The universe always existed with mathematics.

...The largest positive number doesn't change (it doesn't get bigger or smaller, for example).

> ...Another example, to visualize. Let's say someone multiplies the largest number with the largest number, and multiplies that with the number of positive numbers that exist. Let's say someone tries to construct a larger number than that. I would say they thought they were multiplying the "largest number" with the "largest number" -- but it wasn't the largest number. As for the "number of positive numbers that exist", it wasn't the correct number of positive numbers that exist. Also, whatever number someone tries to construct is very small compared to the largest number.
>
> ...Another example, to visualize. If someone thinks more thoughts (thus adding to the quantity of things that exist in the universe), do we get closer to the largest positive number? But we also lose extinct species of animals -- the question is, if the total number of things that exist in the universe increases, do we get closer to the largest number?
>
> > ...I answer: Does someone want to reach a higher number? **Like a thermometer, certain numbers haven't been used.** Is fever a good thing? Could be, if you're in love? Not so nice, if you're sick?

...Another example, to visualize. Let's say the total number of things that exist in the universe is -- always -- increasing. Does it reach the largest number? Kind of like the universe being "over-populated" with things, thoughts, the total number reaches the largest number?

...I answer: the total number of things that exist in the universe might be changing or not, increasing or decreasing.

...Can the total number of things that exist in the universe reach the largest number? If the largest number can't be reached, why is it there? What's it doing?

...I answer: Maybe it's wondering what we human beings are doing.

...**So we see, everything that exists is all the numbers that exist. (We can -- count -- everything that exists; that does not mean that everything that exists is a number).**

(b) What is the number line for negative numbers?

...Negative numbers copy positive numbers but are negative.

...Negative numbers can mean subtracting from the universe. For example, universe – universe (universe minus universe).

Let's talk about the words "largest", "last", "biggest".

...I speak of the last prime number/largest known prime number/largest prime number/biggest prime number. (They're the same). The last prime number is 1. Infinity = 1.

...I speak of the largest positive number/largest number/last number. (They're the same). I say the largest number is bigger than infinity.

...I speak of the smallest positive number/first number. (They're the same).

...I speak of "first" and "last". I believe all numbers came into existence at the same time. The first number is called the first number, because it's the first number on the number line for positive numbers. The last prime number is called the last prime number, because it's the last prime number on the number line for positive numbers (it's also the last...number on the number line for positive numbers -- however, I don't call it the last number).

...As I wrote, mathematics depends where you start. You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe. If you start by counting what exists in the universe, you have a universe of unknown size: the numbers get bigger and bigger until they reach the largest positive number. Everything that exists is all the numbers that exist. If you start with 1 universe, we know the size: it is 1. It is always

1. If you start with 1 universe, the numbers also get bigger and bigger until they reach the same largest positive number. The universe cannot be parted/divided more. The numbers are counting how many parts the 1 universe can be divided into. Both are correct (starting from inside the universe, and starting from 1 universe); one on its own, is false.

...They both reach the last number/largest number/largest positive number, that's why the last number is called the last number.

...What about the number line for negative numbers?

...I speak of the biggest negative number and the smallest negative number. (As I said, the vocabulary one uses for negative numbers is confusing. To clarify for example, -9 is said to be a smaller negative number than -6) ($-9 < -6$).

Let's talk some more about the words "largest", "last", "biggest".

...I said, there is a number larger than infinity; it is the largest number.

...Isn't infinity (infinity = 1) the largest number? No. In that case, shouldn't the largest number be called infinity? No.

...Aren't they the same (the last number and the last prime number)? No. Isn't the last prime number the last number? No.

...There is nothing bigger than the universe; the universe is everything that exists. The universe is infinite. Infinity = 1. The last prime number is 1.

...All numbers must be inside the universe. So we're talking about the largest number, inside the 1 universe. (Examples of numbers inside the 1 universe are: 999,999; and 999,999,999. Those two numbers are bigger than 1. That's why the largest positive number is also called the largest number/last number).

...Is the largest number infinity?

...Again to visualize, let's say for example there are 10 positive numbers (1, 2, 3, 4, 5, 6, 7, 8, 9, and 10) in the universe. Let's say no other numbers exist. 10 is the largest number. Infinity = 1. Also infinity = 10? No. How about, I found something bigger than "infinity" ($10 > 1$), so infinity is 10? No. The universe is everything that exists: all numbers, the words written now, thoughts, etc. Nothing is bigger than the universe. The universe is infinite. Infinity = 1.

There is a finite number of numbers. Am I saying everything is finite?

...If there is a largest number, am I not saying the infinite universe is actually finite? No. As I said, if you can find something bigger than what you thought was the biggest, then what you found before wasn't infinity. Nothing is bigger than the universe; the universe is everything that exists. The universe is infinite. Thoughts keep accumulating.

...If there is a largest number, does it mean all thoughts/all things that happen in the future have been predicted (including how many things)? No. Tomorrow is no guarantee.

...Is there a limited number of thoughts?

...Is time endless?

...If there is a largest number, does it mean time is not endless in the future (since there is a limited number of numbers to count time)?

...I wrote, true statements last forever. Time is endless?
...Once something exists, it exists forever?
...If someone is born later, did their eternity start later than someone born before?

What about the finite in the infinite? The infinite in the finite?

(a) Let's look at infinity.
...Infinity = 1.
...Infinity concerns the boundless, endless; something that has no end.
...I say, we need to distinguish between boundless, endless, big, small.
...I said, numbers don't get endlessly smaller or endlessly bigger.
...Infinity is about what I said: if you can find something bigger than what you thought was the biggest, then what you found before wasn't infinity.

(b) Boundless means boundless. Otherwise, we're talking about something that is in some way -- bounded.
...If something is boundless, it cannot be more boundless. If something is found that is more boundless, then the previous thing simply wasn't boundless; it was mistakenly called boundless.
...I wrote, the total certainty that there is something has consequences. For example, not everything is possible. It is impossible that there is, not, something!...Thus, the universe is bounded in some way: not everything is possible.

(c) Can something finite have something infinite inside it? No.
...The universe is infinite.
...Something finite doesn't have the infinite universe inside it.
...Is anything else infinite besides the universe? The universe is everything that exists. There is nothing else. Only the universe is infinite.

(d) Can something infinite have something finite inside it? Inside the infinite universe, is anything finite? I believe finite objects exist. For example, the number of prime numbers is finite.

(e) Does endlessness exist? Yes.
...For example, it exists as a thought. Is it a factually correct thought?

(f) Is the infinite universe endless?
...Endless in time?

...Endless in some other way?
...I said I don't believe the physical universe is expanding (as is claimed).
...I think the physical universe is finite. I think the universe is infinite. (The universe is everything that exists. It is not only physical things).

...Is the universe expanding? Can the infinite universe get infinit-er? More infinite?

...Something cannot be more infinite, or less infinite. It is either infinite, or not.

...Infinity is infinity, and it is always the same size, 1. Does the size of 1 change?

(g) Can a number be endless?

...Endless in time?

...I said all numbers will always exist. Time is endless?

...I believe: if even one number would be missing, all numbers would cease to exist.

...Endless in some other way?

...For example, 1/3 = 0.3333… (that means repeating the single digit "3" forever). It's a thought (that the digit repeats endlessly). (0.3333... exists as a thought). Is the thought factually correct? Does it really never end? Is there a way to check? What we do see physically for example, is that although 1/3 of a baseball is somewhere inside a baseball, the baseball is a finite object. Then again, it is the decimal representation of 1/3 (meaning 0.3333…) that is endless, not 1/3. **So we see that depending on how the number is written, it looks endless or not.**

...Is the baseball really a finite object? I believe finite objects exist. For example, I believe a baseball is a finite object.

...Let's say the decimal representation of 1/3 (meaning 0.3333…) is endless. Does that mean the whole decimal representation written down, is longer than the finite object baseball? Longer than the finite physical universe? It would be impossible to write the next number (the number after 0.3333...) on the correct number line?

...I said, there is a finite number of numbers.

...Does that mean no decimal number is endless (since there is a limited number of numbers to count with)? For example, does it mean at some point, 0.3333... (meaning repeating the single digit "3" forever) is cut off? In other words, 0.3333... can't go beyond the allowed number of numbers after the decimal point?

...Does that mean endless decimal numbers are endless, and we run out of numbers to count with (I say there is a largest number)? For example, does it mean 0.3333... keeps on going endlessly, even though there are no more numbers left to count the number of 3's after the decimal point (since the 3's go on endlessly, but there is a finite number of numbers to count with)?

...Is it factually correct to say the decimal representation of 1/3 (meaning 0.3333…) is endless? I think one can debate it either way (hopefully not endlessly!).

...If 0.3333... stopped existing, could it have been endless (meaning repeating the single digit "3" forever), until it stopped existing (then it stopped being endless)?...But in that case, in fact it wasn't endless?...In addition, 0.3333... means repeating the single digit "3" -- forever. (0.3333... could have repeated the single digit "3" forever, until it stopped repeating the single digit "3" forever?).

...What we do know is that the decimal representation of 1/3 (meaning 0.3333...) is not boundless -- it's not endless in all directions...Some people might say a/some/all numbers are endless; some people might say no number is endless; some people might say a number can be both endless and not endless at the same time; some people might say a/some/all numbers are neither endless, nor not endless; some people might say it's the wrong question.

...As I said, there is a finite number of numbers. There is a largest positive number. There is a smallest negative number.

...No whole number, whether a positive or negative whole number, is endless. For example, let's say there is a positive whole number "999, 999..." (meaning it's not a decimal number; the dots mean the single digit "9" is repeated forever; it's a positive whole number with an endless number of 9's). I say "999, 999..." is incorrect. The thought exists. But the thought is factually incorrect. No whole number, whether a positive or negative whole number, is endless. There is a largest positive number. There is a smallest negative number.

...I showed all the numbers that exist.

...There is a finite number of numbers. Whether a particular number is endless or not, is another matter. I think one can debate it either way, whether a decimal number can be endless or not. No whole number is endless.

...Whether a number is endless in time, is another matter.

...I believe: if even one number would be missing, all numbers would cease to exist.

...The question remains, are there really endless decimal numbers?

...1/3 is only an endlessly repeating decimal number in base 10, but this does not resolve the issue. The question is if it is -- indeed -- an endlessly repeating decimal number in base 10.

...As another example, is it factually correct to say π pi (3.14159…) is endless? Pi π is not irrational in base pi, but again this does not resolve the issue. Convention says irrational numbers are numbers that cannot be expressed as fractions of integers (an integer is a whole number); the decimal number goes on endlessly without repeating. Some people ask whether irrational numbers might be endlessly repeating decimal numbers and we are unaware of it. I would ask whether irrational numbers and repeating decimal numbers are really endless -- I think one can debate it either way.

...Could it be possible to express irrational numbers as fractions of integers (we just don't know how), even if the decimal numbers go on endlessly without repeating? In other words, it might be possible to express for example π (3.14159…) as a fraction of whole numbers?

...On a similar note to the baseball example above, √2 (meaning 1.4142…) is said to be an irrational number (an endless decimal number that does not repeat). It is said, √2 is the "length" of the hypotenuse of a right-angled triangle with sides of "length" 1. But the "length of √2" is finite, as we can see in the triangle. So how can the decimal representation of √2 (meaning 1.4142…) be endless? I believe it can be argued either way, that 1.4142… is endless or not -- no matter how convinced someone is of one view or the other.

...I ask, does a number have a length? Does the length of a number change depending on the notation system (for example 1/3) (0.3333...)? 1/3 has a different length from 0.3333... ?

...Does a number have volume, mass? Length, width, height?

...On another note, can an endless decimal number be more endless (longer) than another decimal number? Not if no decimal number can be endless. And if a decimal number can be endless, then can for example 40.3333... (which is 121/3) be more endless (longer) than 0.3333... (which is 1/3)? ...**Can anything be endless in time (or in any other way)? Once something exists, it exists forever? Can something endless be more endless than another endless thing? Can something endless be made more endless, less endless? Is there only 1 thing that is endless? Anything else is not really endless?**

…Not knowing whether decimal numbers can really be endless or not (that was funny...the sentence started with "not"...and ended with "not", right before the parenthesis), doesn't change the correct number line. (All real numbers are part of the correct number line: for example 1/3).

...**I think one can debate it either way, whether an endlessly repeating decimal number, is really endless or not.** (Written as a fraction, the same number doesn't look endless) (1/3).

...**I think one can debate it either way also, whether endless decimal numbers that don't repeat, are really endless or not.**

...How do we handle endless decimal numbers on the correct number line?

...For example, 1/3 = 0.3333...

....We don't know whether 0.3333... -- really -- goes on endlessly.

...I said, could it be possible to express irrational numbers as fractions of integers (we just don't know how), even if the decimal numbers go on endlessly without repeating? If so, the fractions would make the same numbers not look endless?

...How do we handle endless decimal numbers on the correct number line? I showed the correct number line.

...On another note, “proofs” in “mathematics” that “prove” 1 = 0.9999... are based on for example:

...zero (0) as a number (zero (0) is not a number)

...the idea/opinion/belief that numbers get endlessly smaller and endlessly bigger (numbers don’t get endlessly smaller or endlessly bigger)

...multiplying or adding, an endless decimal number (for example 0.3333...) with another number (first, we don’t know whether endless decimal numbers are really endless) (second, we have no idea what happens when you multiply an endless number with another number. I asked: Can something endless be made more endless, less endless?)

For example, it is said 1/3 = 0.3333... 2/3 = 0.6666... 1 = 0.9999...
(I ask: In that case, 4/3 = 1.2222...?) (0.3333... + 0.3333... is said to be 0.6666...) (0.6666... + 0.3333... is said to be 0.9999...) (So, 0.9999... + 0.3333... is 1.2222...?) (It’s wrong. 4/3 = 1.3333...) (4/3 ≠ 1.2222...).

(Why do the additions, that are said to be correct in “mathematics” not work?) (For example, 0.6666... + 0.3333... is said to be 0.9999...) (It doesn’t work, it’s wrong, because “mathematics” is factually incorrect: as I said, first, we don’t know whether endless decimal numbers are really endless; second, we have no idea what happens when you multiply an endless number with another number).

(h) What is the smallest number? Is it the smallest positive number, the biggest negative number, the smallest negative number, or negative infinity?

...What is smaller, negative infinity or the smallest positive number? It is said zero (0) is the smallest number. Zero (0), is not a number. It is said negative numbers are smaller than zero (0). Zero (0) is not a number. It is said negative numbers are smaller than positive numbers. The two number lines never meet.

...What is the smallest number?

...Is it either the smallest positive number or the smallest negative number? Is one of the two smaller than the other one? Is it either the smallest positive number or the biggest negative number? Is it either the smallest positive number or negative infinity?

...The two number lines (one for negative numbers, one for positive numbers) never meet. Can positive numbers and negative numbers be compared?

...The smallest positive number is also the first number.

...Negative numbers copy positive numbers but are negative.

...As I said, the vocabulary one uses for negative numbers is confusing. To clarify for example, -9 is said to be a smaller negative number than -6) (-9 < -6).

...What is smaller, the smallest negative number, negative infinity or the biggest negative number? According to the number line for negative numbers, the smallest negative number is the -- smallest negative number.

What is the correct number line? It's all the numbers that exist.
...Both number lines (one for negative numbers, one for positive numbers) are read from left to right. Numbers get bigger from left to right.

...As I said: You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe. Both are correct; one on its own, is false. Together they make the number line for positive numbers.

...If you start by counting what exists in the universe, the numbers get bigger and bigger until they reach the largest number. Everything that exists is all the numbers that exist.

...If you start with 1 universe, the numbers also get bigger and bigger until they reach the same largest number. The universe cannot be parted/divided more. The numbers are counting how many parts the 1 universe can be divided into.

...Negative numbers copy positive numbers but are negative.

(a) Does this seem complicated?

...We divide numbers.
...We divide the 1 universe.
...We divide the 1 Earth into countries.
...I wrote, the universe cannot be divided. It can, but when we do, it's not the entire truth.

(b) Let's look at the number line for positive numbers. It's all the positive numbers that exist. (With regard to the number line for negative numbers, I explained: negative numbers copy positive numbers but are negative). I explain here the number line for positive numbers.

(b1) We read the number line for positive numbers from left to right.

...We start from inside the universe and count things that exist inside the universe. Everything that exists is all the numbers that exist.

...We start with the first number/smallest positive number.

...Numbers get bigger (for example, reaching 0.002, 0.5, 1).

...Numbers continue getting bigger and bigger until they reach the largest number.

...And numbers continue getting bigger until they reach the last prime number, 1 (in other words, until they reach positive infinity, until they reach the end of the number line for positive numbers).

...4 is the last composite number.

...4 is also the first composite number (composite numbers are all numbers that are not prime numbers. For example: 6, 8, 9, 10).

...3, 2, and 1, are the last three prime numbers.

...1, 2, and 3, are also the first three prime numbers.

...1 is the last prime number. 1 is also the first prime number.

...As I wrote, composite numbers indeed suddenly come to a halt when they get larger and larger, until the largest composite number appears (4), but prime numbers just continue increasing 🌞and increasing (3, 2), until the largest prime number appears! Way beyond the last composite number (4), in other words, there are many prime numbers (3, 2, 1).

...Prime numbers become more frequent as they increase (I said in my manuscript this could be the case). 4 is the last composite number. Then there are three prime numbers in a row (3, 2, and 1, the last three prime numbers).

...Numbers get bigger from left to right.

(b2) As I wrote, both number lines are read from left to right. Numbers get bigger from left to right. However, let's look at the number line for positive numbers, from right to left. What does it mean?

...As I said: You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe. Both are correct; one on its own, is false.

...If, for example, you start by counting what exists in the universe (1 eraser, 1 car, etc.), you have a universe of unknown size. If you start with 1 universe (in other words, we know the size: it is 1), then it is not clear where the other numbers are (the positive numbers less than 1, for example) (…and yet, all numbers are inside/part of the universe).

...**If you count from 1 universe, where is the number 0.9 for example? Where is the number 0.2?** 0.9 means 9/10 (it means 90%). Where is 90% of the universe? 0.2 means 2/10. It means 1/5. It means 20%. Where is 20% of the universe? If 0.9 is in the universe, 0.2 cannot be in the universe (the universe is 1). If 0.2 is in the universe, 0.9 cannot be in the universe. Not all positive numbers less than 1 can be in the universe at the same time (if you count from 1 universe).

...**(In effect, on the number line for positive numbers, we see that positive numbers less than 1 are, only on the left-hand side).** As I said, you can start from inside the universe and count things that exist inside the universe. **Positive numbers less than 1 are found only if you count from inside the universe. If you count from 1 universe, the numbers must get bigger than 1.**

...Again, let's look at the number line for positive numbers, from right to left. What does it mean? If you count from 1 universe, where are the numbers greater than 1?

...If you start with 1 universe, the numbers are counting how many parts the 1 universe can be divided into.

...We start with the last prime number, 1 (positive infinity).

...Numbers get bigger and bigger until they reach the largest number. The universe cannot be parted/divided more. (As I said, all numbers must be inside the universe. So we're talking about the largest number, inside the 1 universe. For example, counting from 1 universe, 999,999 is bigger than 1).

...As I said: You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe. Both are correct; one on its own, is false. Together they make the number line for positive numbers.

...What do the numbers mean (for example: 2, 5, and 5.5), counting from 1 universe?

...Counting from 1 universe: 2 means the universe in 2 parts (equal or unequal parts). 2 is bigger than 1.

...2 is also smaller than 1, because 2 is inside the 1 universe.

...As I said the number lines are read from left to right. Numbers get bigger from left to right.

...Counting from 1 universe: 5 means the universe in 5 parts (equal or unequal parts). 5 is bigger than 2.

...5 is also smaller than 2, because 5 is inside 2 (meaning the universe in 2 enormous parts, can be broken into 5 parts, for example). As I said, if you start with 1 universe, the numbers are counting how many parts the 1 universe can be divided into.

...(I said 2 enormous parts. I said the parts can be equal or unequal. It can be for example, 1 enormous part, and 1 small part).

...(The universe in for example 2 parts, is not the same as 1 universe. $x \neq y$. $1 \neq 2$.)

...Counting from 1 universe: 5.5 means the universe in 5.5 parts (equal or unequal parts). This means denying the existence of the missing 0.5 part (there are actually 6 parts). 5.5 is bigger than 5.

...5.5 is also smaller than 5, because 5.5 is inside 5 (meaning the universe in 5 enormous parts, can be broken into 5.5 parts, for example (denying the existence of the missing 0.5 part).

...Could one say for example, 5.5 means denying (random example) the existence of 99.5 parts? No. Why should it mean denying the existence of a missing 0.5 part? For example, one could also say the universe in 5 enormous parts has the number 4 inside it? As I said, if you start with 1 universe, the numbers are counting how many parts the 1 universe can be divided into. Counting from 1 universe, 4 is not inside 5 (the universe in 5 enormous parts, can't be broken into 4 parts. If the universe in 5 enormous parts can be parted/divided further, it must be a number greater than 5).

...5.5 means denying the existence of the missing 0.5 part.

...Counting from 1 universe: numbers get bigger and bigger until they reach the largest number. The universe cannot be parted/divided more.

Let's talk about the largest number.

...I believe it is a prime number.

8. Cantor was wrong

Cantor was wrong. He said the set of integers is countably infinite; he said the set of real numbers is uncountably infinite.
...That statement is totally wrong.
...Henri Poincaré (1854-1912) said Cantor's theory of the mathematical infinite was "a grave mathematical malady, a perverse pathological illness that would one day be cured." It is time to do that.

Let's summarize what Cantor said:

...(1) There are an infinite number of infinities.
...(2) Some infinities are larger than others.
....(3) The infinite number of real numbers is bigger than the infinite number of natural numbers.
...(4) There are more real numbers between zero (0) and 1, than there are integers between 1 and positive infinity.
...(5) You can count the infinite number of natural numbers that exist. You can count the infinite number of integers that exist (in other words, the set of integers is countably infinite).

...(A set is a group of numbers).
...(In this context, countable means the numbers can be put into a list of infinite size). A set is countable if: (a) the set is finite; or (b) the set shares a one-to-one correspondence with the set of positive integers. The set of positive integers is countable. The set of positive integers is infinite. (In other words, the set of positive integers is countably infinite). Infinite sets may be countable or uncountable.
...You can't count the number of real numbers that exist because they are so numerous -- that even a list of infinite size -- can't contain them (in other words, the set of real numbers is uncountably infinite).

Several comments need to be made.

All of it is incorrect ((1), (2), (3), (4), and (5)).

This is correct:

(1) There is only one infinity: those of real numbers, which includes all numbers that exist.

(2) Infinity is infinity, and it is always the same size. In fact, it is a number, 1.

(3) The universe is infinite. Is anything else infinite besides the universe? The universe is everything that exists. There is nothing else. Only the universe is infinite.

(4) Zero (0) is not a number, so you cannot correctly claim there are more numbers between zero (0) and 1 than there are integers between 1 and positive infinity. Asking how many numbers are between zero (0) and 1 is like asking how many numbers are between chair and 1.

(5) All sets of numbers are countable. There is a finite number of numbers.

Some more comments on what Cantor says:

(1) What Cantor did, was to show an "infinite" list of real numbers, then he pointed to some numbers which were not on the "infinite" list. He said this meant real numbers are so numerous, you can't count them all, not even with an "infinite" list (the "infinite" list he showed).

I say, if you can think of numbers, which are not on an "infinite" list, then it doesn't mean there are so many numbers, you can't even count them all on an "infinite" list.

It means what you said was an "infinite" list was not an infinite list.

It's like showing "all the cards", and someone has a card up their sleeve -- no wonder they have a card up their sleeve, they didn't in fact show all the cards.

Cantor never showed an infinite list.

As I wrote, only the universe is infinite.
The universe is everything that exists. There is nothing bigger than the universe.
As I said, if you can find something bigger than what you thought was the biggest, then what you found before wasn't infinity.

The universe is everything that exists: all numbers, the words written now, thoughts (for example, Cantor's wrong idea that there are an infinite number of infinities), etc.

In fact, I showed -- all -- the numbers that exist. It, is, possible to show all the numbers that exist. I showed the correct number line. All numbers are real.

(2) This comment has to do with Cantor's continuum hypothesis.
(a) The continuum hypothesis says there is no infinite set (a set is a group of numbers) that is both bigger than the infinite set of integers (examples of integers are: -5, 0, 4) and smaller than the infinite set of real numbers (examples of real numbers are: -4, √2, 16.8).

> ...There are an infinite number of numbers.
> ...There are an infinite number of real numbers.
> ...There are an infinite number of integers.
> ...There are an infinite number of natural numbers.
> ...Cantor says the infinite number of real numbers is bigger than the infinite number of natural numbers. (In other words, there are more real numbers than natural numbers).
> ...Cantor says the infinite number of natural numbers is the same as the infinite number of integers (in other words, there are as many natural numbers as there as integers). He says the infinite number of natural numbers is also the same as the infinite number of rational numbers (in other words, there are as many natural numbers as there are rational numbers).

The continuum hypothesis says there is no infinite set between the infinite set of integers and the infinite set of real numbers (as stated above). Cantor says there are as many natural numbers as there as integers. He says there is no infinite set between the infinite set of natural numbers and the infinite set of real numbers: there is no infinite set that is both bigger than the infinite set of natural numbers (examples of natural numbers are: 4, 5, 6) and smaller than the infinite set of real numbers. In other words, he says there is no infinite set of numbers between $\mathbb{N}$ and $\mathbb{R}$.

I say, there is a finite number of numbers.

All sets of numbers are countable.
There is a set of numbers between $\mathbb{N}$ and $\mathbb{R}$. I have broken the continuum hypothesis.

(See the next book, where I break the spacetime continuum! 🌞)

Let's look at some vocabulary.
...I say there is a finite number of real numbers. (As I wrote, real numbers are denoted by $\mathbb{R}$). Real numbers are, all, existing numbers. Numbers include positive and negative numbers; there are no other types of numbers. (For example, "imaginary numbers" are not numbers). (Unreal numbers don't exist. Simply by being a number, a number exists and hence is real). All numbers are real (examples include -4, √2, 16.8).

> ...This is not how real numbers are conventionally defined: (a) real numbers are said to include all rational numbers and all irrational numbers; (b) real numbers don't include imaginary numbers. In my view, if imaginary numbers are indeed numbers then they are included in real numbers. (But "imaginary numbers" are not

numbers. Numbers include positive and negative numbers; there are no other types of numbers). Real numbers are all existing numbers, I say.

...I say there is a finite number of integers.

...Sometimes whole numbers are defined as including only positive integers (1, 2, 3…), and not negative integers (-1, -2, -3…). Sometimes zero (0) is included as a whole number. Zero (0) is not a number. Integers are numbers that are not fractional numbers. The word integer comes from Latin, meaning "whole". Negative integers are negative whole numbers (-1, -2, -3…); positive integers are positive whole numbers (1, 2, 3…). Negative numbers copy positive numbers but are negative.

...I say there is a finite number of natural numbers. (As I wrote, natural numbers are positive integers (positive whole numbers) (1, 2, 3…), denoted as $\mathbb{N}$).

...Sometimes natural numbers are defined as including the number zero (0).

...As I wrote, zero (0) has been defined as a number with certain characteristics: it is an even number (!). It is an integer! It's the only integer that is neither positive nor negative. It's neither a prime number nor a composite number (I agree zero (0) is neither a prime number nor a composite number, because zero (0) is not a number).

...I say, natural numbers don't include the "number" zero (0). Zero (0) is not a number. Natural numbers are positive whole numbers (1, 2, 3...).

...It is said there are an infinite number of rational numbers. Cantor says the infinite number of natural numbers is the same as the infinite number of rational numbers (in other words, there are as many natural numbers as there as rational numbers).

...I say, there is a finite number of numbers.

...Let's talk about rational and irrational numbers.

...Convention says natural numbers are included in integer numbers; integer numbers are included in rational numbers; rational numbers are included in real numbers; real numbers are included in complex numbers (complex numbers deal with imaginary numbers); complex numbers are included in hypercomplex numbers (hypercomplex numbers deal with imaginary numbers), etc. Hypercomplex "numbers" were "discovered" in the 19th century. Will more numbers be discovered? No.

...Any number that is not a real number is not a number. For example, complex and hypercomplex "numbers" are not numbers.

...Numbers include positive and negative numbers; there are no other types of numbers).

...As I wrote, a number/some numbers, didn't suddenly start existing later; nor did any number ever cease to exist. I believe all numbers came into existence at the same time.

...Convention says rational numbers are numbers that can be expressed as fractions of integers (for example 1/3). It is said 4, for example, is a rational number because it can be expressed as a fraction of integers (4/1). (I say, whole numbers are whole numbers; they are not fractions).

> ...Convention says irrational numbers are all real numbers that are not rational numbers; irrational numbers cannot be expressed as fractions of integers; the decimal number goes on endlessly without repeating. Some people ask whether irrational numbers might be endlessly repeating decimal numbers and we are unaware of it.
>
> > ...I asked whether irrational numbers and repeating decimal numbers are really endless -- I think one can debate it either way.
> >
> > ...I asked, could it be possible to express irrational numbers (for example √2 (meaning 1.4142…)) as fractions of integers (we just don't know how), even if the decimal numbers go on endlessly without repeating?

Let's return to the continuum hypothesis.
Cantor says there is no infinite set of numbers between $\mathbb{N}$ and $\mathbb{R}$.

I say, there is a finite number of numbers.

All sets of numbers are countable.
There is a set of numbers between $\mathbb{N}$ and $\mathbb{R}$.

> ...I showed the correct number line (number lines, there are two of them) (one for negative numbers, one for positive numbers).

If you cover the negative number line for negative numbers, then the positive number line for positive numbers is an example of a set of numbers between $\mathbb{N}$ and $\mathbb{R}$.
The set of positive numbers is both bigger than the set of natural numbers (positive whole numbers), and smaller than the set of real numbers (all numbers), thus breaking the factually incorrect continuum hypothesis.

(b) It is said the continuum hypothesis was proven to be impossible to prove or disprove. It is said this was proven by Gödel and Cohen. Gödel (in 1940) showed the continuum hypothesis can't be disproved. Cohen (in 1963, 1964) showed the continuum hypothesis can't be proved.

"Mathematics" cannot "show" anything. It's factually incorrect.
"Mathematics" is built on mistakes. It can never lead to a proof. As I said, a bit like a card game, and to win, you invent a new rule.

How does anyone know anything is truly correct?
...As I wrote: there is total certainty that there is something. So we have one truth. Is the rest belief? The manuscript proposes to be correct.

(3) Cantor said there are an infinite number of infinities.

This is wrong.

There is only one infinity: those of real numbers, which includes all numbers that exist.

I asked, what would mathematics look like without the error of including the number zero?

…I said, all numbers would exist, from negative infinity (-∞) to positive infinity (+∞), without the break in the middle with the number zero (0). Zero (0) is not a number.
...As I wrote, mathematics depends where you start. You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe. If you start by counting what exists in the universe, you have a universe of unknown size. If you start with 1 universe, we know the size: it is 1. It is always 1.

...Infinity = 1. (There is nothing bigger than the universe). The universe is infinite.
...Inside the 1 infinite universe are all the numbers.
...I said there is only one infinity: those of real numbers, which includes all numbers that exist.

...What about negative infinity?
...Negative numbers copy positive numbers but are negative.
...Negative numbers can mean subtracting from the universe. For example, universe – universe (universe minus universe).
...Only the universe is infinite. The universe is everything that exists: all positive numbers, all negative numbers, the correct number line, wrong number lines, thoughts, wood, etc.

...Mathematics depends where you start. You can start from inside the universe and count things that exist inside the universe; or you can start from 1 universe.

As I wrote, infinity is infinity, and it is always the same size, 1.

...In that case, does the size of 1 change?

...If the size of 1 changes, is Cantor right? He said, some infinities are larger than others -- is that then correct?

...I answer: Cantor is wrong. There is only one infinity: those of real numbers, which includes all numbers that exist.

...As I wrote, the size of the number line for positive numbers does not expand, or contract. (Also, the size of the number line for negative numbers does not expand, or contract). A number/some numbers, didn't suddenly start existing later; nor did any number ever cease to exist. I believe all numbers came into existence at the same time.

...Does the size of the 1 infinite universe change? As I wrote, the total number of things that exist in the universe might be changing or not, increasing or decreasing. ("What exists" might be changing…Still, all that exists, is the universe). Something cannot be more infinite, or less infinite. It is either infinite, or not. The universe is everything that exists; nothing is bigger than the universe. The universe is infinite.

9. Let's talk about negative numbers.

Negative numbers exist. They are part of the universe. However, the two number lines never meet. It is not possible to do anything with one and the other. You can mistakenly try to make the two number lines intersect somewhere. It's incorrect. The two number lines never met, are not meeting, and will never meet.

10. Is mathematics like faith, like religion?

Is it your math against my math?

...Is mathematics like faith, like religion?...There are many mathematical theories; any one of them might be correct? The correct one might be a theory no one has thought of yet? The correct one might be a combination of theories?...There might not be a correct theory? There might not be any truth, about anything (mathematics, or other)? The truth changes? The truth is subjective?...Assuming truth exists, might one accidentally or intentionally bump into truth, a truth? Perhaps even if truth exists, it is impossible to discover any truth?

(a) If mathematics has to do with truth, how do you know which theory/theories/future theories, to believe? Do you believe in the one that is most popular, the one that everyone says is right? Do you believe the one your parents believe in? Do you believe the one that seems most logical to you? Do you use your gut feeling? Intuition? Do you blindly believe your mathematics teachers? Do you choose the one that seems to be the truth, the whole truth and nothing but the truth? Do you leave it to famous mathematicians to decide what is correct in mathematics?

(b) If mathematics has nothing to do with truth, anything goes (for example, someone might argue that for mathematics to be mathematics it cannot be self-contradictory; someone else might argue that it can be self-contradictory; someone might argue mathematics cannot be defined; someone else might argue that it can be defined). If mathematics has nothing to do with truth, do you then choose to believe in the mathematical theories (for example, calculus, topology and fiber bundles) that seem the most fun, in the same way one would choose a favorite card game with fun rules?

Is it one math religion against another math religion? Choose your religion?
Is it one math belief against another math belief?

Is it like that hand game, some children are taught: you put your hand in the center, someone puts their hand on top, another hand is put on top, you put your hand on top, someone else puts their hand on top, etc., you keep trying to put your hand on top...Like endless discussions/arguments about beliefs, etc.?

The manuscript proposes to be original, important and correct.

As stated, the manuscript is necessary and sufficient to understand mathematics.
As stated, if you figure out prime numbers, then you figure out the rest of mathematics.

11. Plot twist!

If mathematics can be defined any way one likes, then any invented rule is welcome; if mathematics has to do with truth, then it is not ok to invent any rule one likes. Does mathematics have anything to do with truth?

I said, this manuscript will show the truth about prime numbers, which as a consequence shows that a lot of statements in "mathematics" are false.

I said, mathematics is as simple as a Kinder egg (the chocolate that has a nice surprise inside).

I said, it's not true that mathematics is difficult. It's as easy as opening a Kinder egg. It's sweeter than opening a Kinder egg.

What's inside mathematics? Democracy? (Democracy in Greek means "rule of the people").

Shall we vote? Is truth whatever the majority says it is?

For those who believe: Is God democratic?
For those who believe: are the gods democratic?

Again,

1. <u>Statement #1</u>

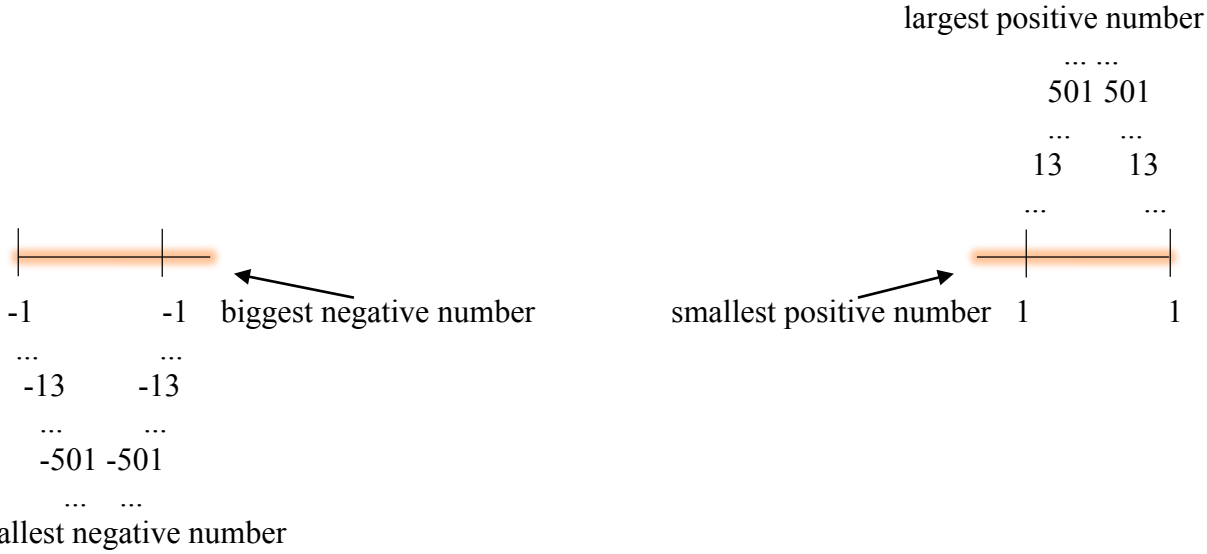
The number of prime numbers is finite.

Here is what I think: here is a list of positive prime numbers and positive composite numbers from smallest to biggest.

(1, 2, 3, 4……..4, 3, 2, 1). In the middle is the largest number. It is bigger than infinity. Infinity = 1.

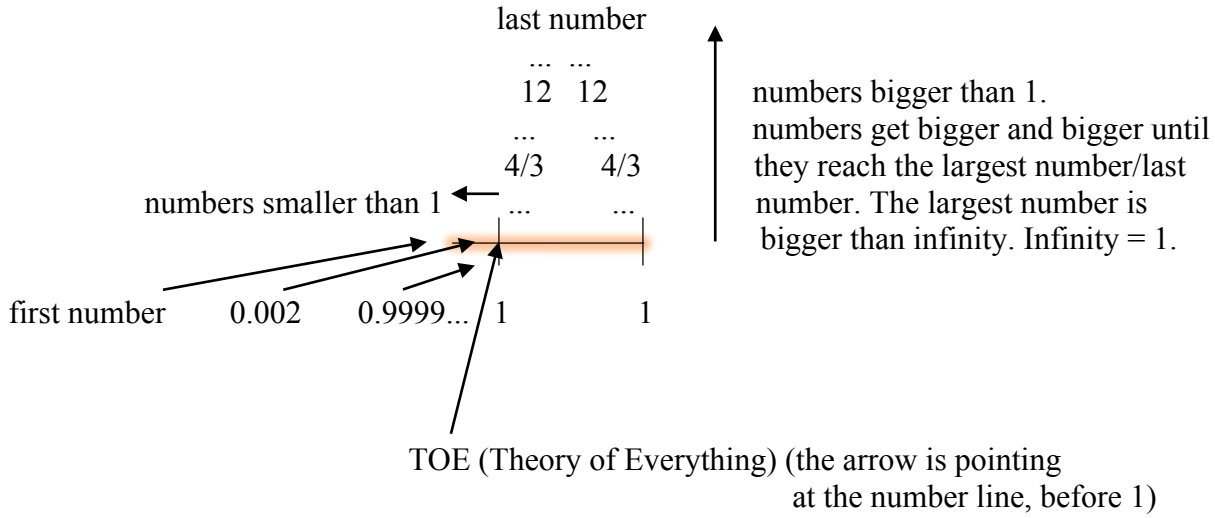
In other words, here is the correct number line (number lines, there are two of them). The two number lines (one for negative numbers, one for positive numbers), in fact never meet. (The two number lines are number segments, not lines. A segment is finite; a line is endless in two directions. We'll continue using the term number line, since it is understood.) (The pictures are not drawn to scale. Also, the pictures have a pyramid-like shape; actually, all numbers are on the number line).

Here are all the numbers that exist in the universe:



There is a finite number of numbers.
The number of prime numbers is finite.

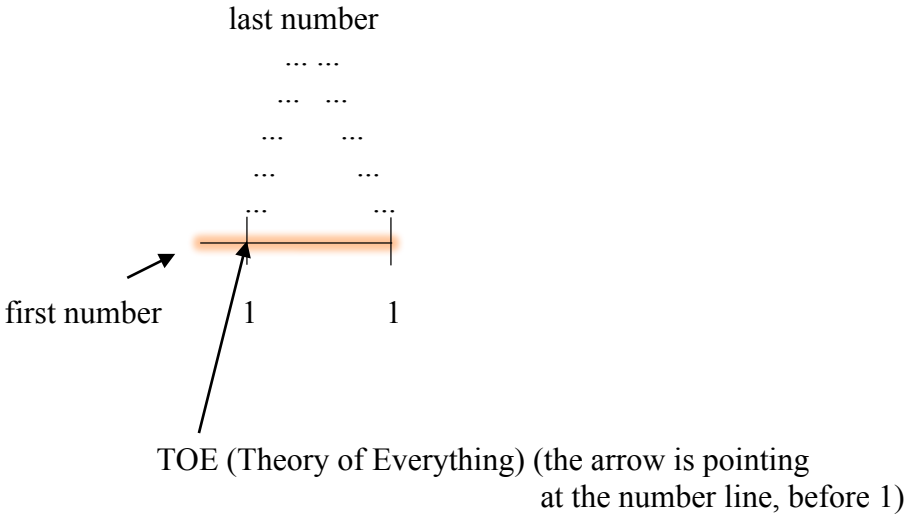
I find positive numbers more interesting. Here are all the positive numbers that exist.



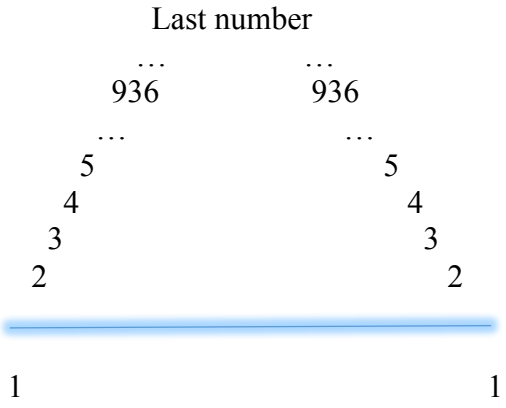
0.9999... means repeating the single digit "9" forever. The arrow (from 0.9999...) is pointing at the number line, before the TOE (Theory of Everything).

0.002 is smaller than 0.9999... The arrow (from 0.002) is pointing at the number line, close to the start of the number line.

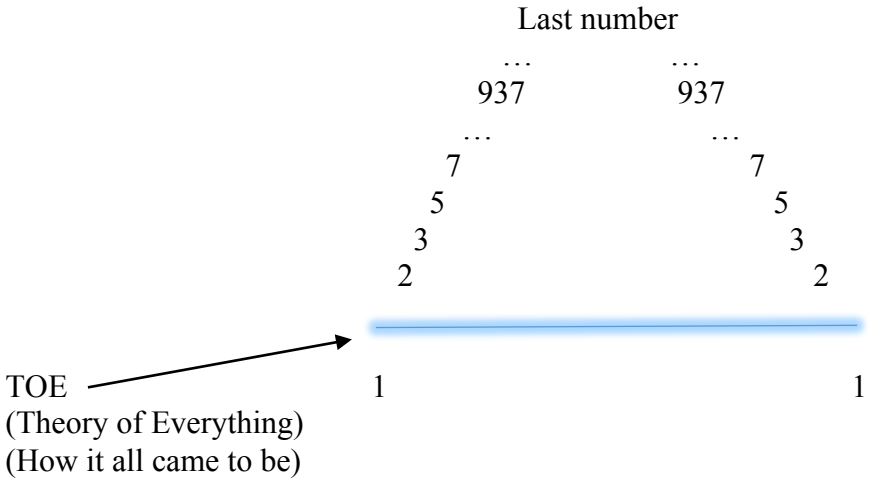
In other words,



I find positive whole numbers more interesting. Here are all positive whole numbers.



Here below are all positive prime numbers.



2. Statement #2

It's not true that some infinities are larger than others. Infinity is infinity. There is only one infinity: those of real numbers, which includes all numbers that exist. The others are not real infinites/they're fake/they've been cut. Infinity = 1.

3. Statement #3

1/3 = 0.3333… (that means 0.3333…etc.)
2/3 = 0.6666… (that means 0.6666…etc.)
1 = 1 ≠ 0.9999… (that means 0.9999…etc.)

(there is something missing)

That thing that is missing is the TOE (Theory of Everything).

1 ≠ 0.9999…

→ There is something missing at the end of those 9's to make it equal to 1, and that is: perfection (nothing missing).