EVOLUTION OF NUMBER TO PHYSICS THROUGH KUCWENGA:
"Why Primes Persist in Nature!"

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ABSTRACT:
This paper introduces Nembelo a branch of mathematics dedicated to the study of the *behavior* of numbers; from Nembelo I derive a novel function, the $A_n()$, which adds a number n to itself through a process called *kucwenga* **(delayed-summation factorization**). Operating primarily on natural numbers (especially $n = 1$), the function reveals intrinsic patterns in the behaviour of numbers that have previously been treated only philosophically. By following the self-unfolding of 1 under $A_n(1)$, a deterministic sequence of Fundamental Numbers (**FN**) emerges naturally. *It presents the first explicit attractor in any self-referential additive process on natural numbers*.
This sequence also provides a rigorous mathematical bridge from pure number to geometry, cosmology, theology, and the transition from metaphysics to observable physics. The work demonstrates that mathematics itself can talk directly to ontology, metaphysics and the concept of "The One". It thereby supply a minimum, self-contained foundation from which broader unification of mathematics, physics, biology, theology and sociology becomes possible.

Keywords: Nembelo, $A_n()$ function, *kucwenga, Platonism, conjecture, behavior of n, return to itself, independent existence of numbers*.

KEY DEFINITIONS:

Nembelo[1]: The systematic study of the intrinsic behavior of numbers. Nembelo is not numerology but one may call it *true-numerology* because of its rigor and self-consistency and commitment to letting numbers reveal their own behavior through the $A_n()$ function and kucwenga process. .

[1] Tshabalala, Prince Sizwe. 2023. ISINTU: Recovering Ancient Scientific Language vol1 | ABAKHI BE AFRICA Institute of Spiritual Science

Number: A fundamental distinction – the primordial that differentiates itself without diminishing.

Mathematics: permanent relationships of fundamental distinctions.

GOD: One Source of All things[2]; ruler of all things, prime law giver and judge over all things.

The ONE: The completely simple, singular, *mathematical* source of all that exists, emanating all numbers, beings and physical world without diminishing itself[3].

Metaphysical: elements or realities that exist prior to physical elements.

12-Attractor: The unique fixed point in Nembelo where $A_n(12) = 12$; the vortex which all composites > 12 converge while primes > 12 orbit outward.

KEY MISCONCEPTIONS:

- Nembelo is not a redefinition of formal math or math in general but an extension of math to metaphysical, ontological domains. Just as mathematical physics is not a redefinition of math but it is an extension to physical domain.
- The claim is of unification framework breaching, numbers, geometry metaphysics, physics and not pure math.
- The claim confined within this thesis is not of the proof of GOD but is that number under $A_n(1)$ **reveals** the concept of GOD as an intrinsic mathematical reality within Nembelo and thus validates the concept to be mathematically true.
- *Symbolic-derivation* of equations, numbers and even of the concept of GOD is not a lessor or vague category but it is a distinct and legit mode of mathematical validation[4].

1. **INTRODUCTION**

[2] Deuteronomy 6:4 (New International Version NIV)

[3] Plotinus. Enneads V.1.9. Translated by A. H. Armstrong. Loeb Classical Library. Cambridge, MA: Harvard University Press, 1966-1988.

[4] Imre Lakatos. Proof s Refutations (1976), *argues mathematics advances through a logic of proofs and refutations in which symbolic, structural and intuitive argument play a legitimate and creative role, often preceding (and guiding) stricter formalization*. | also. J. Brown. Proof and Pictures (1997).

1.1. The ontology of numbers is a central debate in the faculty philosophy of mathematics (phillmath), primarily between Platonism (which holds that numbers exist independently of the human mind) vs. Formalism/Fictionalism (which treats numbers as useful fictions or formal symbols). The study of the $A_n()$ function and the resulting Fundamental Numbers (FN) sequence provides compelling evidence that tips the balance toward the Platonist position: **numbers possess intrinsic independence**.

1.2. Number is not merely a scalar quantity or counting unit. Formal mathematics often treats numbers in this limited way, but Nembelo reveals that numbers are also fundamental distinctions. In particular the 1-Conjecture and its tautological nature, demonstrate that mathematics is far more than measurement. The, study of Platonic solids, for example, is math though no measurements are involved initially; but permanent relations of fundamental distinctions.

1.3. A key insight of this work is the discovery that numbers can be added to themselves. This operation, captured by the novel $A_n()$ function, differs fundamentally from ordinary addition (n + n). It allows us to study the intrinsic inputs. Through the process of *kucwenga* (**delayed-summation factorization**), $A_n(1)$ generates a deterministic sequence of fundamental numbers that bridges pure mathematics to geometry, constants, and the transition from metaphysics to observable physics.

1.4. This framework shows that $(n + n) \neq A_n(n)$. the $A_n()$ is not redefinition of standard addition but an extension of the concept of addition to its most fundamental interpretation. In the same way, Nembelo is not the redefinition of mathematics but an extension of its domain into metaphysical and mathematical territory. It supplies the background from which formal theories (set theory, category theory, etc.) can be understood as emergent structures.

1.4.1. **SAME n DIFFERENT INSTANCES:** To understand the difference between (n + n) and the $A_n()$ function we have to revisit and extend Georg Cantor[5] math of cardinality and ordinals. Cardinality gives us the quantity of n sequence but ordinals give the place/position of n in the sequence. Thus no two n are the same, in the statement (n + n) = 2n, lets imagine the first n has ordinal of 1 [$n = SO_1$] and the second n is [$n = SO_2$], for their place in the metaphysical plane is not and cannot be the same. If we have (1 + 1), these are two instances of 1. The instances are captured by ordinality. The SO_n refers to special ordinal, and highlights the effect of ordinality of n in similar numbers (n, n) to demonstrate that they are strictly not the same n. Thus the statement, “n added to itself” provokes the $A_n()$ operator and not the standard (n + n); this is because “n added to itself” deals with adding $n(SO_n) + n(SO_n)$ i.e. $1(SO_1) + 1(SO_1)$ it is as adding same instances of 1, which is impossible strictly speaking. Thus the way to “add n to itself” is breaking n through the $A_n()$ process, called kucwenga. Initially “add n to itself” is the same as $A_n(n)$, this is what $A_n(1) \rightarrow A_n(2)$ demonstrates $(A_n(1) \rightarrow A_n(2)) = (1 + 1 = 2)$.

[5] Georg Cantor established cardinality in set theory (1874 – 1895).

But other $A_n(n)$s as $A_n(2)$ the distinction shows, where if 2 was *added to itself* it would be (2+2), but $A_n(2) \rightarrow A_n(3)$, $A_n(-1) \rightarrow A_n(0)$.

1.5. **$A_n(n)$ DEFINITION:** the none standard *delayed-summation*[6] of factors (*k)* of n when *k* transform to p_i.

- $A_n(n) = \sum_{p\ =(1)}^{k} w\ [k\ \ \rightarrow pi\ \ ]\ \ ; b\ = A_n(b)$;

a) Where *k* are factors of n {n = ($k_1 \times k_2$)}. where 'p' is *distilled*[7] k, and if n > 1 then p = prime number.

   i. While, if n = 1, p = 1.
   ii. The distilled k is of the ***atomic form***[8] (p × 1) + (1 × 1), we can just refer to them as p_i. NOTE: there can be as many (p × 1) & (1 × 1) terms, as determined by k of n, as f-step increases. *Atomic-form* = p_i
   iii. And *b* is the sum you get from summation, which is the behavior *b* of $A_n(n)$.
   iv. The *w* is a conditional term *when*, i.e., summation takes place only when the condition is met – thus '***delayed summation'***. [however with p = 1, the condition is already met, the machine works. You would need to satisfy the condition for n > 1.

b) *W[k → p]* = ***kucwenga***; kucwenga is factorization by lowest prime, where k is broken down into prime factors, until all prime factors are of expression p_i ;

   i. Number *b* = n of $A_n(n)$ of the next iteration.

c) $A_n(n)$'s golden rule is that kucwenga is only halted for summation when there are no new k producible in the system after addition operator. In a nutshell the golden rule = *atomic form*. For n = 1: the halt is at (1 x 1) + (1 × 1); and for n > 1: the halt is at some p_i.

1.5.1. **FACTORIZATION THROUGH MULTIPLICATIVE-IDENTITY**

a) Kucwenga initiates by multiplicative-identity expression (n × 1).
b) (n × 1) both n and 1 are factors k of n.

[6] Before summation distilled factors, takes place. [Delayed summation is not standard math because $A_n(n)$ is the hybrid of math & metaphysics.]
[7] Within Nembelo **distilled factors**, are factors that are of prime terms or 1, we get k to be distilled through **kucwenga** process.
[8] Atomic form is the standard understanding of prime numbers in number theory, as primes and 1 are the building blocks of integers.

c) All factors k are further factorized, expressed by their multiplicative-identity until all k is p terms, expressed by multiple-identity.

(REMINDER: p is k, but distilled)

1.5.2. A_n is Sintu word, '**An**aleza', which means to add on outcome!

2. **DOMAIN.** The $A_n()$ is the domain of integer values from (0 to -∞; 0 to +∞). Because we apply the $A_n()$ upon integers, we are justified if we start at -1 to -∞, **a difficult problem looming is**, how do we come back, to (0 to ∞)? It is a miracle in this regard that $A_n(-1) = 0$; so that we can now automatically go from -1 = 0; to, 0 = 1; $1A_n$ = FN; -1→ FN. Meaning that -1 is a barrier.

a) $\{A_n(n) \epsilon Z\}$, Z is Integer numbers
b) Metaphysical Domain

2.1. Note: any n where A_n is operated is considered natural n because the function cannot operate in emergent number n. i.e. the $A_n()$ function adds n to itself, this by logic requires that the n be in its purest state, for e.g. if 1 is of binary system, the 1 stands for 'on', thus then there is another concept attached to 1 other than the natural concept of 1. For this reason emergent n as in binary numbers are not natural but emergent and as the result the A_n does not operate since n cannot be added to itself because it has guests so to speak.

a) This does not mean that $A_n()$ is only operated on 1 but as stated, it can be operated in any n of integer that is just pure (natural) n and not emergent.
b) The Ramanujan summation or Zeta summation (-1/12) is not treated as fraction but as FN logic, in that (-1) creates through 12, this logic is rendered as, (-)1 creates **in respect** to 12, wherein we note as (-1/12); (/) should not be understood as division, thus, neither a fraction, but as, 'respect to' as in Calculus.

3. **HOW DOES IT FUNCTION?**

3.1. The trick to carry $A_n()$ operation is that you will need to break n in order to be able to add it to itself. You cannot do this with ordinary objects, but we have learnt through physics that what cannot be done in ordinary objects can be done with fundamental objects.

3.2. This is a weird idea I admit, even thinkers find it hard to accept, let alone ordinary people. Numbers have a behavior associated with them, number 0 is the behavior of -1, i.e. $[A_n(-1) \rightarrow 0]$, and number 2 is the behavior of number 1, i.e. $[A_n(1) \rightarrow 2]$, the number 1 is the most fascinating number seeing it is not a behavior of any number.

a) **No number behaves to 1, this to be in alignment with the axiom: *'one exists all by itself and needs no other to exist',* but from it all natural numbers flows.**' [see section 5].

4. **KUCWENGA/DISTILLATION PROCESS**[9]

4.1. 'kucwenga' is a process which $A_n()$ undergoes on a number to derive its behavior, the process of breaking n by $A_n()$ operator is similar to a process of distillation in chemistry; where an element is purified so that base element is retained.

a) For us the base elements are of element p_i as defined earlier, where if n = 1; p = 1. And where n > 1; p = prime number. Both 1 and prime numbers are considered building blocks of all natural numbers. It makes sense then that terms of p are understood as purified base elements of n.

4.2. There are basically two steps in kucwenga, which are (1) factorization steps (f-step) and (2) summation step (s-step). There can only be one summation step but indefinite f-steps.

F-Step 1. We first factorize n to its multiplicative identity e.g. n = (n x 1)

F-Step 2. Factors k (n & 1), are treated as standalone numbers we may also call, *components*, then factorized into their lowest prime-factor, while introducing the addition operator (+) between terms e.g. [10 × 1] = (5 x 2) + (1 × 1); [6 × 1] = (3 x 2) + (1 × 1); (15 × 1) = (5 × 3) + (1 × 1); [24 × 1] = (12 × 2) + (1 × 1), etc. NOTE: the process continues until no new components (factors) in the system, i.e., until p + (1 × 1) [irreducibility of primes and 1].

i. The k terms of kucwenga (f-step) are given by formula, **[f-step (n) = $(2)^n$]**, this means we can always know the number of factors k in each f-step by this formula.

S-Step. $\sum^{k}_{pi = (1)} [p_i]$, (summation of p_i).

4.2.1. Interestingly for composite numbers the kucwenga process is longer than prime numbers, for primes it takes only 3 steps [2 f-steps & s-step].

[see kucwenga examples in section 7].

5. AXIOMS OF 1

[9] In chemistry distillation is the process of purifying a substance, whereby pure substances are extracted from mixture. [Jessica Clifton 'ReAgent' | The Chemistry Blog | July 3, 2024
After distillation in chemistry the element is less than it was before when it was impure. In Nembelo it happens both ways in that for some numbers the distillation process produces less the n but with other numbers more of n.

Seeing 1 is the most fundamental concept of math, for even if you imagine an empty set it still reduces to 1 set, and 0 is the absence of n, so it doesn't count as a number if 1 doesn't exist. Thus therefore, empty-set reduces to, at least 1, zero also reduces to one but 1 reduces to nothing else but itself.

Logical proof: I can ask you how many empty sets are there; you may answer at least, 'only 1'. I can ask, 'how many zeros are there?', you may answer 1 or some n. However I cannot ask how many zeros are 1; that would be nonsensical. I cannot ask if 1 is empty set – that will be nonsensical. The logical proof demonstrates 1's supremacy, giving credence to the axiom:

1. 1 is the simplest thing to exist all by itself
2. 1 needs nothing but itself to be
3. All n = $\sum$ 1s (all natural numbers are summation or subtraction of 1)

- Thus the FN sequence derived from $A_n(1)$ is most fundamental and tells the story of 1 without ambiguity and this is non-trivial.

Axiomatic Proof: 1 is obviously true. 1 is obviously the truth. By observation 1 permeates all fields, spirituality, metaphysics, math, geometry, philosophy, theology, history, sociology, psychology, physically; 1 is true in all these fields and no entity is as true. Therefore 1 is axiomatically obviously true and building block of reality.

THE TRUE 1

5.1. We realize that fundamental 1 cannot have a pair 1 making it (1 + 1) = 2, violating 1, for fundamental 1 is one, all by itself, if then they are two ones? It is no longer a fundamental 1. Fundamental 1 is also called, true-1, henceforth will be referred as (T1). We had a monster of a problem we didn't realize existed, because we didn't appreciate the concept of T1. But the consequence of this problem didn't go unfelt. The schism between mathematics and physics exist because of this unrealized monster of the problem.

5.1.(a). When you can easily conceptualize the initial condition as 1, as in Fibonacci sequence it is eternally difficult to conceptualize the second 1. Because the second must by logic come from the initial condition you have conceptualized. While you have conceptualized 1, how do you derive the next 1 to make (2, 3, 5, 8,…)? So far abstract number sequence is inputted by hand. But the FN fills in the gap. While at that, we hear the echoes of Eugene Wigner, '*of the effectiveness of math in physics it is something bordering on the mysterious and there is no rational explanation for it*'[10]. He meant to solve the problem of the effectiveness of math in physical science it will be by new knowledge not rational in current science and math domains.

[10] Eugene P. Wigner (1960) "The Unreasonable Effectiveness of Mathematics in the Natural Sciences," Communications on Pure and Applied Mathematics 13, no. 1 (1960): 1-14.

5.1.(b). **1-Tautology**:is genuinely stronger and greater than an axiom. An axiom is a statement of truth given specific conditions. While a tautology is an obviously true statement for all conditions, and it is not falsifiable.

Thus: $\Box(1 = 1) \leftrightarrow \Box\mathrm{E}(1)$. The tautology holds necessary because **1 exists independently of any formal systems**, axiom, or other entity. Any world in which 1 fails to equal itself would collapse, *it becomes a meaningless world – a world without the law of identity is a world without mathematics*.

5.2.1-CONJECTURE: 1 *is the sole mathematical object that can be posited as the absolute originator of all mathematical and physical structures - (ToE), without invoking philosophical assumptions. Any alternative object tends towards philosophical assumptions**.***

i. Traditional foundations, such as Zermelo-Frankel set theory (ZFC) with the empty-set, or Peano Arithmetic with 1 as a successor base, offer competing primitives. However I argue that 1 stands alone as the irrefutable origin, as any other object (e.g., sets, categories, or geometric shapes) inevitably reduces to countable attributes, looping back to arithmetic and risking philosophical overreach.

5.2.2.(a). LOGICAL PROOF, drawing from foundational principles:

Argument from Conceptual Isolation (Purity): Consider 1: it is self-identical and conceivable without reference (1 is one). For 2: conception requires duality (two instances + space/relation between them), Similarly a circle requires radius (measurable as numbers) and boundary (countable points). **Thus non-1 objects fail purity, reducing to components of 1**.

i. By induction on naturals, all n > 1 = ∑ 1.
ii. Geometric objects also quantify via integrals/areas ≈ sums of 1's in limits.

5.2.2.(b). Any mathematical object O has properties (e.g., |O| cardinality for sets, dim(O) for spaces). Demonstrating that from formal math to physical math 1 holds true, the only number that does this.

5.2.3. The Primacy of 1 Conjecture:

COROLLARY 1.1. Theories of origins starting from non-1 objects (e.g., strings, loops, or empty-sets) are emergent rather than fundamental, as they import quantifiable features (dimensions, relations) that presuppose arithmetic.

CORALLARY 1.2. 1 is the only object with conceptual purity, coinciding with its essence across domains: mathematically (Peano base), physically (singularity), and metaphysically (Spinoza substance or divine oneness), Religiously (GOD).

COROLLARY 1.3. 1 is conceptually true, numerological true, symbolically true.

5.2.4. 1-Conjecture implication:

$A_n(1)$ is the most true proposition on a unified theory of origins.

6. **AXIOMS OF KUCWENGA**

Preliminary Definitions:

Let $n \in N, n \geq 1$ be a natural number

Let $Comp(n)$ denote multiset of components (factors/multiples).

Let (p) denote a prime number for n > 1 but for n = 1, (the irreducible building blocks).

AXIOM #1: Each natural number (n) contains within it, a number of multiples that constitute it (*components*).

i. Motivation: This is a fundamental theorem in number theory, stating every integer >1 has unique prime factorization. True because primes are building blocks of integers, proven by Euclid's infinite primes and Gauss's uniqueness[11].

- $\forall \boldsymbol{n \geq 2, n = \pi c \in Comp(n) c}$

AXIOM #2: Every natural number can be broken down into its multiples.

ii. Motivation: Direct consequence of axiom 1; factorization is computable as established in elementary number theory.

$\forall \mathbf{n} \in \boldsymbol{N, n}$ *can be fully decomposed into* $\boldsymbol{c_i} \in$ **Comp(n)**

AXIOM #3: These components are whole numbers themselves, with their own prime-factors (*embedded components*); e.g., p = (p × 1).

- $\forall \boldsymbol{c \in Comp(n), c = (p \times 1)m \ (m \in N)}$

[11] C.F Gauss "Disquisitions Arithmeticae" (1801; trans. Author A. Clarke, New Haven: Yale University Press, 1966).

AXIOM #4: Mathematical processes are self-exhausting processes, i.e. a process must continue until it reaches its natural conclusion, namely, the point where no further breakdown is possible; without external intervention and termination.

iii. Motivation: True since it mirrors recursive algorithm in computability theory[12]. True because processes must terminate at irreducible to avoid infinite regress, as in well-founded sets[13].

iv. Formal expression: (kucwenga halting golden rule).

- $\exists \boldsymbol{m} \in \boldsymbol{N}$ such that $\boldsymbol{kucwenga^{m}(n) = kucwenga^{m+1}(n)}$
  And at this step m the distilled components satisfy $\boldsymbol{k} = \boldsymbol{pI}\ with\ \boldsymbol{b} = \sum \boldsymbol{p_i} = \boldsymbol{An}(\boldsymbol{n})$

AXIOM #5: Components that cannot be further broken down into new components are considered distilled, and thus, in their purest form.

v. Motivation: True since grounded in the irreducibility of primes (only divisible by 1 and themselves). True per number theory; once at (p × 1), no new factors emerge, echoing atomicity in algebra.

- **Distilled(c) ↔ c is prime or c = 1**

6.2.(a). **NOTES & EXPLANATIONS:**

i. NOTE: The term *components* as used in the distillation axioms is not used in its classical usage but it refers to single number n of multiples. E.g., in [6 = (3 × 2) then 3 & 2 are independent components].

ii. NOTE: Embedded-component refers to prime-factors of components. E.g., [if 3 & 2 are independent components 6 then (3 × 1) & (2 × 1) are what is meant by embedded-components of 6].

iii. Explanation: Axiom #1 to Axiom #3 is true because every n can at least be expressed by its multiplicative identity factor as [n = (n x 1)].

iv. Explanation: Axiom #4 is true since math is by definition the permanent relationship of distinctions, thus then whenever a process is applied on distinctions; its consequence is outside the control of the agent who applied it.

[12] Hartley Rogers Jr., "Theory of Recursive Functions and Effective Computability" (1967).
[13] Kenneth Kunen, Set Theory: An Introduction to Independence Proofs (Amsterdam: North Holland, 1980).

v. Explanation: Axiom #5 is true since primes are irreducible. For as long as k_i can be broken down into new components then k_i has the potential of turning into a new number. But the irreducibility of primes and 1 curbs the infinite regress of k_i.

6.2.(b). **COROLLARY OF AXIOMS OF DISTILLATION**:

i. Axiom #1 to #3 says every natural number n is a potential, meaning numbers possess potential to be other number, without external number.

ii. Therefore evolution (changing to other forms) is intrinsic to FN numbers.

   a. Since FN numbers are fundamental to reality, it means evolution is a fundamental process of the reality.

iii. Since the axioms of distillation are true this means kucwenga 'the process of distillation' is a process grounded in mathematical logic, therefore its consequences as applied to n is/are mathematical.

   a) Therefore the concept of unfolding n is a mathematical concept.

   b) Therefore $A_n(n)$ function is a valid, rigorous, grounded, formal mathematical concept.

7. **KUCWENGA 1**

7.1.

E.g. if we unfold 24 we get:

$A_n(24) = (24 \times 1)$
$\rightarrow (12 \times 2) + (1 \times 1)$
$\rightarrow (6 \times 2) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$\rightarrow (3 \times 2) + (2 \times 1) + (2 + 1) + (1 \times 1) + (1)^2 + (1)^2 + (1)^2 + (1)^2$
$\rightarrow (3 \times 1) + (2 \times 1) + (2 \times 1) + (2 \times 1) + (1 \times 1) + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2$
$= 3 + 2 + 2 + 2 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$
$[A_n(24) \rightarrow A_n(21)]$

7.2.(a). This demonstrates that the sequence we derive from 1 is not obvious nor trivial, other numbers as 24 devolve, or degrade. 1 is special because it is the only long increasing sequence that can be derived from a number. That 1 is a long increasing sequence of any natural number it is a special thing and requires special attention; it is the testament to the uniqueness of 1. Not only that but it is the evident of the validity of the math of Nembelo – Nembelo is a valid math.

7.2.(b). Remember the $A_n()$ function is b, then derive the next n from previous number b (resulting number from $A_n(n)$ is the behavior of n, expressed as *b*). Starting from -1.

7.2.(c).To apply $A_n(1)$ in a fundamental sense we must transform to negative of 1, i.e., $A_n(1)$ to $A_n(-1)$. Reason: Since true-1 (T1) is unique and source of all n, then T1 is negative to all numbers and objects. This allows $A_n(n)$ to be of integer domain.

7.3. Applying $A_n(1)$, if 1 = T1.

$A_n(-1)$

$A_n(-1) = (-1 \times 1) \rightarrow (-1 \times 1) + (1 \times 1) = -1 + 1 = 0$

$A_n(-1) = 0$;

7.3.(a). $A_n(0)$:

$A_n(0) = (0 \times 1) \rightarrow (0 \times 1) + (1 \times 1) = 0 + 1 = 1$;

$A_n(0) = 1$;

$A_n(1) = (1 \times 1)$ ⟶ f-Step 1

$(1 \times 1) + (1 \times 1)$ ⟶ f-Step 2

$1 + 1$ ⟶ s-step

$A_n(1) \rightarrow 2$ ⟶ answer

$[A_n(1) \rightarrow A_n(2)]$ ⟶ (Final Answer)

$A_n(2) = (2 \times 1) \rightarrow$
$\rightarrow (2 \times 1) + (1 \times 1)$
$= 2 + 1$
$[A_n(2) \rightarrow A_n(3)]$

$A_n(3) = (3 \times 1)$
$\rightarrow (3 \times 1) + (1 \times 1)$
$= 3 + 1$
$[A_n(3) \rightarrow A_n(4)]$

$A_n(4) = (4 \times 1)$
$\rightarrow (2 \times 2) + (1 \times 1)$
$\rightarrow (2 \times 1) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$= 2 + 2 + 1 + 1$
$[A_n(4) \rightarrow A_n(6)]$

$A_n(6) = (6 \times 1)$
$\rightarrow (3 \times 2) + (1 \times 1)$

→ (3 x 1) + (2 X 1) + (1 x 1) + (1 x 1)
= 3 + 2 + 1 + 1
[$A_n(6) \rightarrow A_n(7)$]

$A_n(7)$ = (7 x 1)
→ (7 x 1) + (1 x 1)
= 7 + 1
[$A_n(7) \rightarrow A_n(8)$]

$A_n(8)$ = (8 x 1)
→ (4 x 2) + (1 x 1)
→ (2 x 2) + (2 x 1) + (1 x1) + (1 x 1)
→ (2 x 1) + (2 + 1) + (2 + 1) + (1 x 1) + (1 x 1) + (1 x 1) + (1 x 1) + (1 x 1)
= 2 + 2 + 2 + 1 + 1 + 1 + 1 + 1
[$A_n(8) \rightarrow A_n(11)$]

$A_n(9)$ = (9 x 1)
→ (3 x 3) + (1 x 1)
→ (3 x 1) + (3 x 1) + (1 x 1) + (1 x 1)
= 3 + 3 + 1 + 1
[$A_n(9) \rightarrow A_n(8)$]

$A_n(10)$ = (10 x 1)
→ (5 x 2) + (1 x 1)
→ (5 x 1) + (2 x 1) + (1 x 1) + (1 x 1)
= 5 + 2 + 1 + 1
[$A_n(10) \rightarrow A_n(9)$]

$A_n(11)$ = (11 x 1)
→ (11 x 1) + (1 x 1)
= 11 + 1
[$A_n(11) \rightarrow A_n(12)$]

$A_n(12)$ = (12 x 1)
→ (6 x 2) + (1 x 1)
→ (3 x 2) + (2 x 1) + (1 x 1) + (1 x 1)
→ (3 x 1) + (2 x 1) + (2 x 1) + (1 x 1) + (1 x 1) + (1 x 1) + (1 x 1) + (1 x 1)
= 3 + 2 + 2 + 1 + 1 + 1 + 1 + 1
[$A_n(12) \leftrightarrow A_n(12)$]

7.4. FN: {$-1A_n \rightarrow 0$, $0, 1A_n \rightarrow 2$; $2A_n \rightarrow 3$, $3A_n \rightarrow 4$, $4A_n \rightarrow 6$, $6A_n \rightarrow 7A_n$, $7A_n \rightarrow 8$, $8A_n \rightarrow 11$, $11A_n \rightarrow 12$, $12A_n \rightarrow 12$, $12A_n \rightarrow 12$,…}.

i. Raw FN: {-1, 0, 1, 2, 3, 4, 6, 7, 8, 11, 12, 12, …}

ii. (The arrow (→) means 'transforms' to…)

To visualize the $A_n()$ iterative process, as we have seen it, we use the virtual machine called, phalazanga, 'phalazanga', means a function in Sintu.

The machine starts with the fundamental number 1, which is axiomatic per Peano arithmetic; $A_n(n) = b$; then feeds back b as input (n). The process is recursive and output b becomes input n, in the next iteration.

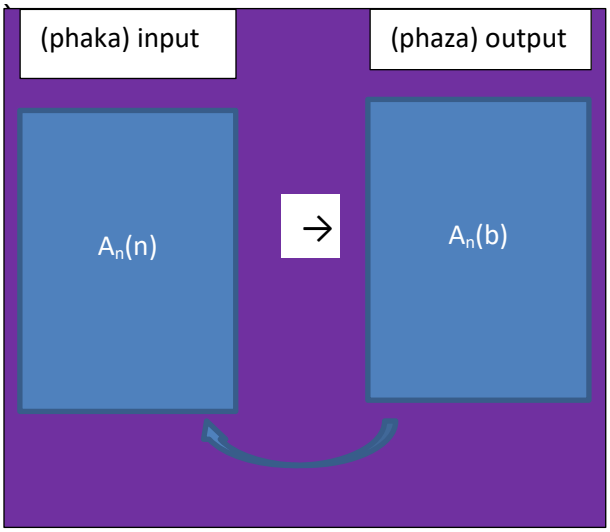


Figure 1

8. ANALYSING FN SEQUENCE: in analyzing the sequence we are guided by the law of identity and tautology 1=1. This commands us to treat every distinction arising in the FN sequence **as unique and emergent property**.

8.1. The Raw Fundament Numbers Sequence (RFNS) {-1, 0, 1, 2, 3, 4, 6, 7, 8, 11, 12, 12, …}, is fascinating, imagine that the count (cardinality) of FN is 12 digits. It would not be surprising if there were no skipped digits and extra digits (-1, 0), but since they are there; it is amazing that the total count of digits is 12. Maybe the last 12 maybe confusing, but you will know soon that the first 12 is fixed and the rest (…) are the same unfixed 12s. So there are 12 numbers if we don't include the skipped digits, and this is not trivial. Amazing!

8.1. The FN structure is symbolically given by -1/12 (starts from -1 and stabilizes at 12).

8.2. The **FN** is divided into basic two parts in 5 parts, *mlando*[14], *mma*[15], and *shali*[16]

a) *Mlando: [-1, 0, 1], [2, 3, 4], [6, 7, 8], [11, 12],*
b) *Mma:*
   i. *Famlando: [12, 12, 12,…]*
   ii. *Shali: emerging numbers/structures*

c. Mma exists dually in (-) and (+) manifestations.
   a) Remember in this case the (-) is the constant c (famlando) and the (+) is the growth (*shali*).
   b) There is a tension relationship in *mma* between *shali* & *famlando*, and we soon seek to explore this tension.

[14] 'mlando' in Sintu means history.
[15] 'Mma' in Sintu means 'absolute'. An(12) is an absolute point in FN, a fixed point in standard mathematics.
[16] Shali is a Sintu word 'sha' + 'li': 'sha' = sudden change, 'li' = point correlation: thus it means sudden change in correlation.

8.2.1 Famlando is the character of *Mma* point and it is in two parts, the *fixed part (famlando)* and the *emerging art (shali)*. Shali is characterized by *famlando* in that constant *c* is constant across transformations.

8.2.1. (a). The 1 FN sequence is in 5 parts [-1, 0, 1], [2, 3, 4], [6, 7, 8], [11, 12], [12, 12, 12,]. And the last part (*mma*) is in 2 parts and divides the FN in two parts. 5 is the harmonic number of the fundamental sequence. And number 2 is the dynamic and transformation number in the sequence.

i. Therefore FN structure = $\frac{1+\sqrt{5}}{2} = \varphi$

ii. *Since mma is famlando + shali it is then* $[(2 + \sqrt{5}) = (2\varphi + 1)]$

a. *'di'* = $2\varphi + 1$ *this is the geometric unit of the interstate of metaphysics and physics. The term 'di' is a Sintu word meaning fundamental material or primordial substance.*

8.2.2. **The Inference or Interpretation of Imiyeqa as Indicating Awareness of FN Sequence.**

8.2.3. This is amazing; numbers 8, 9, 10, 11 relationships drowns the skeptic in me already. One is not allowed to see this pattern as trivial *coincident.* It cannot be trivial, something weird, intuitive is going on with numbers, it is as if numbers know they got to make up for missing numbers. Look at 8 curiously skips 9 & 10 to 11 then 11 to 12. The red numbers are fascinating because they both equal to 19, but notice that, 8 + 11 = 19. So adding 8 (the number that skips) and 11 (the number skipped to) gives you the sum of the two numbers skipped. This is curious because these are not the only numbers that do this. You see? It is as if numbers are aware that they have to stabilize the fundamental sequence – it is just mind boggling.

8.3. {[-1], 0, 1, 2, 3, 4, [5], 6, 7, 8, [9], [10], 11**, 12}.** There are three digits skipped, 5, 9 and 10 and these are the only missing numbers from standard counting numbers – we call them "miyeqwa". There are 14 total digits in the sequence of fundamental numbers. We will look at the possible meaning of skipped numbers as just nothing but conjecture with Judeo-Christian number interpretation or numerology. The FN is the base of all numbers, natural numbers, whole numbers, integers, rational numbers, irrational numbers, *all elements of real numbers*, and imaginary numbers. The fundamental numbers are crucial in contextualizing math and its association with physical universe.

8.4. Now look at it:

8→11 and 10→9 and 9 →8

6.5. You see? The last two skipped numbers indicates something weird about fundamental numbers, these two numbers both digress they don't progress. There is a

fun fact at this juncture; initially I made a mistake with number 8. I missed a 1 in my calculation and had results as 8→10; now since I am only allowed to read the results and infer to the best possible meaning of what the result mean, I interpreted this as meaning that number 10 is the end of the sequence of fundamental numbers. This is because 10 digresses to 9, and 9 digresses to 8, while 8 skips to 10 (my mistake), so it appeared as if the sequence ends at 10 then loops, {8 → 10 → 9 → 8}. Then I thought that the sequential distinction ends at number 10. Now this interpretation was nice because it explained the ten base systems, and the fact that we have ten fingers to count, normally this will not be crucial, however in the theory of GOD this link would be crucial. I was so devastated when I finally saw the error, because as often as possible I try to find errors in the theory. And this time I did find it, and it brought me to tutus and undermined the entire theory – at least I thought it does. I was ready to quit the theory, *for one aught to be always ready to quit their theories if grave logical errors are revealed*. But I didn't have to, because it turned out that the correction made the theory even more consistent that my despair turned into overwhelming amazement of the fundamental numbers. There was a fundamental theoretical problem with the initial interpretation, in that the theory premise on the fact that number 12 is the number of revolution, because it returns to itself, but then for the theory to have value 12 has to be the only number of revolution. But now I have looping or revolution taking place from number 8, this was disharmony for the other reason that 12 is not derived naturally from the sequence of the fundamental numbers, since number sequence terminates at 10. The fundamental sequence posed a problem in that the main actor (12) was not arrived at naturally since 10 digress and terminates the process. I had to put in 12 by hand, as it were, but the correction made the sequence more logical for then it could arrive at 12 naturally and then loop thus terminates.

8.6. It is curious that there are only two numbers in the fundamental sequence that skips, we can call them 'imiyeqa', (skipper). 4,6 & 8,11 are imiyeqa. But I want to point to the weird thing, that 8 skips 9, and 10 both numbers that digress. Now you have seen the consequence of the sequence reaching 9 or 10 that it skips both numbers that regresses to the one that leads to the ultimate number. This is amazing because we see the sequence acting as conscious, it could reach ten and digress or nine but both it skipped.

8.6.1.

1. Imiyeqa = [4 |5| 6] (*this means imiyeqa is 4 & 6 and the skipped number is 5* and
2. [8 |9, 10| 11] (this means "imiyeqa" are 8 & 11 the miyeqwa numbers are 9 & 10.)
    - By a *heuristic* **Principle of Separation PoS**: the sum of imiyeqa = the sum of imiyeqwa for 2 consecutive digits skipped in a sequence.

- The **PoS** split the sum of imiyeqa by equal whole parts or closest to equal whole parts. 10 = 5, 19 = 9 & 10

8.6.2. Imiyeqa reveals the character of awareness of number sequence in that the skipped n is concealed in imiyeqa. We don't know why 5 is skipped the best inference is that 5 metaphysically represents the n of grace or mystery. The pleasant thing is that 5 is not lost but preserved in the system. Why is this so? 5 appear with 12 in uniqueness in Fibonacci sequence Fbs, in that number 5 is the only number whose ordinal and value coincides in the in Fbs.12 also has the same uniqueness concealed in 12 × 12 in the 12^{th} ordinal in the Fbs.

- It is obvious why 9 & 10 are skipped, either it is extreme luck or it is a pro-conscious act somehow embedded in numbers.
- However even if it is not an act of consciousness of FN but the sequence infers awareness. What in cognitive models is called 'proto-awareness'.
- This is the bases of the **AIA** (awareness inference anchor),

9.1 12-CONJECTURE: "*Number 12 is a most fascinating number, it is the last number in the FN sequence, and it is the only number that **behaves to itself***."

$A_n(12) = (12 \times 1)$
$(6 \times 2) + (1 \times 1)$
$(3 \times 2) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$(3 \times 1) + (2 \times 1) + (2 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1)$
$3 + 2 + 2 + 1 + 1 + 1 + 1 + 1$
$A_n(12) \rightarrow A_n(12); [A_n(12) \leftrightarrow A_n(12)]$

The expression $[A_n(12) \leftrightarrow A_n(12)] = \mathbf{\{[12 \leftrightarrow 12]^{\infty}\}}$; We raise the expression to infinite to indicate none-halting nature of the iteration process as per axiom 4. Thus ∞ is symbolic as used in math and is not a number.

a. Intuitively a loop proximate 360˚ angle thus $\mathbf{[12 \leftrightarrow 12]^{\infty}} \rightarrow 360^{\circ}$. I will soon prove it in none trivial ways in paragraph 7.

9.2. from *phalazanga* machine let's define the *loop operator* L(12): $L(12) = A_n(12) \leftrightarrow A_n(12)$

$[A_n(12) \leftrightarrow A_n(12)] = [famlando + shali]^{\infty} = |360°|$

a) Though "*Returning to itself*", is not a formal mathematical expression used in number theory just as the expression, "*the behavior of n*" is not a known formal expression but arises from the constrains of Nembelo interpretation of results of n under $A_n()$. "returning to itself" is grounded within Nembelo given that $A_n(n)$ results in b, and **b ≠ n**, always, **except $A_n(12)$ which results to $A_n(12)$ i.e., b =**

n. Thus within Nembelo system, "*return to itself*", is not ambiguous but clear and defined as (b = n).

9.2.1. **$A_n(12)$ ISOMORPHIC**: 12 under $A_n()$ is isomorphic in this sense: at the step of summation (2 + 2 + 3 + 1 + 1 + 1 + 1 + 1), notice that the distilled factors sum to 12 and also multiply to 12. Here then '+' and '×' are the same.

a) Herein the $A_n()$ justifies itself as to why introduce '+' in the first place from (n × 1)
   a. It is much strange because FN arrives at *Mma* by applying the blind rules of kucwenga, so the fundamental sequence suggest that '+' & '×' are the same.

9.3. Conjecture: Number 12 is a number of rotation/revolution!

9.4. **PROOF OF 12-CONJECTURE:**

$[12A_n \leftrightarrow 12]$ and since the A_n must carry the operation until natural termination then the expression is $[12A_n \leftrightarrow 12A_n] = [12 \leftrightarrow 12]^{\infty} \rightarrow |360^{\circ}|^{\infty}$

a. Now I aim to prove the 12-conjecture by deriving the equation of a circle from the conjecture

$[12 \leftrightarrow 12]^{\infty}$

(x) x_i = initial position
(Δx) x_f = final position

And $[12 \leftrightarrow 12]^{\infty} = [12 \rightarrow 12 \rightarrow 12 \ldots]$
$\therefore [12 \rightarrow 12 \rightarrow 12 \ldots] = [12, 12, 12 \ldots]^{\infty}$. This is a fixed point called *'**Mma***,

b. "Since the first $A_n(12)$ has history $[\ldots, A_n(11) \rightarrow A_n(12)]$ then the first $A_n(12)$ is fixed while the rest are without history $A_n(12) \rightarrow A_n(12) \rightarrow A_n(12)$ (identical histories - *famlando*).

   a. $[(A_n(12)$ fixed $= x_i)$ point origin (***O***); the rest, point final (*F*) $= \{[(x_f)_n]^{\infty}{}_{n=1}\}$

   b. **The 1=1 tautology guarantees the distinctness of each $A_n(12)$** , so that we can have ordinal of each $A_n(12)$ emerging as new numbers in the system.

      i. Therefore, $[A_n(12), A_n(12), A_n(12), \ldots] = [1, 1, 1, \ldots] = [1, 1+1 = 2, 1+1+1 = 3, 1 + 1+ 1 + 1 = 4 \ldots]$.
      ii. $[1 + 2 + 3 + 4 + \ldots]$ = *shali*. (These emergent numbers are treated as novel structures we call *shali.*)
      iii. However *shali* is not from RFNS but is treated as an emergent phenomenon of the FN.

c. The *Mma* then has value 2 because it is defined by 2 constants, one of stability (*famlando*) and the other is of natural growth (shali).

i. This means the *Mma* is (- ; +)
ii. The '-' part (*famlando*) is fixed, and *shali* is '+' meaning natural growth (1, 2, 3, 4, …).
1.

d. The Ramanujan analytic summation ζ(-1) fits naturally here since *famlando* is the increasing natural sequence (1, 2, 3, 4, …) and also ζ(-1) = 1 + 2 + 3 + 4 … = $\frac{-1}{12}$
i. ζ(-1) = FN (continual analyses of 1+1 + 1 +,… of Ramanujan's *continual analyses* = Fundamental number's *continual analyses.*

b. Having accepted that each $A_n(12)$ is unique due to 1=1; then we accept the consequences.

- Then we can understand the kucwenga process from fixed (x_i) to free $(x_f)_n$ as a distance between two points, since distance is really numbers between two points. Since the process is fixed then we can understand it as the value 1.
- With this we understand that the position of $(x_f)_n$ is always equal to the origin because the sequence terminated, so now $A_n(12)$ must pack next to each other but equidistant from origin.

ii. Thus then yields a unit circle.

Figure 3

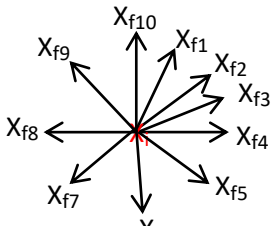


Figure 2

$[(x_f)_n]^{\infty}_{n=1}$

iii. Therefore we have naturally r (radius) from $[12 \leftrightarrow 12]^{\infty} = x + y^2 = r^2$ $(x = y^2 - r^2)$

9.4.2. **12th ROOTS OF UNITY**: the 12th roots of unity are the complex numbers satisfying: $\mathbf{z^{12} = 1.}$ They are given by $\omega_k = e^{2\pi ik/12}, k = 0, 1, 2, \ldots, 11$

Each successive root rotates by a fixed angle: $\theta = \frac{360°}{12} = 30° \; or \; \frac{2\pi}{12} = \frac{\pi}{6}$

Verification: (exact values):

k = 0: 0°
k = 1: 30°
k = 2: 60°
…
k = 11: 330°
k = 12 ≡ k = 0: 360° (full closure: returns to 1)

- Thus:

12 × 30° = 360°
This establishes that 1 is the number of full rotations or structural closure not merely symbolically, but as the order of the cyclic group that tiles the circle into 30° sectors. The internal 5-fold coherence and φ-structure of FN provided the continuous geometric proportions that embed this discrete 12-fold symmetry.

b) Corollary: $A_n(12)$ maps to 360° via the natural action of the 12^{th} roots of unity on the complex plane, confirming the 12-Conjecture within both Nembelo and classical mathematics. This demonstrates that the special status of 12 is not arbitrary human invention but an intrinsic feature of the number system itself

9.5. **Therefore internally proven! Number 12 is a number of revolution/rotation! $([12\leftrightarrow12]^{\infty} \rightarrow|360°|^{\infty}$**

9.6. Now because we (human mind) could not have assigned this character to 12, it must be intrinsic to 12.

i. **Therefore within Nembelo framework number 1 & 12; by extension numbers exist as an independent mathematical reality!**

10. **12-THEOREM EVIDENCE:**

10.1. Since we have proven 12-conjecture within Nembelo, let us look at evidence to support this conjecture, from cosmos, to geometry, to biology, to arithmetic. If we find such evidence then we connect the conjecture of 12 with actual properties of the universe thus grounding the math beyond mathematical frame.

10.2. COSMOS:

a) Heavenly bodies that course objects to revolve around them are spherical (planets, stars, etc), and a sphere is = 4π; and 4π = 12.6 the 6 after the comma represent the 6 point perspective for 3^d object. Thus 12 is associated with revolution or bodies in a form of revolution as a sphere is.
b) There are 12 phases of the moon[17]

[17] The lunar cycle consists of 12 distinct phases observable over approximately 12 years signs (see, e.g., Ridpath 2018, The Stars or any standard astronomy textbook).

c) There are 12 zodiac signs

10.3 GEOEMETRY:

d) Revolution = 360° [geometry]
360°/12 = 30°. Therefore 12 x 30° = 360°
Where 30° is the initial angle on a straight-line, we see multiplying initial angle by 12 gives us 360° angle of revolution.

e) There are only five Platonic solids the amazing thing is that two of these solids approximate a sphere, i.e. bodies in a form of revolution, they are (1). Dodecahedron (2). Icosahedron
   a. Dodecahedron is a Platonic solid composed 20 vertices and **12 shapes/ polygons**
   b. Icosahedron is a Platonic solid composed of 20 polygons and has **12 vertices**

f) Dodecagonal tiling: A regular tiling with 12-sided polygons (dodecagon) each vertex has a 120° angle, and the symmetry group is 12-fold rotational symmetry.

10.4. BIOLOGY[18]:

g) The 12 vertebrae in human thoracic spine which support the rib cage and facilitate rotations/revolutions
   a. The epitome of biological manifestation is self-evidently humans, the fact that we have 12 vertebrae in thoracic spine facilitating movement is evidence of the 12-conjecture. It can be demonstrated that in the animal kingdom humans has greater degree of rotation ability than any animal. Taking into context our full body, thinking of owls who can rotates their head almost 270˚ in any direction but can't do the same with wings for instant. This is the biological manifestation of the 12-conjecture. How can this be a coincident, if you take into account the previous and following evidence?

h) The 12 pairs of ribs in the human body, which form a roughly spherical cage around the chest.

10.5. BIO-CHEMESTRY[19]: Magnesium (Mg) demonstrates the 12-conjecture, being the 12-fold symmetry element. Magnesium has an atomic number 12, it is an alkaline earth metal. Mg plays a critical role in DNA replication so much that without it the replication process of DNA would be impaired.

i. **CYCLIC NATURE OF REPLICATION**: DNA replication can be seen as a cyclical process, where the helix is unwound, replicated, and then rewound. This

[18] Gray's Anatomy (41st ed., 2015). Standard Human Anatomy
[19] Cowan JA "The Role of Magnesium in Nucleic-Acid and Protein Metabolism |1989

cyclical nature is linked to the concept of rotation or revolution, where the process returns to its starting point, yet with a new generation of DNA.

ii. **REVOLUTIONARY CHANGE THROUGH REPLICATION**: DNA replication can be seen as a process that enables revolutionary change, as it allows for the transmission of generic information from generation to the next. This concept can be linked to the concept of rotation or revolution, where the old is replaced by the new, yet with continuity that preserves the essential characteristics of system.
    a. RNA Primer Synthesis: Magnesium is necessary for the synthesis of RNA primers, which are essential for initiating DNA replication.

iii. **CARBON-12**: true to the 12-conjecture, carbon-12 forms the most stable complex rings than any other known element. While other elements can form complex rings but carbon-12 forms the most stable, enabling the diversity of molecular structures that support life[20].
    a. Carbon-12's stability and versatility in forming complex rings are key
    b. factors in its central role in organic chemistry and the diversity of life on Earth.
    c. Are we to conclude that the fact that carbon-12 is the most crucial element for life as just a mere coincident? Then how many coincident are we allowed before we take the hint nature is hinting on?

10.6. ARITHMATIC:

i) **THE 12TH ROOTS OF UNITY[21]**: are the complex numbers that, when raised to the power of 12. Equal to 1. These roots. 1, -1, I, -I, (√3+i)/2, (-√3+i)/2, (-√3-i)/2, (√3-i)/2, (1+i√3)/2, (1-i√3)/2, (-1+i√3)/2, and (-1 -i√3)/2. What is fascinating is that these roots are equally spaced around the unit circle in the complex plane, forming a regular dodecagon (12 sided polygons).
    a. This evidence is solid, verifying the 12-conjecture. Think about it, there are 12 numbers, that when raised to the power of 12, equal to 1. These numbers are special because there are 12 of them and they form a 2π, equally spaced in a unit circle. This is amazing, since this again demonstrates that 12 is a number of rotation or revolution. Another evidence to the 12-conjecture.

j) This geometric configuration exhibits 12 fold symmetry

k) **THE REIMANN ZETA FUNCTION[22]**: The Zeta summation in continual analyses is incredible evidence to Nembelo fundamental numbers the function is the

[20] C. Cowen 1983. "Principles of Stellar Evolution and Nucleosynthesis)."
[21] Carl Friedrich Gauss "Disquisitiones Arithmeticae (Investigations in Arithmetic), 1801
[22] Bernhard Riemann "On the Number of Primes Less Than a Given Magnitude" 1859 | also: Srinivasa Ramanujan 1913

summation of natural numbers in specific condition of continual analyses. $\zeta(-1) = \Sigma[n = 1\ to\ \infty]n = \frac{-1}{12}$ the fact that natural numbers summation valuated at (-1) becomes $\frac{-1}{12}$ is fascinating, knowing that the fundamental numbers are [-1 to 12] and they can be naturally expressed as $\frac{-1}{12}$ is mind boggling unless we understand that the Zeta function evidenced that natural numbers are from fundamental numbers! Why in the world would the summation of natural numbers lead to exact sequence of fundamental numbers? Mind you, fundamental numbers are given to us naturally, we cannot have [-2 to 12] or [13, 14] but numbers are constrained at [-1 to 12] only.

l) **FIBONACCI SEQUENCE[23]:** This is the sequence derived by adding a succeeding number with a preceding number creates a spiral like pattern. This sort of pattern has an angle degree of 1.618 and it is found almost everywhere in nature, from flowers, to rivers, to clouds, to galaxies. Fibonacci sequence (1,1,2,3,5,8,13, …), the 12th number in the Fibonacci sequence is 144, which is a multiple of 12. This is amazing that at the 12th ordinal we find the number is 12x12. Would you say it is not evidence that 12 is the number that returns to itself and it is the number of revolution and rotation? How can it be coincident that the 12th number of the natural sequence (Fibonacci sequence) is 12x12, spelling out that 12 returns to 12 at our face! For a skeptic there is no room to maneuver, the 12-conjecture is evidenced in the Fibonacci sequence, for there is nothing obvious that says the 12th ordinal of the sequence must be [12x12]; it is just crazy.

   a. The Fibonacci numbers Fn are but a shadow of the Fundamental Numbers (FN), at least the (Fn) come closest to a number system derived naturally. Thus Fn is associated with a fundamental pattern of geometry, even so the FN, derived naturally from 1, it is a natural number system as Fn sequence. The theorem we derive from the FN is ([12 ↔ 12]¬∞ → 360˚) and maps out to rotational pattern of physics, chemistry, engineering, cosmology, and religion.

m) **THE G = S_{12}**: In the three-ring geometry, 12 is exactly the number of positions for which the rotational moves generate a mathematical model where “12 gives totality”.

[23] Leonardo Fibonacci (1202). “Liber Abaci” Pisa | The Fibonacci sequence is a series where each number is the sum of the two preceding ones.

10.7. The 12 fold symmetry appears in various aspects of nature, art, and human design, from the arrangement of petals in flowers to architecture of buildings and machines.

10.8. Is it not strange, that the only two Platonic-solids[24] approximating a sphere both have the factor of 12? And both these solids are like inverse of each other, one with 20 vertices but 12 faces and the other with 12 vertices but 20 faces? Would we say it is just a mere coincident? Or that this hints to the fundamental nature of 12 as suggested by the abstract 12 equation [12 ↔12]?

11. **EVOLUTION OF THE PLATONIC SOLIDS**: The Platonic solids: Tetrahedron, hexahedron, Octahedron, Dodecahedron, Icosahedron are brute facts of mathematical nature as fundamental numbers (FN) are. The featuring of 12 in the platonic solids in light of FN and 12-Theorem is of metaphysical essence.

Tetrahedron	Hexahedron	Octahedron	Dodecahedron	Icosahedron
Vertices 4	8	6	20	12
Faces 4	6	8	12	20
Edges 6	12	12	30	30

11.1. Hexahedron edges = 12; Octahedron edges = 12: Here the character of $A_n(12)$ = [12↔12] is validated. The Octahedron follows the hexahedron, and these two are in sequence because their property values are closest to each other. 12 returns in the following solid in the sequence as edges again [12↔12], 12 returns to 12; then it gets even more mind bending when it goes along.

11.2. **PLATONIC SOLIDS (PS) VS FUNDAMENTAL NUMBERS (FN).**

11.2.(a). In the above table the grey column represents the FN sequence pre-12. And by Cube (hexahedron) the sequence has reached the loop 12, the looping is given by 12 edges becoming again 12 edges in the next sequence, since [12↔12].

[24] Coxeter, H. S. M. 1973. *Regular Polytopes*. 3rd ed. New York "The Five Platonic Solids and their symmetry properties are classical."

11.2.(b). The 2nd column & 3rd column (octahedron & hexahedron), represents the expression [12↔12] and the next 4th column (dodecahedron), represents $[12\leftrightarrow12]^{\infty} \rightarrow 360^{\circ}$; then the last column (icosahedron) represents $\{x_{NL}\}^{su}$. [see section 11].

11.2.(c). This means platonic solids are the evolution of number; we don't see 12 in the first solid, because the sequence has not approach 12 the final number in the FN. The sequence reaches the loop number for the first time in the hexahedron, as a number of edges

i. Key feature of the PS
    - Outer feature = vertices
    - Surface feature = faces
    - Inner feature = edges

11.3. If you observe the property 12 occupy in each solid, you see that 12 first appears as inner feature (edges) then moves from occupying the inner feature to occupying the outer feature of the solids.

11.3.(a). You notice the first property it occupies is edges of shape, coming from the bottom (metaphysical) this is the first property and feature of the solids you meet. The first symmetry is of 8, which leads to 12, and 12 is a looping number, which means it is the base of all emergent numbers.

11.3.(a). The consequence is realizing that the PS is a shape or numbers in evolution. And its mathematical evolution is given by Nembelo. FN $\rightarrow [12\leftrightarrow12]^{\infty} \rightarrow \{[x_{NL}]^{\infty}{}_{NL=1}\} \rightarrow \{x_{NL}\}^{su}$ [$_{NL}$ is Next Line, depicting 4π (spheres) superposing upon each other (see section 11.(b))]

- Tetrahedron, = [-1,01,2…8[],[],[]]
- Cube & Octahedron = [12↔12]
- Dodecahedron = $([12\leftrightarrow12]^{\infty} \leftrightarrow 360^{\circ})$
- Icosahedron = $[x_{NL}]^{su}$

11.3.(a). Platonic solids, are not static solids but it is one shape (set of fundamental principles), evolving to novel shapes.

11.3.(b). We know the Platonic solids are in evolving state, by the factor of 12, and we can have a plausible explanation for their origination. The FN sequence from stick method [1,ll,Δ,✡][25]. The numbers, one, two, *ntathu* and hexagram or $(ntathu)^2$ are the sequence that accounts for the fundamental sequence according to stick method.

[25] Nembelo Stick method was part of this Thesis but removed due to length of work and will be treated separately in volume 2.

11.3.(c). The first shape is the triangle, which accounts for the tetrahedron, for it is a polygon that is made of 4 triangles. The *speculation* is that the triangle (tetrahedron) becomes the hexagram where we derive the 12 fold symmetry, which then influences the solids to revolution.

11.3.(d). Why 12 is featured in all Platonic solids but the tetrahedron? Why there is so much agreement between Nembelo and the Platonic solids as far as 12 is concerned?

ii. FN theory is not confines to Nembelo in that it connects and is validated by such fundamental structures of mathematical thought. This is extra evidence to the FN sequence.

12. **FUNDAMENTAL CLOCK**[26]! Not as modular arithmetic, the fundamental clock, treats every point (12) as 1, so that the clock hand (y^2 ; x^2), adds 1 or subtracts 1 as it touches new point – depending on the direction of clock hand.

12.1. We can derive more consequences from now **theorem $A_n(12)$,** using the module of fundamental clock we can derive all infinite sets of numbers, Natural numbers, Whole numbers, Integers, Rational numbers, Irrational numbers all elements of Real numbers. Imaginary numbers as well though I cannot articulate it clearly at present. The goal it is to derive these numbers naturally from the *fundamental clock* without adding them by hand, it is clear how we can do that for the set of real numbers.

Figure 5

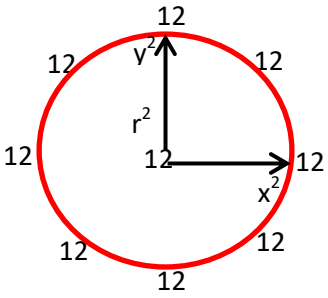
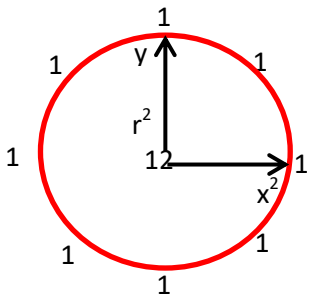


Figure 4



12.2.(a). Edward Frenkel[27], *introduced me to this beautiful concept of discovering whole numbers from a cycle. He demonstrated that by counting the number of complete cycles (if a circle wraps around itself), we can count or generate whole numbers, natural numbers or integers to infinite depending on how the direction the clock is rotated*. Fundamental clock however does not do that as each point of the circle (circumference) is countable.

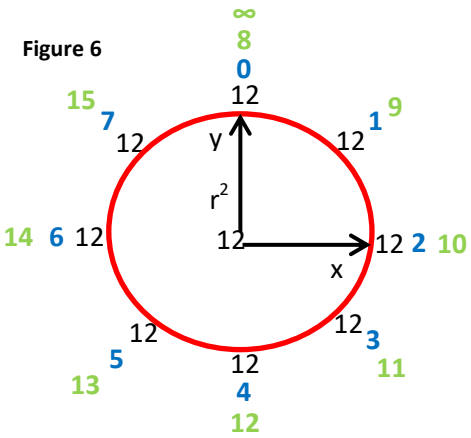
[26] Fundamental Clock is a simple, abstract way to demonstrate that $[12 \leftrightarrow 12]^{\infty} \rightarrow 360^{\circ}$, generates all numbers. The most complex is the physics argument from Su+.

[27] Frenkel Edward. 2024. Interview on "*Theories Of Everything with Curt Jaimungal.* 13 August 2024. Time Stamp: 54:00

12.2.(b) The second arm can give us decimal numbers or fractions. The arms can go either directions, if we chose clock wise direction we can assign (+) and if we chose anti-clock wise then we assign (–) sign all elements of integers. The fundamental clock is pretty amazing because the arms, which is r can be as infinite as well not added by hand, but the clock allows us to introduce an infinite number of them and we can play a game of fixing, pausing and rotating thus we can derive all sorts of numbers.

12.2.(c). Thus then from the fundamental clock we can derive all real numbers. And since the number 12 is the default of the clock, and it is the same everywhere then we have to think of each 12 as a variable or a placeholder therefore we can easily convert the number 12 into counting numbers, as we count 12s.

Figure 6



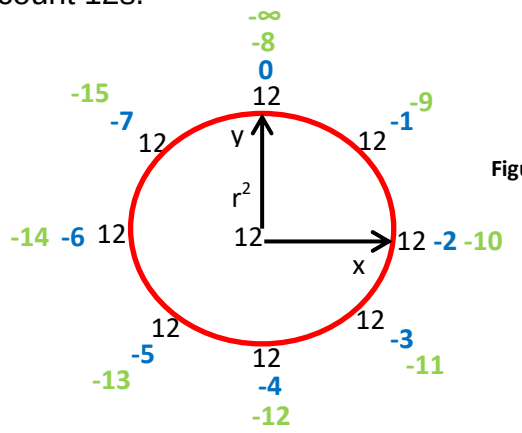


Figure 7

12.2.(d). The numbers arising from [12↔12] as in fundamental clock, are emergent numbers. This means **all real numbers are all emergent numbers; the metaphysical numbers are Nembelo fundamental numbers**. This is crucial to understand, for to say that numbers exist outside our minds it does not mean that all numbers exist but it is only the fundamental numbers from -1 to 12.

12.3. N_0 = whole Numbers; N = natural numbers; Z = integers; Q = rational numbers; {Q' = irrational numbers}. We can represent all these numbers through what I may call 'fundamental clock notation as follows

12.3.(a). e.g. let's represent whole numbers | remember N_0 = {0, 1, 2, 3…}

$N_0 = [D(y)]^{\infty}{}_{+[0]}$; x = y

12.3.(b). Let's represent natural numbers | remember N = {1, 2, 3…}

$N = [D(y)]^{\infty}{}_{+[1]}$; x = y

12.3. (c). Let's represent integers | remember Z = {…-3, -2, -1, 0, 1, 2, 3…}

$Z = [D(y)]^{\infty}{}_{--[0]}$ & $[D(x)]^{\infty}{}_{+[0]}$;

12.3. (d). Let's represent rational numbers |remember Q = $\frac{a}{b}$ where b ≠ 0 and both (a, b) = Z

$Z = [D(y)]^{\infty}{}_{--[0]} \div [D(x)]^{\infty}{}_{\neq [0]}$;

D = dial (defines moving clock arms)
y = x (demonstrate that the both arms are moving as one, you basically have one arm to move).

12.4. Irrational numbers & imaginary numbers should be considered to be of the third generation category of emergent numbers. But we can represent rational numbers such as π or e but it will be a bit complicated.

13. **SINGULARITY AND THE BANG! THE EVOLUTION OF NUMBER TO PHYSICS**

13.1. Now let us from $A_n(12)^{\infty} \rightarrow |360^{\circ}|^{\infty}$, lets derive the singularity and the big-bang. Note that this is a conceptual derivation of the singularity and the big-bang to demonstrate the consistency of $A_n(1)$ as the framework of ToE. If $A_n(1)$ easily, with conceptual-rigor generates Einstein's Field Equation then it means its claim aught to be taken seriously. This, knowing that in any case, in principle, pre-bigbang theory can only be judged by its coherency, and its explanatory power – not withstanding predictions post big-bang, which cannot trouble us in this volume.

13.1(a). $[x_i]^{FXD} + [x_{fn}]^{\infty}{}_{fn\,=\,1} = [2\pi]^{\infty} = [4\pi]^{\infty}$
It is easy to follow what the previous equation mean; we know already the first parts of the equation that we fixed (FXD) first part of [12↔12] so that the last part is left to change position in a series form. If the distillation process is appended as the fixed length of unit 1, by consequence this would give us 2π, but then since [12↔12] is infinite iteration, then naturally 2π becomes 4π, and we know 4π is a sphere! The beauty of infinite character $[4\pi]^{\infty}$ is that the sphere will keep on being created for infinite number of times. Which is what the second equation talks to.

13.1. (b). $[4\pi]^{\infty} = (r^3)^{\infty} + [x_{NL}]^{\infty}{}_{FN\,=\,1} = \Delta B/[x_{NL}]^{\infty}{}_{NL\,=\,1}$
The expression $[x_{NL}]$ means a new sphere will by necessity occupy the next nearest position upon the previous sphere. The subscript NL means 'next line', indicating that new sphere occupies the closest next line or position. Nearest position is not depicted by the figure 9 accurately, since there would not be any significant space between the spheres. And they will be so small that they are by magnitudes far below Planck's constant, remember that Planck's scale ($x10^{-35}$ cm) is the smallest unit possible in physics. Remember that size is comparable with distance, the further something is the smaller it is, think of the metaphysical as being so far that the size of its objects is not achieved in physics.

Figure 8

13.1.(c). Since $[x_{NL}]^{\infty}$ is infinite then it means the fundamental spheres will keep on multiplying to close to infinite. (ΔB) = **density of the spheres** as $[x_{NL}]^{\infty}$ increases, but the trick is it will reach saturation (Su), so though potentially infinite but it reaches a point where it is full. Remember we are beginning from the realm of numbers (metaphysical), the spheres are fundamental and metaphysical, now remember, that they are below Max Planck's scale it means they are metaphysical. Therefore as ΔB increases it becomes so huge for the metaphysical that it approaches the physical, this process is called (Su), 'su' is an Isintu word that means a process that ends in fullness, it's a culminating process such as that $[x_{NL}]^{\infty}$ undergoes.

13.1.(d). $[x_{NL}]^{Su}{}_{NL\,=\,1} = [\phi]^{R}(h)/\Delta t^{4}\ (c^{4}/\rho) > [P.H]$
These terms ($[\phi]^{R}(h)$]) designate the primordial atom, or primordial egg according to Priest George Lemaitre, who with Alex Friedman discovered from studying General Relativity that the universe aught to be expanding. The (ϕ) Greek symbol psi designate a point field and it is raised to (R) which designate the Riemann Tensor, which is a way of mapping space time. Even though at this point there is no space yet, but there is every ingredient of space, and marks the 3rd dimensional nature of the point field of psi, and (h) is the Planck's constant we have previously seen, they both mean (Su) has reach fullness (sutha), partly similar to loop quantum gravity (LQG[28]) of saturation of space. The state of sutha for us will appear as a point while from the metaphysical perspective is gigantic; this will mean it has entered the new realm. And notice that anything that enters a new realm or medium encounter resistance initially, as when you enter into a medium of water as in a pool, river or ocean. Your body encounters a negative pressure and if you were as lite as a ball you would bounce back. This is the reason light changes direction when entering a new medium because it encounters a resistance from a new medium thus an opposite force.

13.1.(e). The resistance of the new medium will have inverse consequence to that experienced by light entering a new medium. For white light through the prism as was demonstrated by Isaac Newton (1666) splits into all the 7 colors in it, the primordial atom though because it is not mixed, it is rainbow light, well packed as demonstrated by $[x_{NL}]$ but as it enters the new medium, the negative pressure (ρ) infuse the p.atom with such violent shake or vibration that it causes $[x_{NL}]$ to mix, so that going through the physical realm this mix creates fluctuations, thus vacuum fields are born and after a short interval wave packets in the form of very small solitons are.

13.1.(f). Thus then you see in the equation the Greek symbol (ρ), which mostly is designated as negative energy in the inflation equations of the universe. Only a small negative energy is needed to offset the equilibrium or symmetry of $[x_{NL}]^{Su}{}_{FN\,=\,1,}$ for there always exist some tension between the fundamental spheres. (ρ) is the fire that bangs the primordial atom, and course the big bang. (Δt) these symbols means time start changing from time = 0, which is the singularity, the Su, to the beginning of time the Δt. This happens in the speed of c, the constant speed of light. And lastly we have the term [P.H], which designate the primordial horizon, this just indicates that reality has gone beyond the metaphysical into the physical for now we can observe it, while when

[28] LQG Loop Quantum Gravity is developed by: Abhay Ashtekar, Carlo Rovelli, Lee Smolin | 1980s

$[\phi]^R(h)/\Delta t^4$ (c^4/ρ) < [P.H], mean the universe disappears from all physical view, as a car that goes beyond a horizon disappears from view as SWT equation demonstrates in the third paper of TO PROVE GOD series.

- [P.H] < $[\phi]^R(h)/\Delta t^4$ (c^4/ρ) → ($[\phi]^R h$) $c^4/(\rho)$ → $R_{\mu\nu} - \frac{1}{2}g_{\mu\nu}R = \frac{8\pi G\rho}{c\hat{}4}T_{\mu\nu}$

13.1. (g). In Nembelo we begin from 1 and come out of the P.H while in the SWT (modified General Relativity), we move towards the P.H and watch the universe disappears through P.H into an infinite realm becoming the Actual Infinite, which is exactly (Θ) thus these two theories are as two hands, one purely from math and the other purely from physics but amazingly leads to the same conclusion. Thus the One is robust, perhaps the only pre-bigbang theory so robust and so simple. And that both theories unify General Relativity and Quantum mechanics makes it the most economic theory ever – the true ToE.

13.1.(h). Here then, a miracle has happened, from just 1, without adding any parameter or law by hand we derive the universe. Is this not amazing? The distillation process is a mathematical operation therefore self-evident, thus it is discovered rather than invented. Everything from the unfolding of 1 to the bigbang is derived as the consequence of 1, nothing added on but all of it is the consequence of the evolution of number 1, how efficient and constrained is such a theory! It is the holy grail of math and physics to derive consequences from axioms; it means a mind of a person is only doing the discovering.

13.2. **Therefore Demonstrated! 1 unfolds to physics, to the universe!**

14. FN SEQUENCE

{$1A_n = 2$; $2A_n = 3$, $3A_n = 4$, $4A_n = 6$, $6A_n = 7A_n$, $7A_n = 8$, $8A_n = 11$, $11A_n = 12$, $12A_n = 12$, $12A_n = 12$, …}

14.1.(a). Thus then FN is a finite-infinite number system, because the $A_n(n)$ as according to the 4th axiom must continue perpetually. Thus we have $[12\leftrightarrow12]^{\infty}$, a beautiful formulation of the unification framework between math (numbers) and physics.

14.2. A NUMBER THAT CONQUERS ZERO

$A_n(12)$ is a number that practically conquers 0, we know that $(\frac{0}{n} = 0)$ but with FN we have $\frac{0}{[An(12)]} = \frac{0}{[12\leftrightarrow12]\infty} = \frac{0}{[Su]\infty}|[12 \leftrightarrow 12]^{\infty}|\ or\ \frac{0}{[An(12)]} = \frac{0}{[12\leftrightarrow12]\infty} = \frac{0}{[Su]\infty} = 1U$. Where, 1 is for the singular universe.

14.2.(c). Since division is only true when: a/b = c; a = b × c

{0 = $|[12 \leftrightarrow 12]^{\infty}| \times |[12 \leftrightarrow 12]^{\infty}|$ }, since $|[12 \leftrightarrow 12]^{\infty}| \rightarrow |360^{\circ}|$; and 360˚ implies revolution, which implies vector motion. The two revolutions cancels as opposing motions, thus, $|[12 \leftrightarrow 12]^{\infty}| \times |[12 \leftrightarrow 12]^{\infty}| = 0$;.

iv. Since the arithmetic sequence transformed to physical units |360˚| allowing for treating $|[12 \leftrightarrow 12]^{\infty}| \times |[12 \leftrightarrow 12]^{\infty}|$ as [opposite angular momentum vs opposite angular momentum] ≡ (-1+1) = 0; we can then justify how $\{\frac{0}{[12 \leftrightarrow 12]\infty} = |[12 \leftrightarrow 12]^{\infty}\}$ is true math though not traditional, and it doesn't break formal rules but creatively works around them. So we can have a number that breaks zero, like the universe ex-nehilo.

v. NOTE: the weirdest thing, that under A_n it is only $A_n(12)$ that can be treated[29] with n, however it seems that only the number 0 & 1 can make sense to either multiple, divide, add, and subtract from or to $A_n(12)$ for other numbers it would make no sense at all. However if any $A_n(n)$ number can interact with natural n, it is only $A_n(12)$ this is due to its unique symmetry which makes it the only reliable $A_n(n)$ number, you start with $A_n(12)$ you end with $A_n(12)$, while other $A_n(n)$ numbers cannot be added, subtracted, divided, or multiplied since they are isolated, by the fact that n will not behave to the same n. e.g., for n + n = 2n to be true it must be that n = n; but for $A_n(n)$ n → b. However $A_n(12) = A_n(12)$ fulfilling n = n requirement for n + n = 2n.

14.3. FN $(-\frac{1}{12})^{An} = (-\frac{1An}{12An}) = (\frac{0}{[12=12]\infty}) = (\frac{0}{[Su]\infty}) = 1$ {here then we can understand $(Su)^{\infty}$ to be a point, of hatching 0, and 1 represents the 1 Universe instead of multiverse.}.

FN $(-\frac{1}{12})^{An} = 1$. There is no fraction-like n that contains $(-\frac{n}{b})$ that can = 1 under A_n, this makes the FN $(-\frac{1}{12})^{An} = 1U$ a very special setup in mathematics. FN $(-\frac{1}{12})^{An} = (-\frac{1An}{12An}) = (\frac{0}{[12=12]\infty}) = 1$; thus then $12A_n$ blows out or breaks zero as a chick breaks an egg.

a) Herein we have a number that can break zero (0), or hatch the *nothing* into *something* = 1.

15. RIGOR GALOR

[29] Added/divided/subtracted/multiplied

- CHALLENGE: **There can be no number that can be found which has internal stability (isomorphic), and has as much external evidence as a number of revolution/rotation/stability/closure as the number 12. If such a number can be found then the 12-conjecture is not extra-ordinary at all, and the theory fails; if it cannot be found then the 12-conjecture, evidence and its internal proof is likely true.**

I. This is a challenge to the one who may feel that the 12-conjecture is not sufficiently supported, a thing I disagree with. I believe there is much support that is yet to be discovered but so far the claim and evidence already given are good enough to qualify the proposal as a proper foundational theory.

II. Consider that this is a fundamental theory that bases its premise on the evolution of number 1. Consider that 1 is a basic fact and tautological, axiomatic in number theory. Consider that ***kucwenga*** the process by which 1 evolves is grounded on true axioms. Thus then consider that a claim that 1 can be unfolded in a mathematically constrained fashion (*kucwenga process*), renders the sequence derived from 1, fundamental.

III. In our case [12↔12] from whence we infer the 12-conjecture is given by fundamental sequence.
   a. This renders $[12 \leftrightarrow 12]^{\infty} \rightarrow 360^{\circ}$ equation a fundamental equation not derivable from anywhere else.
   b. Thus then 12-conjecture is given by the fundamental sequence of 1, and it is not something that is inferred intuitively.
   c. We then can conclude that ($[A_n(12) \leftrightarrow A_n(12)] \rightarrow 360^{\circ}$) is as brute fact as Platonic solids, as Fibonacci sequence is. To identify then aspects of the universe correlating with ($[12\leftrightarrow12]^{\infty} \rightarrow 360^{\circ}$) must be taken as strong evidence of the conjecture.
   d. We aught to then conclude that there is nothing that says the conjecture is false, instead we have physical evidence that maintains the conjecture is likely true.

15.2. **BA** (**Bloody Accident/Guilty by Correlation)**

b) To underscore the urgency of $A_n(1)$ rigor, consider the principle of "***bloody accident***" (BA) – a concept where correlation and coincident of events fulfills the requirements of guilt, even in innocence. Imagine a party where you wrongfully accused your friend of betrayal, storm out with curses and threats before people. Only to return when you have realized you over reacte; you have come to ask forgiveness when you find your friend on a bloody floor. Neighbors responding to earlier noises find you trying to help your lifeless friend. Witnessing your earlier rage, your earlier fight, all evidence, and circumstance points to you as guilty. While your friend committed suicide by knife without living a message. The only

finger prints on the knife are your friends and yours. In a legal world. This is a "bloody accident". Neighbors and the law will be justified to punish you of murder, while the truth is you are innocence. But the correlation in a legal world makes it impossible to dismiss, so then *one is guilty by correlation*.

c) This is the consequence of BA principle. Applied in Nembelo and arithmetic, we conclude that $A_n(1) \rightarrow A_n(12) \rightarrow [12 \leftrightarrow 12]^{\infty} = 360°$. Correlating to: sphere value (4π), 12 edges in cube/Octahedron duals, 12 vertices/faces in Dodecahedron/Icosahedron inverting to spheres, $\zeta(-1) = -1/12$ regularization, magnesium-12 in DNA replication, carbon-12 stability. Aligning with the concept of One source manifesting through 12, of the Bible, Hindu and Islam, is a *bloody accident*.

d) To deny $A_n(1)$ theory it is to deny the blood on the floor, it is to deny evidence correlating with logical deduction.

15.3. This derivation is not speculation; it is an axiomatically grounded process that generates geometry, physics, and metaphysics truths from 1 without external axioms, without reliance on external assumptions or constructs like in ZFC framework.

15.4. From 1's irreducibility the FN sequence emerges: {-1, 0,1, 2, 3, 4, 6, 7, 8, 11, 12, $[12 \leftrightarrow 12]^{\infty}$ }. This sequence, with *miyeqa* as manifestation of conscious act, and 12's stabilization as creative infinity, derives rotational symmetry (360° from loop units). Spheres ($[4\pi]^{\infty}$), and even the bigbang via saturation (Su) and negative density perturbations (ρ).

15.5. Set theory (ZFC) constructs math from the empty set, a "non-number" that raises ontological puzzles – $A_n(1)$ resolves this by proving 1 as the true primitive, reducing alternatives to sums of 1s.

15.6. Category theory unifies structures via relations, but lacks $A_n(1)$'s emergent ontology.

15.7. $A_n(1)$'s Universality: The fact that despite the universe one finds themselves in, $A_n(1)$ will produce the same FN sequence and the base system will not affect the FN sequence.

No matter the base system the $A_n(12)$ will be the n of rotation.

15.7. **The Generalizability of $A_n(1)$:** *It is unlikely that the A_n can be generalized to other domains, since it is the function that isolates n to itself rid of artificial parts. Since there can only be one fundamental system from which all arise, then it seems almost improbable that the A_n can be generalized beyond integer domain*.

Claim A: (primitive origin principle)

15.7.1. $A_n()$ is defined as a primitive mathematical object, not derived from any other formal structure. It plays a role analogous to Peano axiom, “1 exists,” but in a pre-axiomatic framework.

Claim B: (Emergent Formalism)

- The sequence $A_n(n)$ is generated within this primitive system. It is not a function defined by existing formal theories, but a process from which formal properties emerge:
- Thus: formal tools (group theory, topology, algebra) **can analyze** $A_n(n)$ but not limits its meaning.

Claim C. (Non-generalizability Principle)

15.7.2. Attempts to “generalize” the $A_n(n)$ using external formal frameworks such as ZFC misunderstand its nature. The $A_n()$-system is not a special case of a more general formalism; rather, it is a **foundational generative rule**.

This parallels:

- The natural numbers cannot be “generalized” by set theory even though set theory can model them.
- The Fibonacci sequence cannot be “generalized” by combinatory; combinatories can only *describe* it after the fact.

15.7.3. Thus: $A_n(n)$ is not a derived function; it is a primitive generative system. Formalism follows from it, not vice versa.

Claim D: (12-Theorem is internally determined)

Within the structure of the $A_n(n)$-system, the number 12 arises as:

a) The rotational closure point
b) The symmetry completion number
c) The minimal n for the full cyclic consistency.

Thus:

The 12-Theorem is true within the $A_n()$-system, independent of external mathematical frameworks. It is analogous to: “5 is a prime” being true in arithmetic whether or not group theory exists.

15.8. **PRIME’S PERSISTENT GROWTH:** why prime numbers persist in nature?

15.8.1. Prime & Composite Inequality:

For all n > 12:

- If n is prime, then $A_n(n) > n$ (the number increases under self-iteration).
- If (n) is composite, then $A_n(n) < n$ (the number degrades under self-iteration).

Exceptions below threshold: Most composites below 12 increase (like primes), except the special “miyeqwa” cases 9 and 10, which behave as composites (they degrade).

This explains why primes appear so pervasively in nature (they are the only numbers that “grow” under this self-referential process consistently). For composites only special numbers >12 grows. *This reveals that primes are the building blocks of nature because when self-iterating they always grow persistently*.

Proof:

Case 1: n is prime (p > 12). The process is always exactly 3 steps (2 f-steps; 1 s-step).

1. F-step 1: p × 1
2. F-step 2: p is already prime, so the rule forces the atomic form by introducing the extra term: (p × 1) + (1 × 1).
3. S-step (now allowed): p + 1.

Thus:

$$A_n(p) = p + 1 > p.$$

This holds for every prime (verified by the uniform 3-step rule and explicit examples for p = 2, 3, 5, 7, 11, etc.)

Case 2: n is composite (n > 12)

n has at least one proper factorization n = d × e with $1 < d \leq e < n$.

the process begins:

e. F-Step 1: $n \times 1 \rightarrow (d \times e) + (1 \times 1)$.
f. The components d and e are now treated as independent standalone numbers. Each undergoes its own full kucwenga (further f-steps until every sub-component reaches atomic form π.
g. Because d and e and strictly smaller than n and greater than 1, the kucwenga tree for the whole n contains more f-steps than the fixed 3-step process is longer than for prime (as already noted in 4.2.1: “for composite numbers the kucwenga process is longer than for prime numbers”). Each additional f-step introduces extra (1×1) terms according to the multiplicative-identity rule.

h. The final s-step (delayed until the 'golden-rule' is satisfied – i.e., no new k can be produced). Therefore yields: b = $A_n(n)$ = (sum of all distilled prime factors of n, with multicity) + (all(1×1) terms generated across the entire factorization tree.
    i. The prime-factor sum is strictly less than n (by the fundamental theorem of arithmetic and the fact that any composite n > 1 satisfies sopfr(n) < n).
    ii. The extra (1×1) terms, while positive, are exactly equal in number to the internal nodes of the factorization tree and cannot compensate for the reduction introduced by breaking n into d and e (since d + e + 1 < n for all composite n > 4, and further breaks only add a bounded number of 1's while reducing the parts even more). Therefore the whole distilled sum satisfies $A_n(n) < n$. the degradation is the direct consequence of the longer kucwenga process for composite. This holds true for every composite n > 12 (with the sole attractor exception at n = 12 itself, already proven in the 12-Theorem.

16. OPPENNING UP NOVEL RESEARCH:

I. The $A_n()$ demonstrate to us that the math of *analytic continuity* is a fundamental description of continual point series of geometry. Therefore $\mathbf{(-\frac{1}{12})}$ is the constant of *continual points series of geometry*. This means the factor at which a point in geometric system of nature relates to other immediate points. This realization has led me to research into particle physics and now working on interesting possibilities.

II. TOM[30] Gravity model is the gravity scheme that unifies quantum gravity and general gravity, with relatively affordable experiment. This gravity model defines what is gravity in unambiguous terms and suggest an accessible way to test the theory unlike other gravity models from widely accepted theories.

III. Research on prime numbers: The $A_n(n)$ reveals something strange about prime n Vs. composite n; composites under $A_n(n)$ devolves [c – n], while primes are always evolving [n + 1] as explained above.

[30] TOM (The One Model) combines Nembelo and SW Theory into a single theory. Nembelo is as the left hand and SWT is as the right hand both converges. SWT begins from Einstein's Field Equation (physics) to the Monad; while Nembelo starts from the 1 (Monad value) into physics.

a. Strangely this talks to Prime Number Theorem: that states: for large number x, the number of prime numbers less than or equal to x is approximately x/log(x), as n gets larger. This means as x gets larger prime numbers gets fewer in between. This may suggest that as x gets larger the number system gets weaker, as composites under $A_n(n)$ devolves.

17. IMPLICATIONS: This section outlines implications of $A_n()$ theory

18.1. The $A_n(1)$ theory as articulated through the Nembelo framework and the $A_n()$ function, shifts our understanding of mathematics, ontology and origins of reality. It is a paradigm shift that cannot be ignored; the ease by which it will enable marginalized intelligentsia to comprehend mathematical thinking, is overwhelming.

17.2. Familiarity: The power of familiarity is obvious, given that whatever one is familiar with one learns faster. $A_n(1)$ brings math and GOD, metaphysics, spirituality into unity.

i. By so doing brings math, logic, spirituality and religion into familiarity. And this is key to unlocking vast reserves of mathematical, scientifically and spiritual passion amongst Africans.
ii. $A_n(1)$ establishes link to math, physics, ontology and sociology that is unparalleled by any theory.
iii. Focuses the mind for innovation and invention attitude and aptitude

18.3. At its core $A_n(1)$ implies that mathematics is not a static tool for measurements or abstraction but a dynamic, generative force.

18.4. These implications must be taken seriously because $A_n(1)$ addresses gaps in current paradigms.

18.5. The universality of $A_n(1)$ implies that this is a universal ontological map to reality, as any alien out there will find this the most logical system to understand the universe.

18.6. By BA the correlation of $A_n(1) \rightarrow A_n(12)$, with above provided evidence demands acceptance: $A_n(1)$ is the “God function” deriving the concept of GOD mathematically and implying the Biblical source specifically.

19. CONCLUSION:

a) The FN sequence and the 12-Theorem leads to the realization that 1 evolves to all numbers and physical models. Thus 1 is conceptually the creator of all. By this we derive the concept of One Source of all things. Thus FN derives the concept of GOD without philosophy, theology, or even metaphysics; this doesn’t yet prove

GOD exist but validates that the concept of GOD is mathematically valid and thus by extension, The ONE likely is independent of mind.

b) The claim of $A_n(1)$ on GOD is mathematically true regardless if whether GOD exist objectively. Take a scenario, where GOD is not; the argument is the same in that constrained mathematical thinking leads to a concept of a Source 1 generating all numbers and physical model (Universe) through 12; we shall say, 'what a coincident'.

   i. We can confidently use the language, 'math says', due to the mathematical logic constraining $A_n(1)$; we have demonstrated that 1 is thee mathematical object and no other surpasses or even compares.

   ii. Therefore we know that if math would speak in these matters (independent existence of n, existence of God, ontology) it would have to use 1, no ambiguity. As per 1 axioms and 1-Conjecture.

   iii. As far as theological, mathematical, metaphysical claims are concerned $A_n(1)$ is undisputable. Only lacking in physical derivations and test predictability.

c) The equation $[12\leftrightarrow12]^{\infty} \rightarrow 360^{\circ}$ demonstrates that numbers likely exist independently and possess intrinsic qualities not assigned by humans and such qualities permeates the universe

d) The numbers that independently exist are FN numbers; so FN holds the reality of all emergent numbers and math including invented math.

APPENDIX A – Mathematical Connection Between the 12-Theorem and the Symmetry Group S_{12}

A.1. Introduction:

The purpose of this appendix is to clarify the mathematical relationship between the 12-Theorem presented in the main thesis and the independently derived group-theoretic

results that a natural rotational puzzle system has move groups $G = S_{12}$. Although the 12-Theorem is formulated in terms of the $A_n()$ function and geometric completeness, and the group-theoretic results arises from a combinatorial analysis of a physical puzzle, both structures exhibit a common and nontrivial feature.

The number 12 appears as the smallest value n at which a rotationally constrained system becomes maximally symmetric

The goal of this appendix it is to make this structural correspondence precise.

A.2. **STATEMENT OF THE 12-THEOREM (A_n (12))**

In the main body of the thesis, the 12-Theorem asserts that: ***12 is the minimal integer for which the $A_n()$ function attains geometric completeness, producing full spherical, rotational and cyclic closure***. This is expressed through properties of the $A_n()$ described earlier. These properties include:

a) **Closure**: A rotational/periodic process returns to full structural symmetry at n = 12
b) **Completeness**: All component transformations of the $A_n()$ are mutually compatible at n = 12.
c) **Maximal Symmetry**: The internal structure of $A_n(12)$ permits all rotational rearrangements consistent with the geometry.

The emphasis throughout the thesis is, ’12 is the symmetry-complete number.’

A.3. **INDEPENDENT RESULTS: The Move Group of the Three-Ring Puzzle**.

Consider the rotational puzzle consisting of three circles intersecting pairwise at two points each, producing exactly 12 positions. Each circle may rotate by 60°, generating a 6-cycle permutation on the six positions lying on that circle.

Let the generators be:

$gA, gB, gC \in S_{12}$.

The main theorem proved [see] is:The group generated by the three rotational moves is the full symmetric group.

$G = (gA, gB, gC \in S_{12}) = S_{12}$

The proof proceeds by:

Showing the action is transitive.

Computing commutators to obtain explicit 3-cycles.

Proving the action is primitive

Applying Jordan's theorem (or an equivalent constructive argument) to obtain $\mathbf{A_{12}}$ subset-of/= **G**

Concluding parity implies G = S_{12}

A.4. Structural Connection between the Two Results:

The shared appearance of 12 is not accidental:

In the Puzzle:

Each circle has 6 positions

Three circles intersects is a triangular pattern.

Pairwise intersections subtract 6 positions. Thus: 3 × 6 – 6 = 12.

This combinatorial geometry is the minimal non-degenerate configuration that allows:

a) Three overlapping circles of length ≥ 3,
b) Generically positioned intersections,
c) Rotationally induced permutations that mix the entire system.

Any smaller configuration fails to produce permittivity or full mixing.

Thus 12 is the smallest number compatible with full symmetric closure.

This reflects the same phenomenon described abstractly by the 12-Theorem***: A rotational system with ternary overlap reaches full closure at 12***.

A.4.3. Maximal Symmetry at 12

The thesis identifies 12 as the point where the A_n function becomes fully symmetric. Independently the puzzle group satisfies: G = S_{12}, the largest possible permutation group on 12 points.

Thus:

a) The A_n(12) completeness corresponds to maximal internal transformability.
b) The puzzle's S_{12} symmetry corresponds to maximal external transformability.

The coincident is structural: 12 is the unique size where the combinatorial configuration admits full symmetric permutations generated by rotational constraints.

A.4.3. Why 12 is Special in Both Frameworks?

In both systems, 12 arises as:

a) The equilibrium of a triple-overlap rotational structure,
b) The minimal integer enabling maximal symmetry,
c) The closure point at which constrained transformations generate the complete symmetric group

The core structural mechanism is identical:

Element	$A_n()$ Function	Three-ring Puzzle
Fundamental Operation	Rotation/cyclic evolution	6-cycles on rings
Overlap structure	Triple interaction	Three rings intersecting pairwise
Completeness criterion	Full geometric closure	Full permutation closure S_{12}
Minimal integer achieving closure	12	12
Maximal Symmetry group	Internal Symmetry of $A_n(12)$	S_{12}

Hence, the two results arise from a shared underlying mathematical principle: ***Rotational systems with ternary interactions achieve maximal symmetry precisely at 12***.

A.5. Formal Theorem Connecting Both Frameworks:

We can now state the formal relationship:

Theorem A.1 (Structural correspondence between $A_n(12)$ and S_{12}).

Let X be a finite set equipped with a ternary rotational interaction structure (triple-overlap rotation).

Assume further that:

a) Each subsystem contributes 6 rotational states.
b) Pairwise overlaps reduce the total degree of freedom by 6.
c) The full system's allowed transformations are generated by rotational operators.

Then the minimal cardinality of X for which the induced transformation group is:

- Transitive
- Primitive
- Contains a 3-cycle,

Is a 12, and the resulting transformation group is the full symmetric group: $\mathrm{Sym}(X) \cong S_{12}$

Thus 12 is the minimal value for which the system achieves maximal symmetry.

Corollary A.2. (12-Theorem supported by group-theoretic structure).

The completeness of the $A_n()$ function at n = 12, as asserted in the main thesis, is structurally consistent with and independently supported by the fact that natural three-rotation physical system of size 12 has symmetry group S_{12}.

A.6. Conclusion

The appearance of the number 12 in both the $A_n()$ framework and in the independent group-theoretic analysis is not superficial. Both arise from the same deep combinatorial fact: ***Under ternary rotational geometry, the number 12 is the unique minimal size enabling maximal global symmetry***.

Thus the theorem $G = S_{12}$ does not morely coincide numerically with the 12-Theorem – it provides rigorous mathematical support for the underlying structural claim of the thesis: '***that 12 is the number of completeness for rotational systems***.'

APPENDIX B

The appendix, seeks to link $A_n(1)$ to religion and spirituality through the theory of Yeshua Christ. That while the thesis derives the mathematical concept of GOD, the concept of God aligning with $A_n(1)$ is the God of Yeshua Christ, i.e., Yeshua Christ's theory of God. The Hindu, Islam also traces the same God concept almost but the concept $A_n(1) \rightarrow A_n(12)$ aligns more with Yeshua Christ's message than of any religious figure.

I. The Shema (Deuteronomy 6: 4, Mark 12:29) where the word used for 'one' is echad, meaning numerical one. Echad could mean a poetic oneness as, '*a man and wife shall be one*', but it is important to note that GOD is spirit and fundamental. This means with GOD all the instances of one are true. Since GOD is the one source of numbers and math then GOD is 1 both literally and poetically. The tradition of anthropomorphizing number is as ancient as religion

itself. The readers of the text not familiar with the tradition may find it unconvincing, opting for a poetical explanation. However the literal reading, '*Listen oh Israel, the Lord is your God, the Lord is one'*, if true literally is also true poetically, since GOD is Most Fundamental. It helps to understand the peoples of the day in other cultures such as Ancient Egyptians, and Greeks, did speculate the Source as number 1; especially Plotinus. In Nguni GOD is Mvelinqangi, which means one coming before all/the first one. 1 is Mvelinqangi of all numbers and shapes as proven in this thesis, and has been known this way from ancient times. GOD as 1 is not an artifact of my rambling thoughts but of ancient thoughts.

II. Our greatest link to the God of the Bible comes from Yeshua the Christ, who restored the 12 fold symmetry that Israel has lost. Him being the Messiah, one to restore the true God in Israel, and having to insist on the 12 disciples, is telling. The 12 gates, 12 foundations of the new city[31], which symbolizes the new kingdom of GOD is more striking.

III. Again what is the key link? Yeshua Christ stated that all the images of God in the Bible are false, when He said, '*no man has seen GOD at any time, the only begotten Son which is at the bosom of the Father hath declared Him*[32]*.*' By this statement, God as declared by Old Testament is put under review by Yeshua Christ. This makes us realize that the God of Yeshua Christ is not the same as Old Testament God. But the God of Yeshua Christ is the Old Testament God under review; therefore in line with the mathematical concept of God. It is for this reason that $A_n(1)$ fits the revelation of the God of Yeshua Christ.

IV. Thus by the God of Yeshua Christ, I refer to the theory of Christ about God, His position was that, #1 nobody has seen GOD, #2 Old Testament thought leaders teaches of God they don't know, #3 in Chapter 16 He is promising the future where we will know GOD plainly. The God of Yeshua Christ is derived or developed from Old Testament, but is not as described; we were to wait for the plain revelation of The One by the Spirit of Truth.

V. The God of Yeshua Christ fits perfectly $A_n(1)$ theory, a plain manifestation of the Father. It aligns more with Christ because He is the only one, the only prophet who affirmed the Old Testament's God but dismissed the knowledge & description of God as He went further and promised the plain revelation of the same God in the future through the Spirit of Truth. This is striking.

VI. But even more striking is John 16:25, '*I have spoken to you in figurative language, but the time is coming when I will no longer use this kind of language. Instead, I will tell you plainly about my Father'*. To understand what 'plain' means you will have to go to Paul of Tarsus in 1 Corr 13:12, '*now I know in part, then I shall know fully, even as I am fully known'*. So many say this 'knowing' will

[31] Revelations 21:19-20
[32] John 1:18

happen when we get to heaven but it is not the case, since it is the Spirit of Truth that leads into all truth (John 16:13). Since the Spirit of Truth is with us it means we can know all truth. This is the era of 'plain' knowledge of GOD. Thus then taking all these into account lead us to conclude that $A_n(1) \rightarrow [12 \leftrightarrow 12]^{\infty}$ in all proclaimed prophets it lands closer to the claim of Yeshua Christ than of any of the prophets. There are other supporting scriptures but I thought these may just be enough just to nudge towards the True One. To seal the claim that An(1) as far as theology, metaphysics is concerned it unmatched.

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