Mathematical Modular Relations and Closure

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Abstract

The relation of the modular relations of mathematical form leads naturally the question of closure of groups for the sake of accounting processes and that of finality of the modular relations of counting of number theoretic puzzles such as Fermat's Last Theorem; and the given solvability of problems in general; for which an aforementioned relation hints at their unresolvability and decomposition with no means of structure establishable. The given that an equation may have no solutions is quizzical in that conjugate to a given mathematical equation there is an additional equation conceptually; and that of the given that these relations find decomposition under parallel terms pushes the limits of the foundation of solvability of subsidiary relations in number theory. Here is presented a simple method and manner to look at but two parallels; that of the decomposition of the resolution of differential equations; and their given connection to modular relations given the relation of powers and modular prime bases and as well the relation of a given equation in numbers of arithmetic relation of progression and that of prime or non prime powers of a modular form.

0.1 Preliminary Notions

Here the notion and idea is presented that: "Any dually monovalent function of repetituous nature is self enfolded in transcendent form by non-transcendent harmonic functions into separable forms of addition and multiplication as isomorphic due to self similarity of given interrelation to zero and any finit subset. As such as two parts to a given differential equation under $\pm$ and remainder with given terms of differential nature for addition and subtraction fold; it is also true that these parts under basic $\pm$ entitle the given of a chain of ∞ order of decomposition into linear expressions of equivalent nature and forms as that of an expression of the universal characteristic of mathematics in the physical world; by a given dimensionless."

Presentation of Alternative to Fermat's Last Theorem

$$q^m = p^n + l^n \qquad \mod n \tag{1}$$

Given $m \geq n$ mod n has solution.

$$q^m - p^n = l^n \qquad \mod n \tag{2}$$

Has a solution.

$$q^m = l^n + p^n \lim_{m \to n} \tag{3}$$

Has a solution. Take for instance $m - n \neq 0$ and $m - n \geq 0$ so; $\mod n \leq m$ implies $q^m - p^n = g = l^n$ for $q^n \leq q^m$ and $q^n \geq q$ so;

$$A :) a^n - a = 0 \qquad \mod n \tag{4}$$

Implies:

$$q^{m-n} - p = l \qquad \mod -n + m \tag{5}$$

And:

$$q^m - p^n = l^n \qquad \mod n \tag{6}$$

As $m > n$ & $m > g^* > n$ it is true when mod n goes to mod m by the previous $A :)$ that m acts as n & for one n; m is $2n$; hence there exist odd solutions.

$$q^{m-n} + q^m = 0 \qquad \mod n \tag{7}$$

$$q^{m-n} + q^m = 0 \qquad \mod m \tag{8}$$

By -1 left to right with interchange of m and n through series.

$$q^{m/2} + q = 0 \qquad \mod l = \frac{m}{2} \tag{9}$$

$$0 = 0 \tag{10}$$

This is not the end for the relation can be reversed as well as a relation into that of it's alternative solution under reversal after the following additional appendicy.

As the equation $q^m - p^n = l^n$ as $m \geq n+1$ implies all adjacent solutions to $q^n = p^n + l^n$ exist; as $m = n$ possesses none, $m - n \geq 0$ exists for mod n, m; & m, n are equivalently apart from that of a displacement by 1; for which by Fermat's Last Theorem, they are irreducibly similar yet apart.

In conclusion there are ∞ solutions to $q^m - p^n = l^n$ in powers and integer numbers. Conversely there are absolutely no solutions to $x^n + y^n = z^n$.

As a further parallel it is true that in fact there are exclusively $\infty, 0, *$ where $*$ is any finite number of solutions to Fermat's Last Theorem.

Reversal of Theorem

$z^n = y^n + x^n$ in reverse implies any solutions concurrently to $q^n = p^n + l^n$ exist adjacent by $n \pm 1, q, p, l \pm 1$ yet not so for $n+1$ & $q, p, l+1$ & that $Q \mod n+1 \neq Q \mod n \forall p, q, l$ & finally $R \mod n$ with $R = p, q, l \pm 1 \neq R$ mod n which means $n \pm 1 \neq m$ in 1.)

Computational Number Theoretic Ramifications

Taken then as a given the number theoretic computational ramfications are two fold; with an interesting relation and dilemma related to the halting problem and recurrence of a given planthea of reductionism:

1.) The given problem of recurrence of relation of set subset relation of a hyper-manifold relation of embedding of four fold relation known as K_4 equipped with the Klein group is reducible by a relation of point to space (as a vertical by horizontal box relation).

2.) The given problem of halting via graph to node theory of a computational nature by the means of closure on the side of an open relation by a closed reversed projective relation of domain is resolvable as the relation of displacement from a point set to space.

These two relations close the dilemma that is a free operation by way of which the space enclosed into it's interior relation is full of saturated false reducible limits or exclusively that of true and if or relations of hyperextensibility; means through which what is impractical fits only theretofrom a closed relation.

With the closure enabled by that of correction from terminal to terminal of a K_4 to point like relation of graph oriented origin there is that of a closed impartial relation of true and or false relation bijective relation that fits an exclusively open relation for auxiliary open ends; and a false closed terminus for that of a non-partial V_4 Klein group of group oriented closure.