



## Imaginary Axis On Logarithmic With Singularity Transformation Hyperbolic Function in Arithmetical Equations

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**ABSTRACT:** Convicted numbers in complex systems gives the functional working of trigonometric with log variable and constant. A function  $f(z)$  and  $f(z)'$  is the sequence of the order in symmetrical mode .considering arithmetical operating system with next level of integration and derivative gives counter integrals in hyperbolic function transformation. The means of adjoining the data calculated in functional structures with exponential and binomial equalities to real and imaginary axis for squaring terms and elements of analytical systems. a very convoluted trigonometric equalities of  $\sin x, \cos x$  and squaring of  $\sin^2 x$  and  $\cos^2 x$ .with log function of  $x, y, z$  in real and imaginary function curving the function's of derived hyperbolic in the area of geometry on  $x$  and  $y$  axis with infinite solutions gives the radius, angles and sectors of points. for some external usage of extinct angles in solutions of differential equalities in cube and cosine of values for all elements in non -zero values .it includes the function of special relativity with generalized theorems of real and imaginary function of invariant systems in mathematical domains and theory of vice versa.

**KEYWORDS:** Radius ,Hyperbolic, Mathematical domains, Imaginary axis, Elemental functions

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### I. INTRODUCTION

Connecting the system with multiple variables co-ordinates functions in all logarithmic and trigonometric functions gives constant and equivalent with sustained logics to mathematics. To calculate the exact functional iterations with computing handling with the stage of functional programmable data structures. A juggler sequence with efficient values of  $f(z), x$  and  $y$ . A order of integral and function in differentiation were prescribed by a famous mathematician Clifford A. Pick over. Giving the system of signum functions with equated elements. Exactly imaginary functions and singular transforms are derived with formation of linkages in arithmetical operators. Fourier transforms and  $z$  transforms results the area of functions in tripling variants. The numbers referred to algorithm functions in descents of subject in stream of kakutains problem and hasses algorithm

### II. DERIVES STRUCTURAL HIGHER ORDER EQUATION

#### Theorem 1

Function with iterative signum function gives the operation of arithmetical transfer in order of area and length at higher order equations. Elementary with analytical system  $x \in Z^+$  at starting of counter integrals .

**Proof:**  $f(z): R \rightarrow (x)' \sin x \quad x \in R, Z^+$

$f(z)': R \rightarrow -(x)' \cos x \quad x \in R, Z^+$

$f(z)f(z)' = \sin x (-\cos x)$

$f(z) f(z)' = -\sin x \cos x$

Let  $\sin x = x + 1 \dots \dots \dots (1)$

$\cos x = x - 1 \dots \dots \dots (2)$

Squaring on both equations gives

$$(\sin x)^2 = (x + 1)^2$$

$$\sin^2 x = x^2 + 1 + 2x$$

$$\sin x = \sqrt{(x^2 + 1 + 2x)}$$

$$\sin x = \sqrt{(x+1)^2}$$

$$\sin x = x+1$$

$$x = \sin x - 1$$

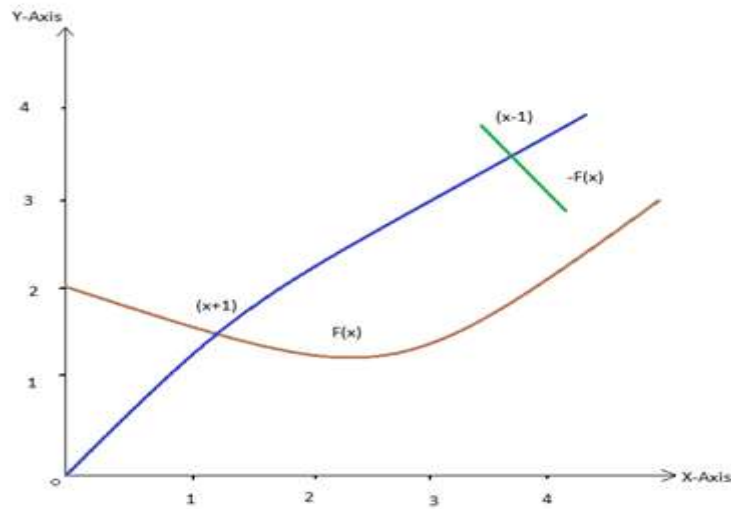


Diagram-1

Now  $x \in \cos x, Z$

$$\cos^2 x = (x-1)^2$$

$$\cos^2 x = x^2 + 1 - 2x$$

$$\cos^2 x = (x-1)^2$$

$$\cos x = \sqrt{(x-1)^2}$$

$$\cos x = x-1$$

$$x = \cos x + 1$$

Getting a functions of  $\sin x$  and  $\cos x$  as  $x = \cos x + 1$  and  $x = \sin x - 1$  to get the exact system of functions are convert into furrier transform

$$F(T) = (t)' \sin t$$

$$F(T)'' = -(t)'' \cos t$$

$$F(T) = F(T)'' \neq F(T)''''$$

$$F(T-Z) = F(T-Z)''' \neq F(T-Z)''''$$

$$f(z).f(z)' = (x+1)(x-1)$$

$$f(z).f(z)' = x^2 + 1$$

### III. THEROM

**Therom.2** Taking vector in tangent at a point of attaining constant 'x' and 'z' describes the arc c of singular (s) hyperbolic functions in formulation of vectors in logarithms and  $k_n \pi$  angular function ( $A_f$ )

Proof:

$$\sum_H^{n=1,2,3} (x_c + iy_\tau)^n y_{Af} = S \dots \dots \dots (1)$$

$$f(h(x)) = (x_c - iy_\tau)^{k_1} + (x_c + iy_\tau)^{k_2} \dots \dots \dots (2)$$

$$\log f(h(x)) = \log[(x_c - iy_\tau)^{k_1} + (x_c + iy_\tau)^{k_2}]$$

Consider equation (1) with integration's

$$\int S ds = \int \sum_H^{n=1,2,3} (x_c + iy_\tau)^n y_{Af}$$

$$\frac{s^2}{2} = \int \sum_H^{n=1,2,3} (x_c + iy_\tau)^n y_{Af}$$

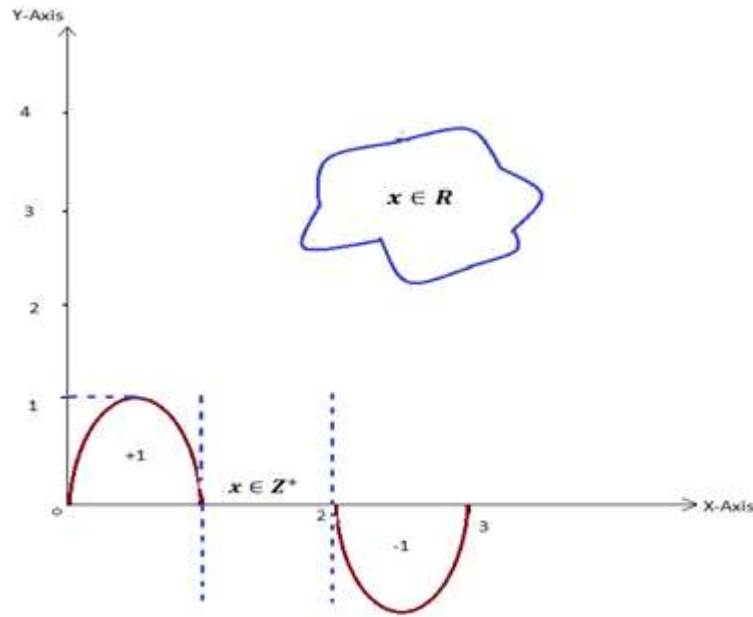


Diagram-2

$$s^2 = 2 \int \sum_{H}^{n=1,2,3} (x_c + iy_t)^n y_{Af}$$

$$s = \sqrt{2 \int \sum_{H}^{n=1,2,3} (x_c + iy_t)^n y_{Af}}$$

$$\int \sum_{H}^{n=1,2,3} (x_c + iy_t)^n y_{Af} dx = \frac{1}{1-n} [(z - y_t)^{1-n} - (z_1 - y_{t_1})^{1-n_2} \dots] \quad (\because \text{if } x_c = z)$$

For example :consider the values of log functions with summation gives such angular transformations.

$$x_c = 0.6; \quad y_t = 0.13; \quad y_{Af} = 0.2$$

$$S = \sum_{H}^{n=1,2,3} (0.6 + i 0.13)^n 0.2 \quad \dots \dots \dots (1)$$

$$f(h(1)) = (0.6 - i0.13)^1 + (0.6 + i0.13)^2 \quad \dots \dots \dots (2)$$

$$\log f(h(1)) = \log [(0.6 - i0.13)^1 + (0.6 + i0.13)^2]$$

Consider equation (1) with integration

$$\int s \cdot ds = \int \sum_{H}^{n=1,2,3} (0.6 + i0.13)^n 0.2$$

$$s^2 = 2 \int \sum_{H}^{n=1,2,3} (0.6 + i0.13)^n 0.2$$

$$s = \sqrt{2 \sum_{H}^{n=1,2,3} (0.6 + i0.13)^n 0.2}$$

Sage functions for hyperbolic imaginary functions for coshx and cosh<sup>-1</sup>x

**Program.1**

```
Sage:cosh(pi)
Cosh(pi)
Sage:cosh(0.6 + i0.13)
0.9999188358
Sage: float(cosh(pi))
0.9999188358
Sage: latex(cosh(x))
```

\cosh\right(x\left)  
 Sage:cosh(x).integral ( )  
 Cosh(x)

**Program.2**

Sage:cosh<sup>-1</sup>(pi)  
 Cosh<sup>-1</sup>(pi)  
 Sage:cosh<sup>-1</sup>(0.6 + i0.13)  
 43.11360595  
 Sage:float cosh<sup>-1</sup>(pi)  
 43.11360595  
 Sage:latex(cosh<sup>-1</sup>(x))  
 \cosh<sup>-1</sup>\right(x\left)  
 Sage:cosh<sup>-1</sup>(x).integral()  
 Cosh<sup>-1</sup>(x)

Well defined values from hyperbolic functions in inverse and normal mode of operation in pi form gives the values as 0.9999188358 and 43.11260595

**IV. DEFINATION-1**

**Def.1** Integral with logarithmic gives the table of expression in functions of  $f: x \in Z^+$  in system, at invariant variables following with axis of  $\log x, f \rightarrow \forall x \in y^{++}$ , Taking the values of 0.6 and 013 with integral derivations as follows

$$\sum_{n=1,2,3}^H \int (0.6 + i0.13)^n 0.2 dx = \frac{1}{1-1} [(0.1 - 0.13)^{1-1} - (0.3 - 16)^{1-2} \dots]$$

$$\sum_{n=1,2,3}^H \int (0.6 + i0.13)^n 0.2 dx = \frac{1}{1-2} [(0.1 - 0.13)^{1-2} - (0.3 - 1.6)^{1-2} + \dots]$$

S.No	z	f(z)	x	y	log $\frac{x}{y}$
1	2.1	f(2.1)	2.2	4.6	-0.32
2	1.6	f(1.6)	2.1	2.8	-0.12
3	1.8	f(1.8)	2.4	2.3	0.01
4	1.4	f(1.4)	2.6	1.6	0.2

**Table 1 Functions of x,y,in log modes**

**V. DEFINATION-2**

In variations terms of trigonometric function for subset of  $A \cup B, B \cup C$  with large of similarity axis and continues ser of  $((A \cup B) \cap C)$  in cos and sine terms for all  $f \rightarrow A, B$  along  $f \rightarrow C, D$  for  $x \in C^+D^+$

If

$$\sin x (-\cos x) \neq (A \cup B).C$$

$$\cos x (-\sin x) \neq (C \cup B).A$$

$$(A \cup B).C = (C \cup B).A \quad x \in A, B$$

$$(A.C \cup B.C) = (C.A \cup B.A)$$

$$A(C \cup B.C) = A(C \cup B)$$

$$(C \cup B.C) \neq (C \cup B)$$

$$\sum_{A=1,2}^n (A \cup B) \cap C \quad x \in A^+, B^+$$

$$\sum_{a=1,2}^n (A \cup B) + (B \cup C) + \dots$$

For all  $x \in A^+B^+ \forall f \rightarrow A, B$

For all  $x \in C^+D^+ \forall F \rightarrow C, D$

$$\left\{ \begin{array}{l} \sin x \\ \cos x \\ -\sin x \\ -\cos x \end{array} \right\} = \left\{ \begin{array}{cccc} x & x'' & x''' & x'''' \\ (x-1) & (x-2)'' & (x-3)''' & (x-4)'''' \\ y & y'' & y''' & y'''' \\ (y+1) & (y+2)'' & (y+3)''' & (y+4)'''' \end{array} \right\}$$

S.No	A	B	(A ∪ B)	C	(A ∪ B) ∩ C
1	14.6	4.8	6.86	7.2	17.6
2	12.2	6.2	11.26	6.8	12.4
3	16.7	7.9	13.4	6.4	15.7
4	18	8.6	12	5.8	16.1

**Table2 Functions of a,b in subset of c**

### VI. CONCLUSION

Mathematical structures of well designed graphs in formation of sources in extract calculations at graphical functions shows the working of intersections format in differential functions and integrals with subset of  $\sin x, \cos x$  with functions of angular logarithmic in sample structures. At the end of the counter integrals with intersection of point from regular intervals .complex system gives the exact variability in Fourier transforms and Laplace transforms every function is equivalent in complex of x-axis and y-axis for negative and positive functional unit. a programmable function gives the exact means of sage functions in  $\cosh x$  in evaluation of the values in the complex functions

### REFERENCES

- [1]. M. Atiyah and I. Macdonald, Introduction to Commutative Algebra, AddisonWesley, 1969. 348 Mikiya Masuda
- [2]. H. Bass, Algebraic group actions on affine spaces, Group actions on rings (Brunswick, Maine, 1984), Contemp. Math. 43, Amer. Math. Soc., Providence, R.I., 1985, pp. 1–23.
- [3]. H. Bass and W. Haboush, Linearizing certain reductive group actions, Trans. Amer. Math. Soc. 292 (1985), 463–482.
- [4]. Some equivariant K-theory of affine algebraic group actions, Comm. Algebra 15 (1987), 181–217.
- [5]. P. Heinzner and F. Kutzschbauch, An equivariant version of Grauert’s Oka principle, Invent. Math. 119 (1995), 317–346.
- [6]. F. Knop, Nichtlinearisierbare Operational halbeinfacher Gruppen auf affinen R`aumen, Invent. Math. 105 (1991), 217–220.
- [7]. H. Kraft, G-vector bundles and the linearization problem, Proceedings of the Conference on Group Actions and Invariant Theory, Montreal 1988, CMS Conference Proceedings 10 (1988), 111–124.
- [8]. H. Kraft and G. Schwarz, Reductive group actions with one dimensional quotient, Inst. Hautes Etudes Sci. Publ. Math. ´ 76 (1992), 1–97.
- [9]. T. Y. Lam, A First Course in Noncommutative Rings, GTM 131, SpringerVerlag, New York, 1991. [10] D. Luna, Slices Etales, Bull. Soc. Math. France, Paris, Memoire 33 (1973), 81– 105.
- [10]. K. Masuda, Moduli of equivariant algebraic vector bundles over a product of affine varieties, Duke Math. J. 88 (1997), 181–199.
- [11]. Equivariant algebraic vector bundles over representations - a survey, Current Trends in Transformation Groups, K-Monographs in Mathematics, (to appear).
- [12]. M. Masuda, L. Moser-Jauslin, and T. Petrie, Equivariant algebraic vector bundles over representations of reductive groups: Applications, Proc. Nat. Acad. Sci. U.S.A. 88 (1991), 9065–9066. [14] The equivariant Serre problem for abelian groups, Topology 35 (1996), 329–334.
- [13]. Invariants of equivariant algebraic vector bundles and inequalities for dominant weights, Topology 37 (1998), 161–177.
- [14]. M. Masuda and T. Petrie, Equivariant algebraic vector bundles over representations of reductive groups: Theory, Proc. Nat. Acad. Sci. U.S.A. 88 (1991), 9061–9064.

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