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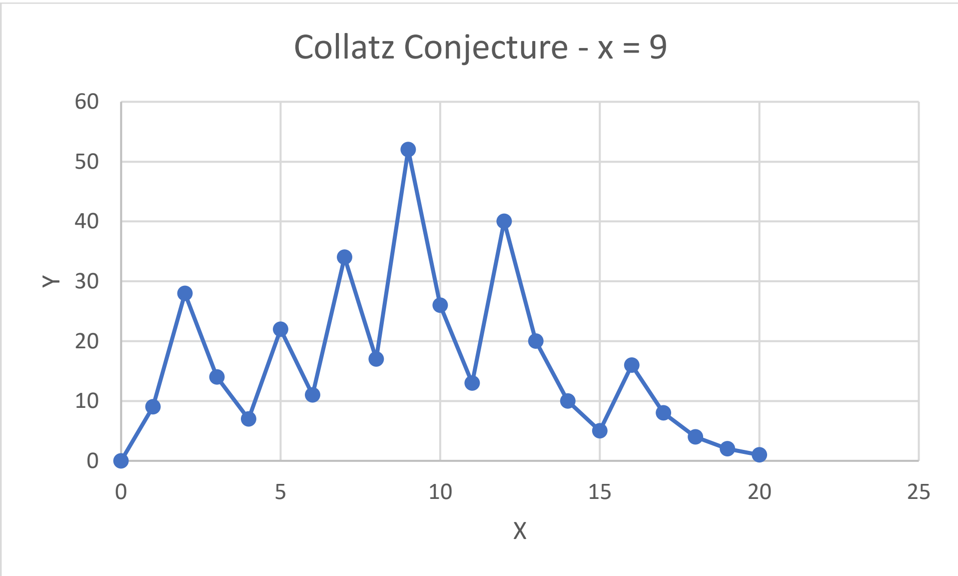
CAPVT I - Longevitvs De Collatz Conjectvre: Qvid Explicatio De?

For this first Volume, I will give you all 4 pioneering tidbits of knowledge that I have been given by the Lord, our God, to share to you all. It is with great honor that I bestow such knowledge upon you lot: call me wicked, crazy, mentally unfit, or incorrect to state such matters, but even if I had thought of such knowledge, it would not have been mine to share in the first place.

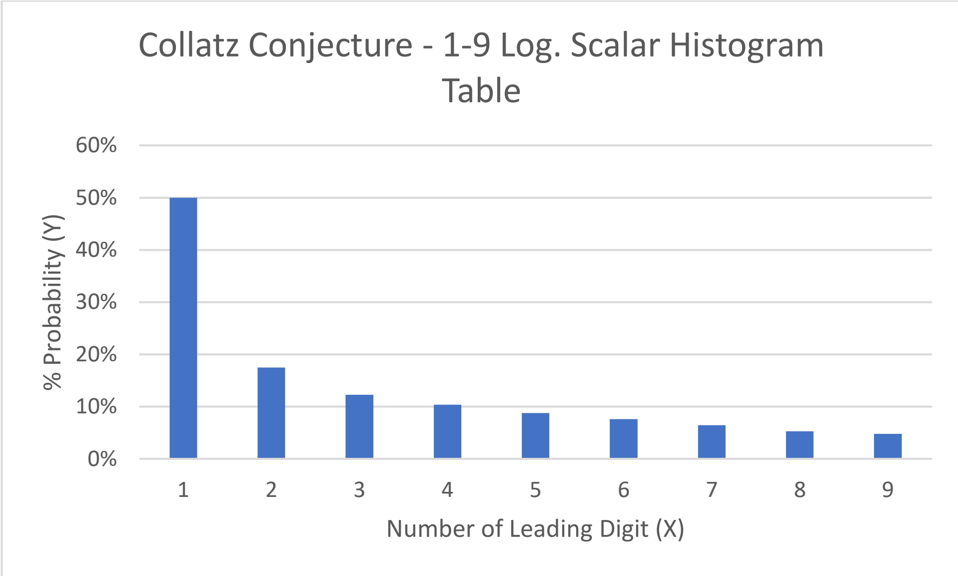
First up is the solution to various Mathematical Solutions, such as Collatz Conjecture and the Riemann Hypothesis: I will combine these two into one Solution later, so don't worry about losing an extra slot. Thus, the solution for Collatz Conjecture, as such, is such and, as such, this Chapter will regard Collatz Conjecture and my Solution to it, including, but not limited to, an explanatory, step-by-step solution/proof of Collatz Conjecture.:

If 3x + 1 when odd & $\frac{1}{2}$ when even, then a loop will occur between 4, 2, & 1. Thus, since the graph is:



It is random; take log & get Benford's Law.

Since Benford's Law can easily be assumed, take X, Y as graph approaches Y = 1. If Y = 1, X ≠ 1, then the graph is logarithmic in scale with a linear regression. Thus, since X, Y are, in nature, a sequence of random arbitrary constants, take the 4, 2, 1 pattern's arbitrary constant values to represent a quantized numerical dataset distribution & separate each value from 1-9 in their leading digit into separate categories. Thus, the following Histogram Table can be made according to the Percentages of Probabilities per Number of Leading Digit, X.



So, therefore each value is represented by Benford's Law. Take the Law of Randomness, as well as the Law of Numbers, & apply it to a histogram dataset distribution table with their respective X, Y arbitrary constant values.

If 1 = 50%, then 2 = 17.5%, then 3 = 12.275%, & so forth to create a string of arbitrary constants used as points of reference for probability distribution.

If we take a percentage of the dataset distribution table X, Y arbitrary constant values & convert them into double integrals based on the percentage of probability of each Number of Leading Digit, depending on the Number of Leading Digit selected (due to $\frac{3x+1}{2}$ & $\frac{1}{2}$), then you receive the following equation to solve for X:

$$1 = \int \left(\int \left((1dx) \cdot (0.5dx) \right) \right) dy$$

$$= (C + x) * 0.5dxy + C$$

Thus, to solve for X = 2:

$$2 = \int \left(\int \left((2dx) \cdot (0.175dx) \right) \right) dy$$

$$= (C + 2x) \cdot 0.175dxy + C$$

Thus, to solve for X = 3:

$$3 = \int \left(\int \left((3dx) \cdot (0.1275dx) \right) \right) dy$$

$$= (C + 3x) \cdot 0.1275dxy + C$$

Thus, to solve for X = 4:

$$4 = \int \left(\int \left((4dx) \cdot (0.10375dx) \right) \right) dy$$

$$= (C + 4x) \cdot 0.10375dxy + C$$

Thus, to solve for X = 5:

$$5 = \int \left(\int \left((5dx) \cdot (0.08775dx) \right) \right) dy$$

$$= (C + 5x) \cdot 0.08775dxy + C$$

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Thus, to solve for X = 6:

$$6 = \int \left(\int \left((6dx) \cdot (0.07625dx) \right) \right) dy$$

$$= (\mathrm{C} + 6x) \cdot 0.07625dxy + \mathrm{C}$$

Thus, to solve for X = 7:

$$7 = \int \left(\int \left((7dx) \cdot (0.06425dx) \right) \right) dy$$

$$= (\mathrm{C} + 7x) \cdot 0.06425dxy + \mathrm{C}$$

Thus, to solve for X = 8:

$$8 = \int \left(\int \left((8dx) \cdot (0.0525dx) \right) \right) dy$$

$$= (\mathrm{C} + 8x) \cdot 0.0525dxy + \mathrm{C}$$

Thus, to solve for X = 9:

$$9 = \int \left(\int \left((9dx) \cdot (0.0475dx) \right) \right) dy$$

$$= (\mathrm{C} + 9x) \cdot 0.0475dxy + \mathrm{C}$$

Since such a pattern emerges, calculate any X value for said Y arbitrary constant. Thus, calculate for X-value on the Main Graph of each Number, N, used in conjunction with each X, Y value on the Collatz Conjecture Table/Graph respectful of the selected Y-value and solve.

Thus, for 1:

$$1 = (\mathrm{C} + x) \cdot (0.5dxy + \mathrm{C})$$

Since we used X = 2 before, we calculate the Y-value according to the “step” of the X value parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 1, and since you must take an odd number by $3x + 1$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y - value.

Thus, when X = 1, the first, and only, step, S, in the sequence, Y = 1. Thus, plug in Y = S into the X value.

Thus, for 1:

$$= (\mathrm{C} + (1)) \cdot (0.5dxy + \mathrm{C})$$
$$= 0.5\mathrm{C}ydx + \mathrm{C}^2 + 2ydx + 4\mathrm{C}$$

Since we used X = 2 before, we calculate the Y-value according to the “step” of the Xvalue parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 2, and since you must take an even number by $\frac{\mathrm{X}}{2}$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y-value. Thus, when X = 1, the next step, S, in the sequence, Y = 1. Thus, plug in Y = S into the X value.

Thus, for 2:

$$2 = (\mathrm{C} + 2x) \cdot (0.175dxy + \mathrm{C})$$
$$= (\mathrm{C} + 2(1)) \cdot (0.175dxy + \mathrm{C})$$
$$= 0.175y\,(\mathrm{C} + 2)\,dx + \mathrm{C}$$

Since we used X = 3 before, we calculate the Y-value according to the “step” of the Xvalue parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 3, and since you must take an even number by $3x + 1$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y- value. Thus, when X = 1, the next step, S, in the sequence, Y = 10. Thus, plug in Y = S into the X value.

Thus, for 3:

$$3 = (\mathrm{C} + 3x) \cdot (0.1275dxy + \mathrm{C})$$
$$= (\mathrm{C} + 3(10)) \cdot (0.1275dxy + \mathrm{C})$$
$$= 0.1275y\ (\mathrm{C} + 30)\ dx + \mathrm{C}$$

Since we used X = 4 before, we calculate the Y-value according to the “step” of the Xvalue parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 4, and since you must take an even number by $\frac{\mathrm{X}}{2}$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y-value. Thus, when X = 1, the next step, S, in the sequence, Y = 2. Thus, plug in Y = S into the X value.

Thus, for 4:

$$4 = (\mathrm{C} + 4x) \cdot (0.10375dxy + \mathrm{C})$$
$$= (\mathrm{C} + 4(2)) \cdot (0.10375dxy + \mathrm{C})$$
$$= 0.10375y\ (\mathrm{C} + 8)\ dx + \mathrm{C}$$

Since we used X = 5 before, we calculate the Y-value according to the “step” of the Xvalue parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 5, and since you must take an even number by $3x + 1$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y-value. Thus, when X = 1, the next step, S, in the sequence, Y = 16. Thus, plug in Y = S into the X value.

Thus, for 5:

$$5 = (\mathrm{C} + 5x) \cdot (0.08775dxy + \mathrm{C})$$
$$= (\mathrm{C} + 5(16)) \cdot (0.08775dxy + \mathrm{C})$$
$$= 0.08775y\ (\mathrm{C} + 80)\ dx + \mathrm{C}$$

Since we used X = 6 before, we calculate the Y-value according to the “step” of the Xvalue parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 6, and since you must take an even number by $\frac{\mathrm{X}}{2}$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y-value. Thus, when X = 1, the next step, S, in the sequence, Y = 3. Thus, plug in Y = S into the X value.

Thus, for 6:

$$6 = (\mathrm{C} + 6x) \cdot (0.07625dxy + \mathrm{C})$$
$$= (\mathrm{C} + 6(3)) \cdot (0.07625dxy + \mathrm{C})$$
$$= 0.07625y\ (\mathrm{C} + 18)\ dx + \mathrm{C}$$

Since we used X = 7 before, we calculate the Y-value according to the “step” of the Xvalue parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 7, and since you must take an even number by $3x + 1$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y-value. Thus, when X = 1, the next step, S, in the sequence, Y = 22. Thus, plug in Y = S into the X value.

Thus, for 7:

$$7 = (\mathrm{C} + 7x) \cdot (0.06425dxy + \mathrm{C})$$
$$= (\mathrm{C} + 7(22)) \cdot (0.06425dxy + \mathrm{C})$$
$$= 0.06425y\ (\mathrm{C} + 154)\ dx + \mathrm{C}$$

Since we used X = 8 before, we calculate the Y-value according to the “step” of the Xvalue parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 8, and since you must take an even number by $\frac{x}{2}$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y-value. Thus, when X = 1, the next step, S, in the sequence, Y = 4. Thus, plug in Y = S into the X value.

Thus, for 8:

$$8 = (C + 8x) \cdot (0.0525dxy + C)$$
$$= (C + 8(4)) \cdot (0.0525dxy + C)$$
$$= 0.0525y\ (C + 32)\ dx + C$$

Since we used X = 9 before, we calculate the Y-value according to the "step" of the Xvalue parallel to the Main Table/Graph used for N = 1 such that each graph is equal to the next step, S.

Thus, since X = 0 has a Y-value of Y = 9, and since you must take an even number by $3x + 1$, then plug in X = 0, which is according to the Table/Graph, into x, and that is your Y-value. Thus, when X = 1, the next step, S, in the sequence, Y = 28. Thus, plug in Y = S into the X value.

Thus, for 9:

$$9 = (C + 9x) \cdot (0.0475dxy + C)$$
$$= (C + 9(28)) \cdot (0.0475dxy + C)$$
$$= 0.0475y\ (C + 252)\ dx + C$$

Now, considering what we have done here is only of one singular step, S, continue to solve for each step according to the Main Collatz Conjecture Table/Graph of each Number, N.

Nevertheless, we are left with y: plug in the y-value: plug in the y-value on the Main Graph of each Number, N, used in conjunction with each X, Y value on the Collatz Conjecture Table/Graph respectful of the current problematic solution selected x-value and solve.

Thus, for 1:

$$1 = 0.5ydx + C^2 + 2ydx + 4C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

$$= 0.5((1)\ dx + C^2) + 2(1)\ dx + 4C$$
$$= 0.5C2 + 4C + 2.5dx$$

Thus, for 2:

$$2 = 0.175y\ (C + 2)\ dx + C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

$$= 0.175(1)\ (C + 2)\ dx + C$$
$$= 0.175(C + 2)\ dx + C$$

Thus, for 3:

$$3 = 0.1275y\ (C + 30)\ dx + C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

$$= 0.1275(1)\ (C + 30)\ dx + C$$
$$= 0.1275(C + 30)\ dx + C$$

Thus, for 4:

$$4 = 0.10375y\ (C + 8)\ dx + C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

$$= 0.10375(1)\ (C + 8)\ dx + C$$
$$= 0.10375(C + 8)\ dx + C$$

Thus, for 5:

$$5 = 0.08775y\ (C + 80)\ dx + C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

$$= 0.08775(1)\ (C + 80)\ dx + C$$
$$= 0.08775(C + 80)\ dx + C$$

Thus, for 6:

$$6 = 0.07625y\ (C + 18)\ dx + C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

$$= 0.07625(1)\ (C + 18)\ dx + C$$
$$= 0.07625(C + 18)\ dx + C$$

Thus, for 7:

$$7 = 0.06425y\ (C + 154)\ dx + C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

$$= 0.06425(1)\ (C + 154)\ dx + C$$
$$= 0.06425(C + 154)\ dx + C$$

Thus, for 8:

$$8 = 0.0525y\ (C + 32)\ dx + C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

$= 0.0525(1)\ (C + 32)\ dx + C$
$= 0.0525(C + 32)\ dx + C$

Thus, for 9:

$$9 = 0.0475y\ (C + 252)\ dx + C$$

Plug in the designated number, $y = 1$, & plug into y respectfully. Then solve using F.O.I.L. Method & Simplify:

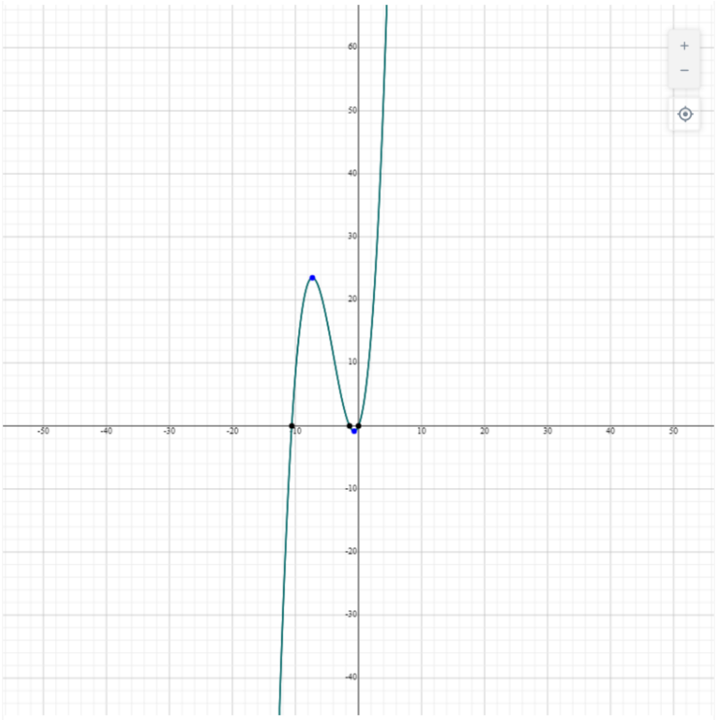
$$= 0.0475(1)\ (C + 252)\ dx + C$$
$$= 0.0475(C + 252)\ dx + C$$

Now, as such, we are left with C: When received only C as the main arbitrary constant, take the antiderivative of each equation respectively:

Thus, for 1:

$$1 = \int (0.5C^2 + 4C + 2.5dx)$$
$$= 0.1667x^3 + 2x^2 + 2.5x + C$$

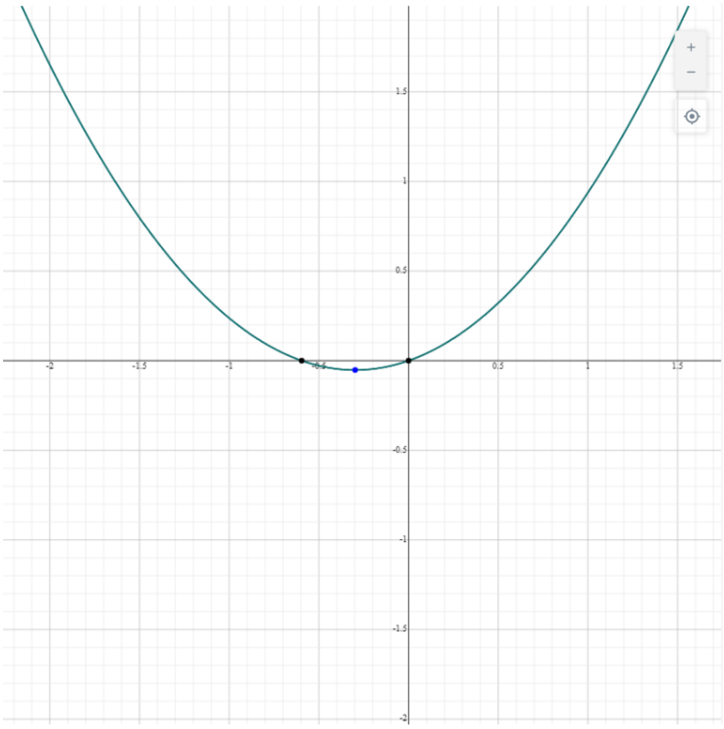
Thus, the graph for the following equation is the following:



Thus, for 2:

$$2 = \int (0.175(C + 2)\ dx + C)$$
$$= 0.5875x^2 + 0.35x + C$$

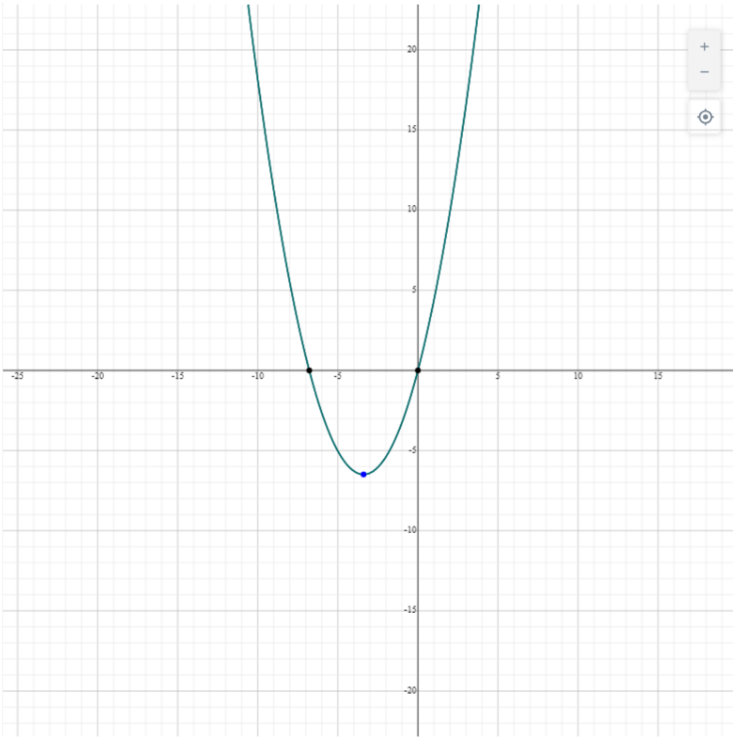
Thus, the graph for the following equation is the following:



Thus, for 3:

$$3 = \int (0.1275(C + 30)\ dx + C)$$
$$= 0.56375x^2 + 3.825x + C$$

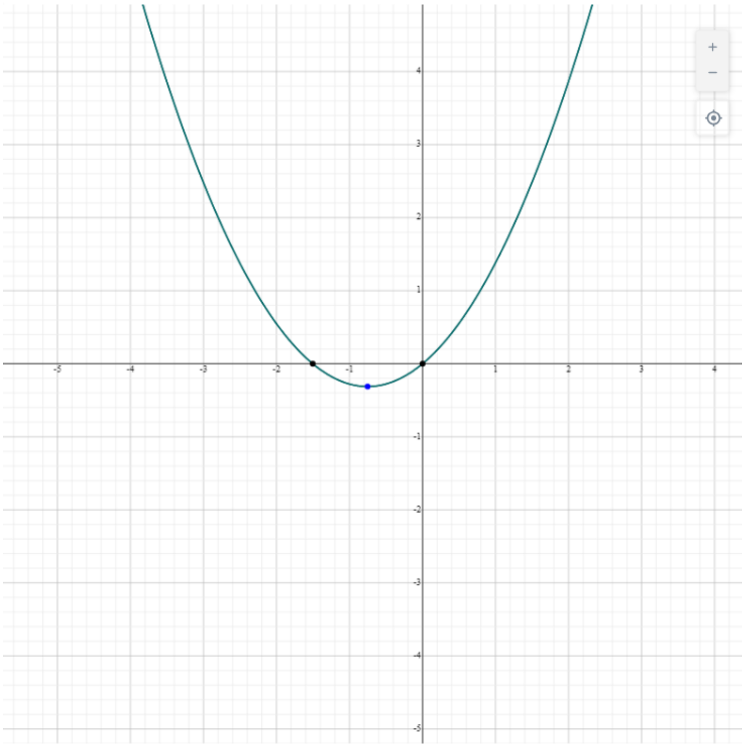
Thus, the graph for the following equation is the following:



Thus, for 4:

$$4 = \int (0.10375(C + 8)\ dx + C)$$
$$= 0.551875x^2 + 0.83x + C$$

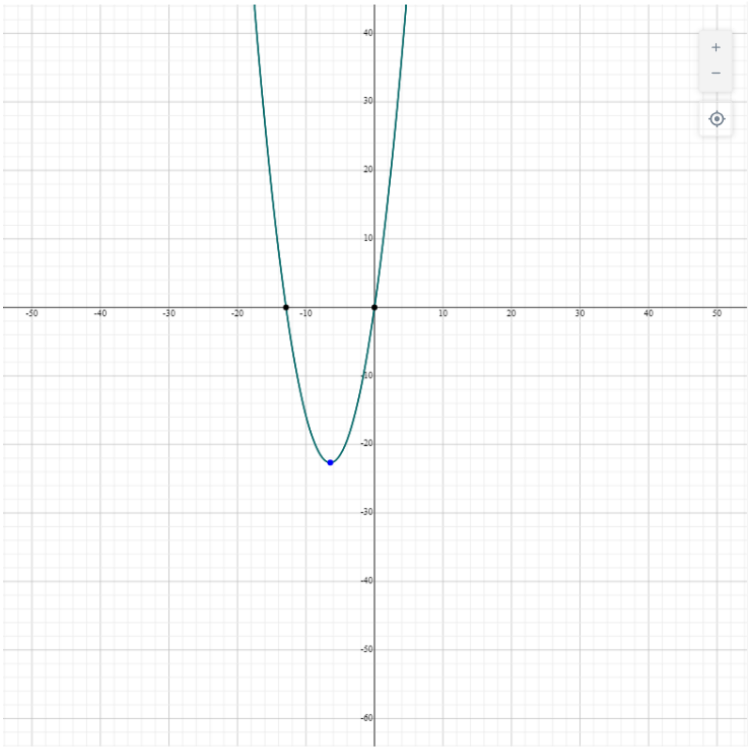
Thus, the graph for the following equation is the following:



Thus, for 5:

$$5 = \int (0.08775(C + 80)\ dx + C)$$
$$= 0.543875x^2 + 7.02x + C$$

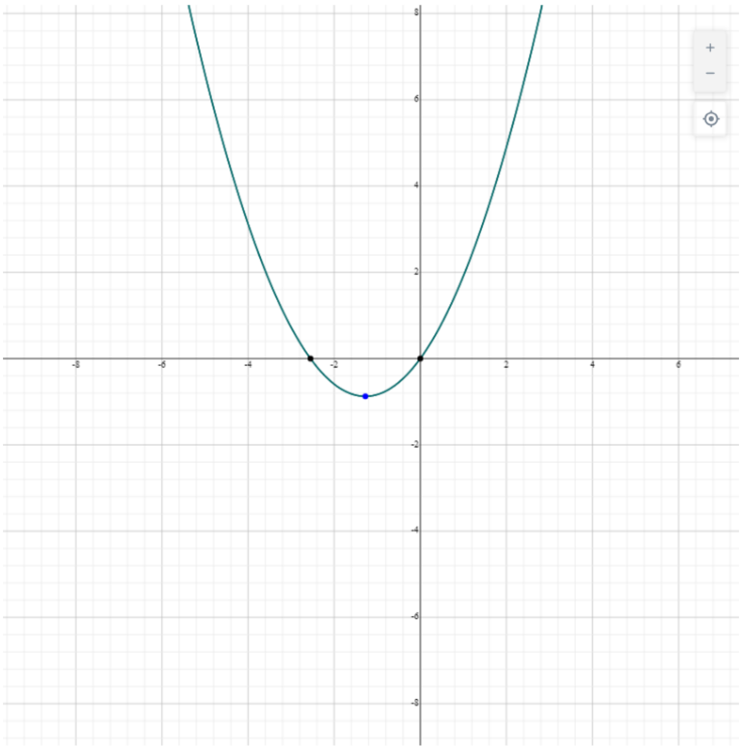
Thus, the graph for the following equation is the following:



Thus, for 6:

$$6 = \int (0.07625(C + 18)\ dx + C)$$
$$= 0.538125x^2 + 1.3725x + C$$

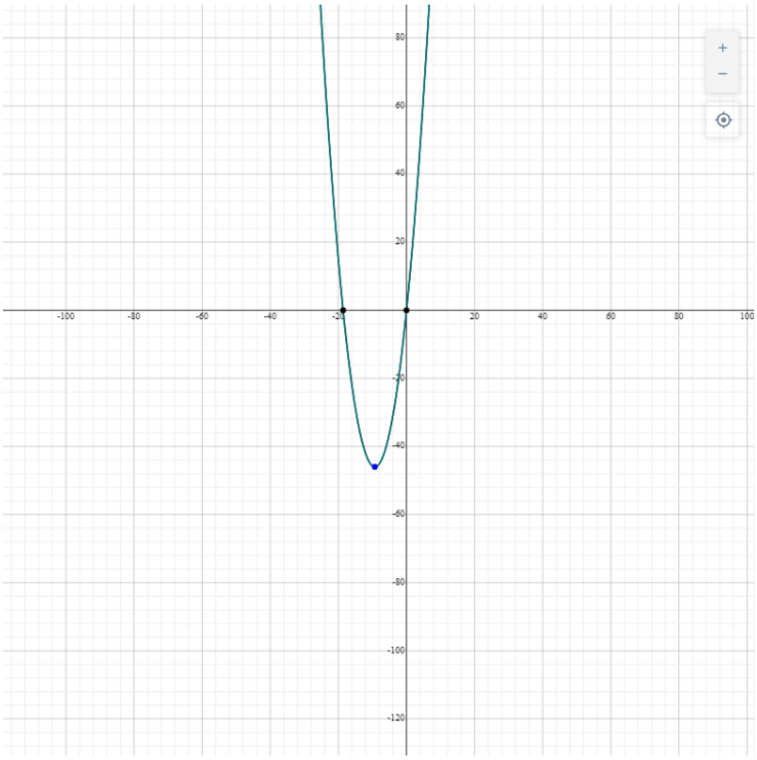
Thus, the graph for the following equation is the following:



Thus, for 7:

$$7 = \int (0.06425(C + 154)\ dx + C)$$
$$= 0.532125x^2 + 9.8945x + C$$

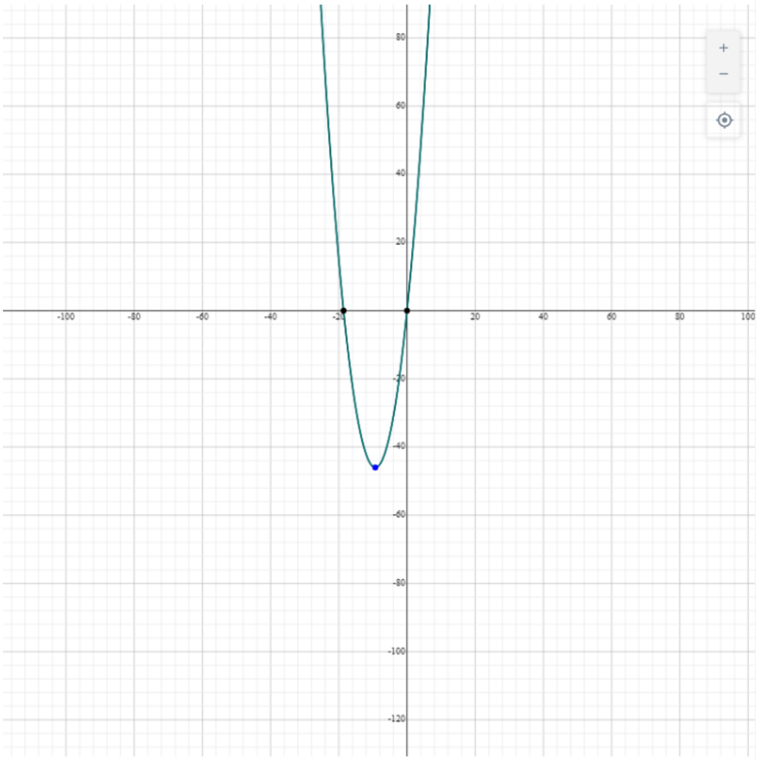
Thus, the graph for the following equation is the following:



Thus, for 8:

$$8 = \int (0.0525(C + 32)\, dx + C)$$
$$= 0.52625x^2 + 1.68x + C$$

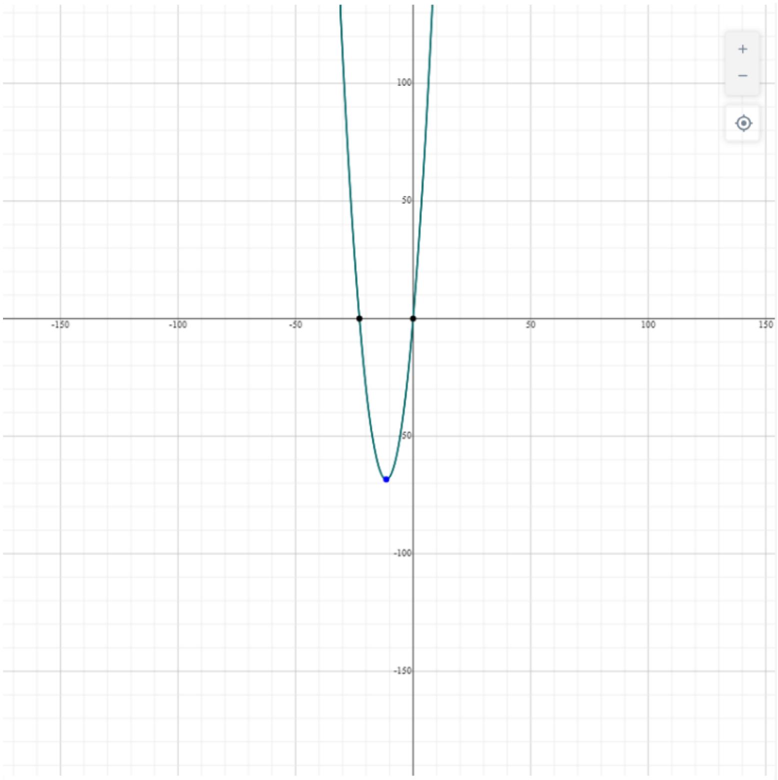
Thus, the graph for the following equation is the following:



Thus, for 9:

$$9 = \int (0.0475(C + 252)\, dx + C)$$
$$= 0.52375x^2 + 11.97x + C$$

Thus, the graph for the following equation is the following:



Thus, we get a unique geometric graphical solution per number n. If each expression, valued by a specific number, s, then for every numerical step, geometrically, s_n, Binomial probability distribution of each value n, s, & each numerical step geometrical value, s_n, such that:

$$\mathrm{P_x} = \binom{n}{x} p^x q^{n-x}$$

&:

$$\mathrm{P_y} = \binom{n}{y} p^y q^{n-y}$$

Thus, since each binomial distribution is based on either x, y, then:

$$\binom{n}{x} = nCx = \frac{n!}{(n-x)!\,x!}$$

$$\binom{n}{y} = nCy = \frac{n!}{(n-y)!\,y!}$$

Thus, if each x, y value has n_s power, due to the quadratic relationship, take Quadratic probability distribution due to the nature of the powers of the Binomial that essentially create a newer power function of the probability distribution:

$$\binom{n}{x} = nCx = \frac{n!}{(n-x)!\,x!} = \binom{n}{y} = nCy = \frac{n!}{(n-y)!\,y!}$$
$$= \frac{n!}{(n-s_n)!\,s_n!} \cdot \left[\frac{p^x}{q^{-n+x}} + \frac{p^y}{q^{-n+y}} + \ldots + \frac{p^{s_n}}{q^{-n+s_n}} + \frac{p^{n_s}}{q^{-n+n_s}}\right]$$

Thus, as such, the following is true for the localized functions:

Thus, for x:

$$\mathrm{P_x} = \binom{n}{x} p^x q^{n-x} = \frac{n!}{(n-x)!\,x!} p^x q^{n-x}$$

If:

$$\mathrm{P_{x_x}} = \left[\frac{n!}{(n-x)!\,x!} p^x q^{n-x}\right] \cdot \binom{n}{x} p^x q^{n-x} = \left[\left[\frac{n!}{(n-x)!\,x!} p^x q^{n-x}\right] \cdot \frac{n!}{(n-x)!\,x!} p^x q^{n-x}\right]$$

$$n = 9$$

&:

$$x = 5$$

Then:

$$\mathrm{P_x} = \binom{4}{1} (0.5)^1 (0.5)^{4-1} = \left[\left[\frac{9!}{(9-5)!\,5!} (0.5)^5 (0.5)^{9-5}\right] \cdot \frac{9!}{(9-5)!\,5!} (0.5)^5 (0.5)^{9-5}\right]$$

Such that:

$$\mathrm{P(x = 1) = 0.0000018482}$$

$$\mathrm{P(x < 1) = 0.0000085426}$$

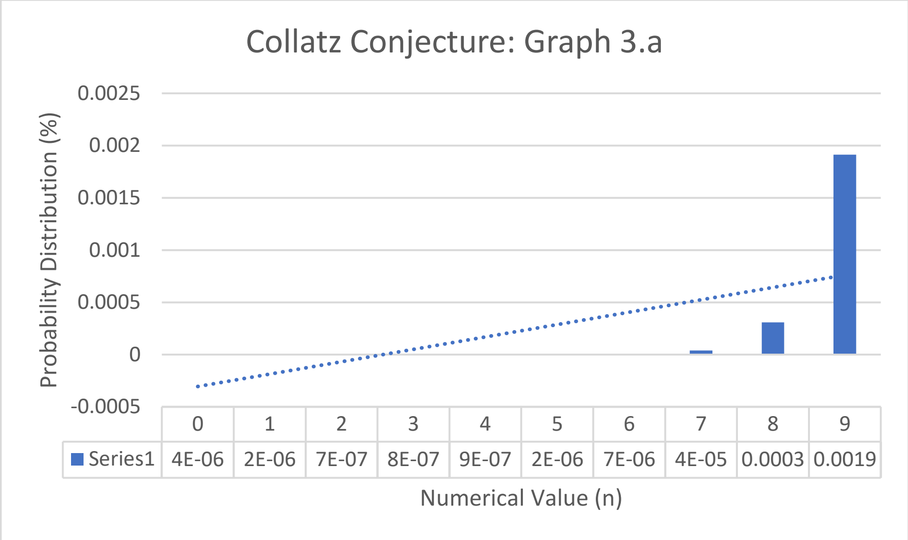
$$\mathrm{P(x \leq 1) = 0.000010391}$$

$$\mathrm{P(x > 1) = 0.0022640}$$

&:

$$\mathrm{P(x \geq 1) = 0.0022658}$$

Such that the graph of the overall probability distribution table is:



	0	1	2	3	4	5	6	7	8	9
Series1	4E-06	2E-06	7E-07	8E-07	9E-07	2E-06	7E-06	4E-05	0.0003	0.0019

& So forth until you reach n = 9.

The reason as to why the skewed values for the probability distribution (histogram) table can and will be more than 1 in total value is because of the solution in question: that is, when you add, subtract, multiply, divide, or, generally, combine/dissolve in any way, two or more probability distribution types, not dependent on if they are the same type (i.e. Uniform to Uniform or Poisson to Random to Binomial) and regardless if they are combinative or dissolutionitive, generally, there will be the excess of one or more values that you must take into account. Therefore, when you have multiple distribution types combined/dissolved into one another, there will be a superposition of them together depending on the operations used to do so. Therefore, if there are more than 1 probability distribution type used, they can be more than 1 as well as negative in value.

Since we combined the methods of Binomial & Quadratic probability distribution, to include a solution to solve outside of the 4, 2, & 1 cycle, include the Random, Poisson, Bernoulli, & Uniform probability distribution equations respectively & combine them into one expression.

Thus, Poisson probability distribution is:

$$\mathrm{P_x} = \frac{\lambda^{x} e^{-\lambda}}{x!}$$

Thus, Random probability distribution is:

$$\mathrm{P_x} = \left(\frac{1}{\sqrt{2\pi\sigma^2}}\right)\left(e^{\frac{[-(x-\mu)^2]}{2\sigma^2}}\right)$$

Thus, Uniform probability distribution is:

$$\mu_u = \frac{a+b}{2}$$

Thus, U-Quadratic probability distribution is:

$$\mathrm{P}\binom{\alpha}{\beta} = \alpha \cdot (x-\beta)^2$$

Thus, $\mathrm{P_{x_n}}$ =:

$$\mathrm{P_{x_n}} = \left[\left[\left[\frac{n!}{(n-x)!\,x!}p^x q^{n-x}\right] \cdot \left[\frac{n!}{(n-x)!\,x!}p^x q^{n-x}\right]\right] + [\alpha \cdot (x-\beta)^2] + \left[\frac{a+b}{2}\right] + \left[\frac{\lambda^{x} e^{-\lambda}}{x!}\right] - \left[\left(\frac{1}{\sqrt{2\pi\sigma^2}}\right)\left(e^{\frac{[-(x-\mu)^2]}{2\sigma^2}}\right)\right]\right]$$

Thus, if $\mathrm{P_{x_n}}$ is the following equation above, then take each distribution value relative to the specified numerical value, n, & calculate the probability of the next value to continue after, & instead, of the 4, 2, & 1 cycle.

Thus, if:

$$\mathrm{P_{x_n}} = \left[\left[\left[\frac{n!}{(n-x)!\,x!}p^x q^{n-x}\right]\left[\frac{n!}{(n-x)!\,x!}p^x q^{n-x}\right]\right] + [\alpha \cdot (x-\beta)^2] + \left[\frac{a+b}{2}\right] + \left[\frac{\lambda^{x} e^{-\lambda}}{x!}\right] - \left[\left(\frac{1}{\sqrt{2\pi\sigma^2}}\right)\left(e^{\frac{[-(x-\mu)^2]}{2\sigma^2}}\right)\right]\right]$$

$$n = 9$$

$$x = 5$$

$$p = 0.5$$

$$q = 0.5$$

$$a = 9$$

$$b = 0$$

$$\sigma_x^2 = \sqrt{\frac{\sum(x + x_n)^2}{n+1}}$$

&:

$$\lambda = 2$$

Thus, as such:

$$P(X = x) = 0.10297$$

$$P(X < x) = 1.50354$$

$$P(X \leq x) = 1.60651$$

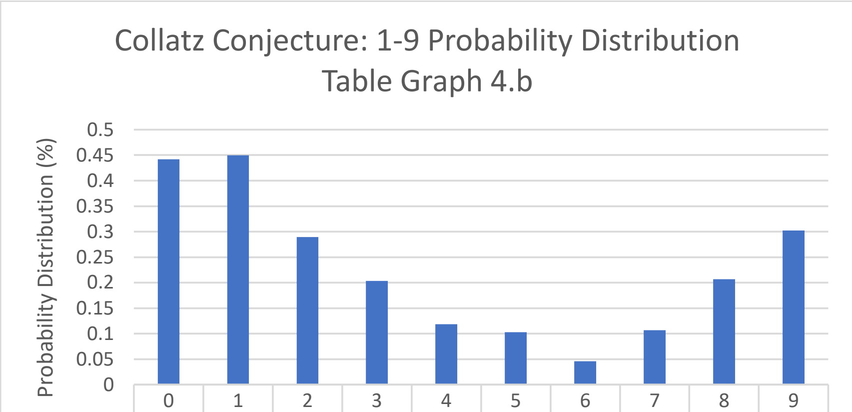
$$P(X > x) = 0.66166$$

$$P(X \geq x) = 0.76463$$

Again, the reason as to why the skewed values for the probability distribution (histogram) table can and will be more than 1 in total value is because of the solution in question: that is, when you add, subtract, multiply, divide, or, generally, combine/dissolve in any way, two or more probability distribution types, not dependent on if they are the same type (i.e. Uniform to Uniform or Poisson to Random to Binomial) and regardless if they are combinative or dissolutionitive, generally, there will be the excess of one or more values that you must take into account. Therefore, when you have multiple distribution type combined/dissolved into one another, there will be a superposition of them together depending on the operations used to do so.

Therefore, if there are more than 1 probability distribution types used, they can be more than 1 as well as negative in value.

Thus, the following distribution table for the following Table of Distribution is as follows (for numerical numbers 1-9):



	0	1	2	3	4	5	6	7	8	9
Series1	0.442	0.45	0.2896	0.2032	0.1187	0.103	0.046	0.1067	0.2065	0.3024

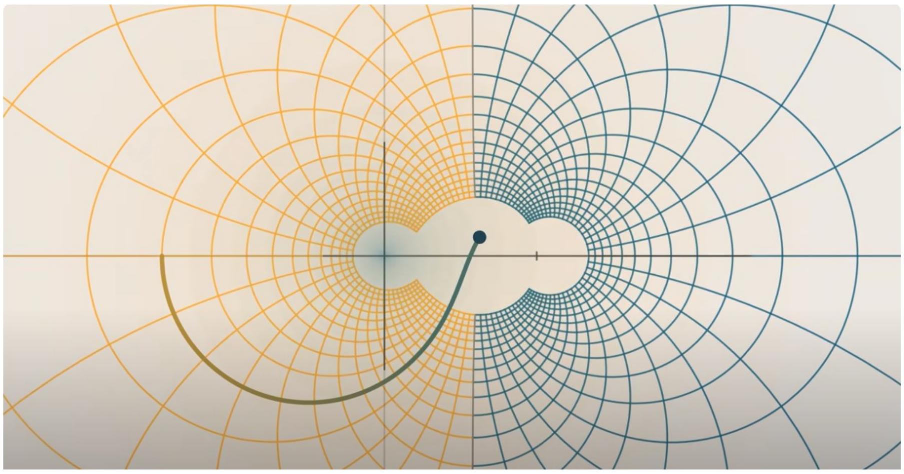
Thus, with the data concluded, each value is not totaled together with each other respectively, rather they are separate in nature, only dependent to the n values' numerical number, either respectful of either x or y on the geometric graph of the n values' relative function & power, ns.

Thus, to calculate what value should go next after, & instead, of the 4, 2, & 1 cycle, take each n value & discriminate them with due respect to their x-value's probability distribution probability, calculated in their own formulation of arbitrary constants, & solve for the 2, or more, values needed to go after, & instead, of the 4, 2, & 1 cycle.

CAPVT II - Riemann Hypothesis: Qvid De is?

When it comes to the Riemann Hypothesis, the question that is brought up most often is, "How can it be solved?" Simply stated, it can be solved in the following way.

Essentially, the Riemann Hypothesis is based on two different factors: Primes & the Halves of each Riemann Function. With each Prime stated, we can have a function across a specified function, produced in this manner:



As such, there is a main function as the Riemann Zeta Function passes through the scope of the graphical function above. Because of this, we can take the specific value in-between each of the specified boundary conditions, $0 \le x \le 1$, such that we can take the half of each boundary condition continuously over an infinite timeframe such that we approach Real Numbers Rx. Because of this, we can easily take such for both sides, creating two different loops in-between $-1 \le x \le 0$ & $0 \le x \le 1$. This is because the Riemann Zeta Function can create a Logarithmic relation with n Steps, thus creating a relationship between n Steps between each functional Value of the Real Numbers Rx that are produced by the halving of the Graphic Function itself.

Probability dictates that, due to the nature of the schematics produced by x, y, we can take it as:

$$z(s) = \frac{1}{2}\left(\frac{1}{1^s} + \frac{1}{2^s} + \frac{1}{3^s} + \frac{1}{4^s} + \frac{1}{5^s} + \cdots + \frac{1}{n^s}\right)$$

Thus, when you apply the shift change, the Riemann Zeta Function General Equation becomes:

$$z(n, s) = \frac{1}{n^{s^n}}\left(\frac{1}{1^{s\cdot n}} + \frac{1}{2^{s\cdot n}} + \frac{1}{3^{s\cdot n}} + \frac{1}{4^{s\cdot n}} + \frac{1}{5^{s\cdot n}} + \ldots + \frac{1}{n^{s\cdot n_z}}\right)$$

Due to the General Equation becoming relative to the Halving of each function, n is the Number within the stated boundary conditions & s being the relative expression produced by s in the Riemann Zeta Function. In certain parts of a collective body, one might express that this function does not hold any weight due to the halving of the bodies themselves, yet what they fail to realize is that the halving is already done with $\frac{1}{n^{s^n}}$ in the beginning of the expression, relaying the fact that the value is minute & replaces the ½ with the curtailed expressive value n Real Number Step (as it approaches infinity). Thus, as there are an infinite number of Real Numbers within 0 & 1 alone, there are plenty within the total boundary conditions $-1 \le x \le 1$ as each value is presented as such. This not only solves the other half of the boundary conditions & solves the relative numerical analysis crisis as n approaches infinity. Thus, x will always be within -1 & 1 as n approaches infinity, yet y will always approach the magnitude of x as y depreciates in numerical quantitative magnification. As such, an example of the following might be:

$$z(0.5,4) = \frac{1}{0.5^{4^{0.5}}}\left(\frac{1}{1^{4\cdot 0.5}} + \frac{1}{2^{4\cdot 0.5}} + \frac{1}{3^{4\cdot 0.5}} + \frac{1}{4^{4\cdot 0.5}} + \frac{1}{5^{4\cdot 0.5}} + \ldots + \frac{1}{0.5^{4\cdot 0.5}}\right)$$

Because of the example given being in-between the boundary conditions $0 \le x \le 1$, the values produced in such creates a relationship with each value within the boundary conditions such that it increases in value, thus creating a very odd reality of functionality between the n Real Number Value & s Value of the Riemann Zeta Function General Equation. Thus, each value will be a unique value, yet it will coincide with other solutions as x approaches the boundary conditions.

CAPVT III – (Non-Levis) Zeta Nullae Cyphris ad x = ½: Riemann Hypothesis

If x, y are the main values of any arbitrary constants, and x=1/2, then:

$$z(\log(s)) = \frac{1}{1^s} + \frac{1}{2^s} + \frac{1}{3^s} + \cdots + \frac{1}{n^s}$$

Thus, if $x = \frac{1}{2}$, & all Non-Trivial Zeta Zeros are based on $x = \frac{1}{2}$ vertical axis, then:

$$s = x - (i^2) \pm \frac{1}{2}$$

$$z(\log(s)) = \frac{1}{1^s} + \frac{1}{2^s} + \frac{1}{3^s} + \cdots + \frac{1}{n^s}$$

Thus, if $s = x - (i^2) \pm \frac{1}{2}$, then:

$$z(\log(s)) = \frac{1}{1^{x-(i^2)\pm\frac{1}{2}}} + \frac{1}{2^{x-(i^2)\pm\frac{1}{2}}} + \frac{1}{3^{x-(i^2)\pm\frac{1}{2}}} + \cdots + \frac{1}{n^{x-(i^2)\pm\frac{1}{2}}}$$

Thus, because you plug in the designated expression for s into the equation in such a way such that x=p (power of step, n, similar as in Collatz Conjecture), then x is the premise of the new axis(es), redefining x as:

$$x = \frac{1}{2} \pm \frac{1}{4}$$

Due to the halving of the areas of which each axis can be located upon. This is contractually found due to each axis being halved due to their complex calculations when you attempt to solve for the next set of axes, which are, in part, due to the nature of the solution to the problem.

Thus, since $x = \frac{1}{2} \pm \frac{1}{4}$, new values will converge into even smaller numbers of axes, with their corresponding values, such that each value will become even smaller in nature, to an infinitely small set of axes which can be calculated in the formula as follows:

$$x = \frac{1}{n} \pm \frac{1}{\frac{n}{2}}$$

This, in turn, creates new halves, and allows the creation of the other side to be primed & diverged as a new form of conjugation can be thus formulated.

An example of this solution is as follows:

$$s = 2 - (2i^2) \pm \frac{1}{2}$$

$$z(\log(s)) = \frac{1}{1^{2-(2i^2)\pm\frac{1}{2}}} + \frac{1}{2^{2-(2i^2)\pm\frac{1}{2}}} + \frac{1}{3^{2-(2i^2)\pm\frac{1}{2}}} + \cdots + \frac{1}{10^{2-(2i^2)\pm\frac{1}{2}}} + \frac{1}{n^{2-(2i^2)\pm\frac{1}{2}}}$$

Positives:

$$\frac{1}{1^{s+}} = \frac{1}{1^{2-(2i^2)+\frac{1}{2}}} = 1$$

$$\frac{1}{2^{s+}} = \frac{1}{2^{2-(2i^2)+\frac{1}{2}}} = \frac{1}{8\sqrt{2}}$$

$$\frac{1}{3^{s+}} = \frac{1}{3^{2-(2i^2)+\frac{1}{2}}} = \frac{1}{27\sqrt{3}}$$

$$\frac{1}{4^{s+}} = \frac{1}{4^{2-(2i^2)+\frac{1}{2}}} = \frac{1}{128}$$

$$\frac{1}{5^{s+}} = \frac{1}{5^{2-(2i^2)+\frac{1}{2}}} = \frac{1}{125\sqrt{5}}$$

$$\frac{1}{6^{s+}}=\frac{1}{6^{2-(2i^2)+\frac{1}{2}}}=\frac{1}{216\sqrt{6}}$$

$$\frac{1}{7^{s+}}=\frac{1}{7^{2-(2i^2)+\frac{1}{2}}}=\frac{1}{343\sqrt{7}}$$

$$\frac{1}{8^{s+}}=\frac{1}{8^{2-(2i^2)+\frac{1}{2}}}=\frac{1}{1{,}024\sqrt{2}}$$

$$\frac{1}{9^{s+}}=\frac{1}{9^{2-(2i^2)+\frac{1}{2}}}=\frac{1}{2{,}187}$$

$$\frac{1}{10^{s+}}=\frac{1}{10^{2-(2i^2)+\frac{1}{2}}}=\frac{1}{1{,}000\sqrt{10}}$$

Negatives:

$$\frac{1}{1^{s-}}=\frac{1}{1^{2-(2i^2)-\frac{1}{2}}}=1$$

$$\frac{1}{2^{s-}}=\frac{1}{2^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{4\sqrt{2}}$$

$$\frac{1}{3^{s-}}=\frac{1}{3^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{9\sqrt{3}}$$

$$\frac{1}{4^{s-}}=\frac{1}{4^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{32}$$

$$\frac{1}{5^{s-}}=\frac{1}{5^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{25\sqrt{5}}$$

$$\frac{1}{6^{s-}}=\frac{1}{6^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{36\sqrt{6}}$$

$$\frac{1}{7^{s-}}=\frac{1}{7^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{49\sqrt{7}}$$

$$\frac{1}{8^{s-}}=\frac{1}{8^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{128\sqrt{2}}$$

$$\frac{1}{9^{s-}}=\frac{1}{9^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{243}$$

$$\frac{1}{10^{s-}}=\frac{1}{10^{2-(2i^2)-\frac{1}{2}}}=\frac{1}{100\sqrt{10}}$$

Thus, each prime, and double primes (for positives only), is an exact number confirming the existence of specific prime geometric sequential calculations that cultivates the values as the new values of the next set of axes, $x=\frac{1}{2}\pm\frac{1}{4}, x=\frac{1}{4},\frac{3}{4}\pm\frac{1}{8},$ and so forth as $x=\frac{1}{n}\pm\frac{1}{\frac{n}{2}}$, confirming that it is, indeed, converging.

Thus, it is now stated that there is an infinite series of steps, and their relative axis(es), and, as such, a new formulation of such.

CAPVT IV – Coniugatio Collatz Coniectvrae Qum Riemann Hypothesis

With the introductions away for each respective topic, let us begin to state the similarities between Collatz Conjecture & the Riemann Hypothesis.

This will be a minor explanation, yet it will go into detail about the pairing of the two. The description is as follows:

Since Collatz Conjecture's 4, 2, & 1 Cycle is now broken by the Probabilities, which are derived from their respective equation for each starting numeral, either between 1-9, or their respective fifth's N-step starting numeral, and thus combining the following explanation provided by Chapter II, the Riemann Hypothesis can be used to create a separation between two different divergent states for each probability for each respective numeric value N. Probabilities are now defined, by combining the two solutions together, as having both the distinctive characteristics of the Riemann Zeta Function, the newer one being posted, & the Probabilities equation provided in Chapter I. Thus, the following function, the now-called Collatz-Riemann Zeta Probabilities Function, is the following below:

$$
\begin{aligned}
z_{\mathrm{P}_{\mathrm{x_n}}}(n, s, p, q, x) &= \left[\left[\left[\frac{n!}{(n-x)!\,x!} p^x q^{n-x}\right]\left[\frac{n!}{(n-x)!\,x!} p^x q^{n-x}\right]\right] + [\alpha \cdot (x-\beta)^2] + \left[\frac{a+b}{2}\right]\right. \\
&\left. + \left[\frac{\lambda^{\mathrm{x}} e^{-\lambda}}{x!}\right] - \left[\left(\frac{1}{\sqrt{2\pi\sigma^2}}\right)\left(e^{\frac{[-(x-\mu)^2]}{2\sigma^2}}\right)\right]\right] \\
&+ \left[\frac{1}{n^{s^n}}\left(\frac{1}{1^{s\cdot n}} + \frac{1}{2^{s\cdot n}} + \frac{1}{3^{s\cdot n}} + \frac{1}{4^{s\cdot n}} + \frac{1}{5^{s\cdot n}} + \ldots + \frac{1}{n^{s\cdot n_z}}\right)\right]
\end{aligned}
$$

Thus, the following can be stated for the newly formed function: the Collatz-Riemann Zeta Probabilities Function can allow for not only the formulation of space-time gravitational special/general relativity functions & patterns as it can help follow the newly-formed equation in solving the hard-to-solve Space-Time-Continuum Problem with regards to Gravitational Fields within high and low frequencies, wavelengths, & time-dilation properties that are problematic in topics such as Astrophysics & Rocket Science.

Thus, there are many applications for this equation, as one was stated before, yet one remains still, which is, of course, the all-feared & all-formulated God equation: as you may or may not see by now, I am attempting to solve the God Equation by using current Mathematical Theory & Problematic/Non-Problematic Physical Theories, Laws, & Relativity.

CAPVT V – Fvndamentvm De Devs Aeqvationis

Thus, to take the 4th step in this problem to solve the God Equation, we must look to Special Relativity, specifically Relativistic Kinematics & Invariance:

To solve such, we must understand that the Relativistic Kinematics & Invariance is used to solve the key factor of Space-Time Kinematics due to the Relationship per dimension & between each dimension, provided that they have the specified relationship to each other's invariance as each variable is given such that v, t is the basic formulation of the 6th & 7th Dimensional travel, with due respect to the origin such that the kinematics provided allow for the formulation of such travel. To even begin at the 6th Dimension, more or less at the 7th, more or less at even the 5th Dimension, we must understand that there are three key fundamentals to each dimension:

• Time travels differently throughout each Dimension, yet is consistent with each moving motion through Kinematics, hence the Invariance in the Relativistic Relationships within each Dimension & their similarities & differences respectful for each other Dimension.
• Periodically, each Dimension can be traveled to and from as with the creation, & manipulation, of time itself & space matter can be formulated to create a better, more cohesive, and much more comprehensive explanation to the, "Golden Ticket," of Time Travel & Travel Through Wormholes which, in Theory, are separate theories, one being born within a Dimension while the latter allows for Interdimensional Travel, yet in practicality, with the new formulation of Physical Instrumentation & Practical Theories, each manipulated Time Space allows for ***both*** Interdimensional Travel & Travel within a Dimension respectful of which application being utilized.
• Conclusively, each set datapoint of travel, with respect to its Relativistic Invariance, is properly comprised of several more sub datapoints and, as such, the creation of new forms of travel, especially those of each Dimension themselves, creates a whole new Paradox of Time itself: There is no such thing as Time in Inter-dimensional & Intra-dimensional, and there is one last thing itself. Extra-dimensional Travel is also possible, too. We can, "escape," this world & go to another one if we so choose to, we would need to create a device that would allow us to complete such a travel between different Realities.

With that being said, the newest formulation of Relativistic Kinematics & Invariance is "The coordinate differentials transform into a more contravariant relationship within, and with respect to, each dimension. The following formula that best explains this is:

$$dX^{\mu'} = \boldsymbol{\Lambda^{\mu'}{}_{y} dX^{y}}$$

Thus, the squared length of the differential of the four-vector dX^y constructed using

$$dX^2 = dX^y dX_\mu = \eta_{\mu y}\, dX^\mu\, dX^y = -(cdt)^2 + (dx)^2 + (dy)^2 + (dz)^2$$

Is an invariant. Notice that when the line element dX^2 is negative that $\sqrt{-dX^2}$ is a differential of proper time according to the space-time continuum of the positron-electron relationship within a certain quantifiable yet observable quantum space of the universe, while when dX^2 is positive, $\sqrt{dX^2}$ is differential of the proper distance between two or more truncations of different places within two or more space-time continuums, whether they be at different speeds, velocities, accelerations, or different dimensions (planes-of-existences).

The 4-velocity U^μ has an invariant form, the following expression:

$$U^2 = \eta_{\mu y} U^y U^\mu = -c^2\,,$$

Which means all velocity four-vectors have a magnitude of c. This is an expression of the fact that there is no such thing as being at coordinate rest regarding dimensionality with regards to orthogonality within a plane, especially if that plane is differentiated with various punctuations of values of matrices within the full plane-of-existence: in relativity, at the least, you are always moving forward through time. Differentiating the above equation by τ produces:

$$2\eta_{\mu y} A^\mu U^y = 0.$$

So, in special relativity, the acceleration four-vector and the velocity four-vector are orthogonal." Wikipedia, Wikimedia, Sourced on Dec. 5th, 2023. Special Relativity. *Revised*.

Now, keep in mind that these formulae are based in the newer Dimensions, the 6th & the 7th, v & t respectfully. Each Reality is formulated based on the following Equation, at least what we have of so far, as well as the newest 8th Dimension, y, & the newest Dimensions, the 9th, z, & the 10th, μ:

$$\begin{aligned} F(n,s,p,q,x,y,z,v,t,\mu) \\ = \Bigg[\bigg[\Big[\frac{n!}{(n-x)!\,x!}p^x q^{n-x}\Big]\Big[\frac{n!}{(n-x)!\,x!}p^x q^{n-x}\Big]\bigg] + [\alpha\cdot(x-\beta)^2] + \Big[\frac{a+b}{2}\Big] \\ + \Big[\frac{\lambda^x e^{-\lambda}}{x!}\Big] - \Big[\Big(\frac{1}{\sqrt{2\pi\sigma^2}}\Big)\Big(e^{\frac{[-(x-\mu)^2]}{2\sigma^2}}\Big)\Big]\Bigg] \\ + \Big[\frac{1}{n^{s^n}}\Big(\frac{1}{1^{s\cdot n}}+\frac{1}{2^{s\cdot n}}+\frac{1}{3^{s\cdot n}}+\frac{1}{4^{s\cdot n}}+\frac{1}{5^{s\cdot n}}+\ldots+\frac{1}{n^{s\cdot n_z}}\Big)\Big] \\ + \Big[[-(cdt)^2+(dx)^2+(dy)^2+(dz)^2] - n_{l_{v,\mu}} U^v U^\mu\Big] \end{aligned}$$

Now that we have the following function, we have the following to add to it, the final, and most important dimension, the 11th Dimension, g, & the 12th Dimension, R, & the 13th Dimension, ρ, & the 14th Dimension, σ, & the 15th Dimension, α, & the 16th Dimension, β, & the 17th Dimension, γ, due to the Gravitational Pull from each Dimension respectively & within Each Dimension respectively. Thus, you get:

$$F(n,s,p,q,x,y,z,v,t,\mu,g,R,\rho,\sigma,\alpha,\beta,\gamma)$$
$$= \left[\left[\left[\frac{n!}{(n-x)!\,x!}p^x q^{n-x}\right]\left[\frac{n!}{(n-x)!\,x!}p^x q^{n-x}\right]\right] + [\alpha\cdot(x-\beta)^2] + \left[\frac{a+b}{2}\right]\right.$$
$$\left. + \left[\frac{\lambda^x e^{-\lambda}}{x!}\right] - \left[\left(\frac{1}{\sqrt{2\pi\sigma^2}}\right)\left(e^{\frac{[-(x-\mu)^2]}{2\sigma^2}}\right)\right]\right]$$
$$+ \left[\frac{1}{n^{s^n}}\left(\frac{1}{1^{s\cdot n}} + \frac{1}{2^{s\cdot n}} + \frac{1}{3^{s\cdot n}} + \frac{1}{4^{s\cdot n}} + \frac{1}{5^{s\cdot n}} + \ldots + \frac{1}{n^{s\cdot n_z}}\right)\right]$$
$$+ \left[[-(cdt)^2 + (dx)^2 + (dy)^2 + (dz)^2] - n_{l_{v,\mu}} U^v U^\mu\right]$$
$$+ \left[\int d^4x\sqrt{-g}\left(\frac{R}{16\pi G} + c_1(\mu)R^2 + c_2(\mu)R_{\mu v}R^{\mu v}\right.\right.$$
$$\left. + c_3(\mu)R_{\mu v\rho\sigma}R^{\mu v\rho\sigma}\right)\int d^4x\sqrt{-g}\left[\alpha R\ln\left(\frac{\square}{\mu^2}\right)R + \beta R_{\mu v}\ln\left(\frac{\square}{\mu^2}\right)R^{\mu v}\right.$$
$$\left.\left. + \gamma R_{\mu v\rho\sigma}\ln\left(\frac{\square}{\mu^2}\right)R^{\mu v\rho\sigma}\right]\right]$$

Thus, that is the final formula for the newly-formulated, most fundamental, verifiable version of the God Equation [1-7].

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