New mathematical connections between the possible developments and solutions of Ramanujan's equations and various parameters of Particle Physics and Cosmology. XII

Michele Nardelli[1], Antonio Nardelli

Abstract

In this research thesis, we have analyzed further Ramanujan formulas and described further possible mathematical connections with some parameters of Particle Physics and Cosmology

[1] M.Nardelli have studied by Dipartimento di Scienze della Terra Università degli Studi di Napoli Federico II, Largo S. Marcellino, 10 - 80138 Napoli, Dipartimento di Matematica ed Applicazioni "R. Caccioppoli" - Università degli Studi di Napoli "Federico II" – Polo delle Scienze e delle Tecnologie Monte S. Angelo, Via Cintia (Fuorigrotta), 80126 Napoli, Italy

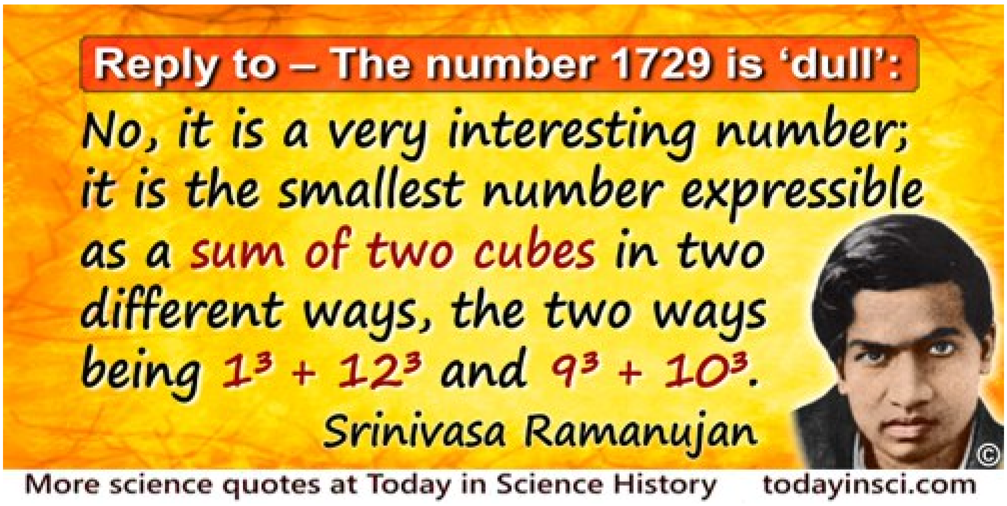
Summary

In this research thesis, we have analyzed the possible and new connections between different formulas of Ramanujan's mathematics and some formulas concerning particle physics and cosmology. In the course of the discussion we describe and highlight the connections between some developments of Ramanujan equations and particles type solutions such as the mass of the Higgs boson, and the masses of other baryons and mesons. We have obtained mathematical connections also with the boundary state corresponding to the NSNS-sector of N Dp-branes in the limit of u → ∞, with the ratio concerning the general asymptotically flat solution of the equations of motion of the p-brane and with the Karatsuba's equation concerning the zeros of a special type of function connected with Dirichlet series.

Moreover solutions of Ramanujan equations, connected with the mass of candidate glueball f_0(1710) meson and with the hypothetical mass of Gluino (gluino = 1785.16 GeV), the masses of the π mesons (139.57 and 134.9766 MeV) have been described and highlighted. Furthermore, we have obtained also the values of some black hole entropies and the value of the Cosmological Constant.

Is our opinion, that the possible connections between the mathematical developments of some Rogers-Ramanujan continued fractions, the value of the dilaton and that of "the dilaton mass calculated as a type of Higgs boson that is equal about to 125 GeV", the Higgs boson mass itself and the like-particle solutions (masses), are fundamental.

All the results of the most important connections are highlighted in blue throughout the drafting of the paper



https://todayinsci.com/R/Ramanujan_Srinivasa/RamanujanSrinivasa-Quotations.htm

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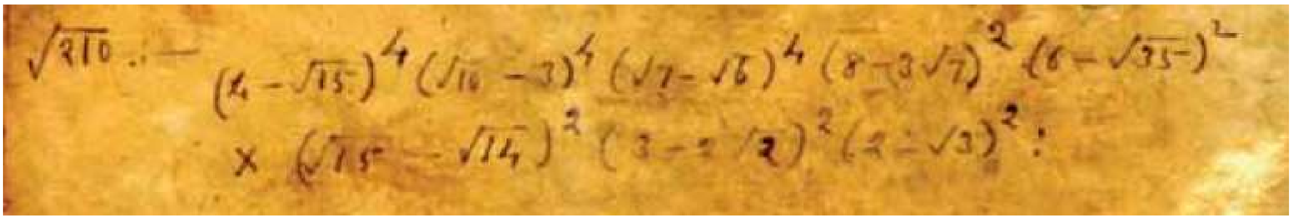
MANUSCRIPT BOOK 1 OF SRINIVASA RAMANUJAN

Page 307-308



sqrt(210) – (4-sqrt15)^4(sqrt10-3)^4(sqrt7-sqrt6)^4(8-3sqrt7)^2(6-sqrt35)^2(sqrt15-sqrt14)^2(3-2sqrt2)^2(2-sqrt3)^2

Input:

$$\sqrt{210}-\left(4-\sqrt{15}\right)^4\left(\sqrt{10}-3\right)^4\left(\sqrt{7}-\sqrt{6}\right)^4\left(8-3\sqrt{7}\right)^2\left(6-\sqrt{35}\right)^2\left(\sqrt{15}-\sqrt{14}\right)^2\left(3-2\sqrt{2}\right)^2\left(2-\sqrt{3}\right)^2$$

Decimal approximation:

14.491376746189438573448001578245216550384199708996388613 60...

14.491376746....

Continued fraction:

$$14+\cfrac{1}{2+\cfrac{1}{28+\cfrac{1}{2+\cfrac{1}{28+\cfrac{1}{2+\cfrac{1}{28+\cfrac{1}{2+\cfrac{1}{28+\cfrac{1}{2+\cfrac{1}{28+\cfrac{1}{2+\cfrac{1}{1+\cfrac{1}{1+\cfrac{1}{1+\cfrac{1}{26+\cfrac{1}{11+\cfrac{1}{4+\cfrac{1}{1+\cfrac{1}{6+\cfrac{1}{\ldots}}}}}}}}}}}}}}}}}}}}$$

From which:

-(((5+sqrt5)/2))+Pi^2(((sqrt(210)-(4-sqrt15)^4(sqrt10-3)^4(sqrt7-sqrt6)^4(8-3sqrt7)^2(6-sqrt35)^2(sqrt15-sqrt14)^2(3-2sqrt2)^2(2-sqrt3)^2)))

Input:

$$-\left(\frac{1}{2}\left(5+\sqrt{5}\right)\right)+\pi^2\left(\sqrt{210}-\left(4-\sqrt{15}\right)^4\left(\sqrt{10}-3\right)^4\left(\sqrt{7}-\sqrt{6}\right)^4\left(8-3\sqrt{7}\right)^2\left(6-\sqrt{35}\right)^2\left(\sqrt{15}-\sqrt{14}\right)^2\left(3-2\sqrt{2}\right)^2\left(2-\sqrt{3}\right)^2\right)$$

Exact result:

$$\frac{1}{2}\left(-5-\sqrt{5}\right)+\left(\sqrt{210}-\left(3-2\sqrt{2}\right)^2\left(2-\sqrt{3}\right)^2\left(8-3\sqrt{7}\right)^2\left(\sqrt{7}-\sqrt{6}\right)^4\left(\sqrt{10}-3\right)^4\left(4-\sqrt{15}\right)^4\left(\sqrt{15}-\sqrt{14}\right)^2\left(6-\sqrt{35}\right)^2\right)\pi^2$$

Decimal approximation:

139.4061217232853774870667197545671321478816154631262518936...

139.40612172…. result practically equal to the rest mass of Pion meson 139.57

Property:

$$\frac{1}{2}\left(-5-\sqrt{5}\right)+\left(\sqrt{210}-\left(3-2\sqrt{2}\right)^2\left(2-\sqrt{3}\right)^2\left(8-3\sqrt{7}\right)^2\left(-\sqrt{6}+\sqrt{7}\right)^4\left(-3+\sqrt{10}\right)^4\left(4-\sqrt{15}\right)^4\left(-\sqrt{14}+\sqrt{15}\right)^2\left(6-\sqrt{35}\right)^2\right)$$

π^2 is a transcendental number

Continued fraction:

$$139+\cfrac{1}{2+\cfrac{1}{2+\cfrac{1}{6+\cfrac{1}{7+\cfrac{1}{2+\cfrac{1}{5+\cfrac{1}{3+\cfrac{1}{1+\cfrac{1}{2+\cfrac{1}{9+\cfrac{1}{1+\cfrac{1}{1+\cfrac{1}{22+\cfrac{1}{2+\cfrac{1}{2+\cfrac{1}{11+\cfrac{1}{3+\cfrac{1}{2+\cfrac{1}{8+\cfrac{1}{23+\cfrac{1}{\ldots}}}}}}}}}}}}}}}}}}}}}$$

And:

((((sqrt(210) – (4-sqrt15)^4(sqrt10-3)^4(sqrt7-sqrt6)^4(8-3sqrt7)^2(6-sqrt35)^2(sqrt15-sqrt14)^2(3-2sqrt2)^2(2-sqrt3)^2))))^3 + 55 -golden ratio

Where 55 is a Fibonacci number

Input:

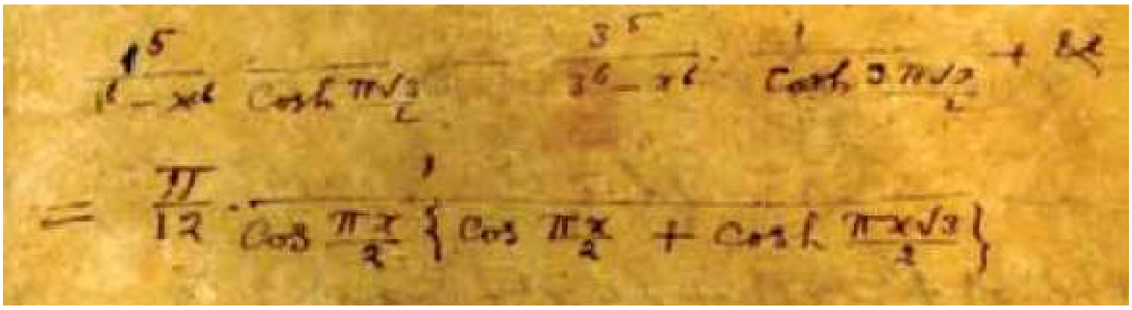
$$\left(\sqrt{210}-\left(4-\sqrt{15}\right)^4\left(\sqrt{10}-3\right)^4\left(\sqrt{7}-\sqrt{6}\right)^4\left(8-3\sqrt{7}\right)^2\left(6-\sqrt{35}\right)^2\left(\sqrt{15}-\sqrt{14}\right)^2\left(3-2\sqrt{2}\right)^2\left(2-\sqrt{3}\right)^2\right)^3+55-\phi$$

ϕ is the golden ratio

Decimal approximation:

3096.571082711032205462197461448816664908654537992084149955...

3096.57108271…. result practically equal to the rest mass of J/Psi meson 3096.916



For x = 2, we obtain:

Pi/12 * 1/((cos((2Pi)/2)*((((((cos(2Pi)/2)))+cosh((2sqrt3Pi)/2))))))

Input:

$$\frac{\pi}{12}\times\frac{1}{\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{1}{2}\left(2\sqrt{3}\,\pi\right)\right)\right)}$$

$\cosh(x)$ is the hyperbolic cosine function

Exact result:

$$\frac{\pi}{12\left(-\frac{1}{2}-\cosh\left(\sqrt{3}\,\pi\right)\right)}$$

Decimal approximation:

-0.0022591414399660240170200743091443747515086825987393660 7...

-0.002259141439….

Alternate forms:

$$\frac{\pi}{-6-12\cosh\left(\sqrt{3}\,\pi\right)}$$

$$-\frac{\pi}{6+12\cosh\left(\sqrt{3}\,\pi\right)}$$

$$-\frac{\pi}{6\left(1+2\cosh\left(\sqrt{3}\,\pi\right)\right)}$$

Alternative representations:

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(-i\pi\sqrt{3}\right)\right)\right)}$$

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=\frac{\pi}{12\left(\cosh(i\pi)\left(\frac{1}{2}\cosh(2i\pi)+\cos\left(-i\pi\sqrt{3}\right)\right)\right)}$$

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(i\pi\sqrt{3}\right)\right)\right)}$$

Series representations:

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-\frac{\pi}{6+12\sum_{k=0}^{\infty}\frac{3^k\pi^{2k}}{(2k)!}}$$

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-\frac{\pi}{6-12\sum_{k=0}^{\infty}I_{2k}\left(\sqrt{3}\right)T_{2k}(\pi)\left(-2+\delta_k\right)}$$

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-\frac{\pi}{6+12I_0\left(\sqrt{3}\,\pi\right)+24\sum_{k=1}^{\infty}I_{2k}\left(\sqrt{3}\,\pi\right)}$$

Integral representation:

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12} = -\frac{\pi^{3/2}}{6\sqrt{\pi} - 6 i \int_{-i\infty+\gamma}^{i\infty+\gamma} \frac{e^{(3\pi^2)/(4s)+s}}{\sqrt{s}}\, ds} \quad \text{for } \gamma > 0$$

Half-argument formula:

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12} = \frac{\pi}{12\left(-\frac{1}{2} - \sqrt{\frac{1}{2}\left(1+\cosh(2\sqrt{3}\pi)\right)}\right)}$$

Multiple-argument formulas:

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12} = -\frac{\pi}{6 + 12\, T_{\sqrt{3}}(\cosh(\pi))}$$

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12} = \frac{\pi}{12\left(\frac{1}{2} - 2\cosh^2\left(\frac{\sqrt{3}\pi}{2}\right)\right)}$$

$$\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12} = \frac{\pi}{12\left(-\frac{3}{2} - 2\sinh^2\left(\frac{\sqrt{3}\pi}{2}\right)\right)}$$

-1+(((((Pi/12 * 1/((cos((2Pi)/2)*((((((cos(2Pi)/2)))+cosh((2sqrt3Pi)/2))))))))))

Input:

$$-1 + \frac{\pi}{12} \times \frac{1}{\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{1}{2}\left(2\sqrt{3}\pi\right)\right)\right)}$$

cosh(x) is the hyperbolic cosine function

Exact result:

$$\frac{\pi}{12\left(-\frac{1}{2} - \cosh(\sqrt{3}\pi)\right)} - 1$$

Decimal approximation:

−1.002259141439966024017020074309144374751508682598739366 07...

-1.002259141439966024…

Alternate forms:

$$-1-\frac{\pi}{6+12\cosh\left(\sqrt{3}\,\pi\right)}$$

$$-1-\frac{\pi}{6\left(1+2\cosh\left(\sqrt{3}\,\pi\right)\right)}$$

$$\frac{\pi}{12\left(\frac{1}{2}\left(-e^{-\sqrt{3}\,\pi}-e^{\sqrt{3}\,\pi}\right)-\frac{1}{2}\right)}-1$$

Alternative representations:

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-1+\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(-i\pi\sqrt{3}\right)\right)\right)}$$

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-1+\frac{\pi}{12\left(\cosh(i\pi)\left(\frac{1}{2}\cosh(2i\pi)+\cos\left(-i\pi\sqrt{3}\right)\right)\right)}$$

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-1+\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(i\pi\sqrt{3}\right)\right)\right)}$$

Series representations:

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-1-\frac{\pi}{6+12\sum_{k=0}^{\infty}\frac{3^k\pi^{2k}}{(2k)!}}$$

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-1-\frac{\pi}{6-12\sum_{k=0}^{\infty}I_{2k}\left(\sqrt{3}\right)T_{2k}(\pi)\left(-2+\delta_k\right)}$$

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}=-1-\frac{\pi}{6+12I_0\left(\sqrt{3}\,\pi\right)+24\sum_{k=1}^{\infty}I_{2k}\left(\sqrt{3}\,\pi\right)}$$

Integral representations:

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}=-1-\frac{\pi}{18+12\sqrt{3}\pi\int_0^1\sinh(\sqrt{3}\pi t)\,dt}$$

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}=-1-\frac{\pi}{6+12\int_{\frac{i\pi}{2}}^{\sqrt{3}\pi}\sinh(t)\,dt}$$

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}=$$
$$-1-\frac{\pi^{3/2}}{6\sqrt{\pi}-6i\int_{-i\infty+\gamma}^{i\infty+\gamma}\frac{e^{(3\pi^2)/(4s)+s}}{\sqrt{s}}\,ds}\quad\text{for }\gamma>0$$

Half-argument formula:

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}=-1+\frac{\pi}{12\left(-\frac{1}{2}-\sqrt{\frac{1}{2}\left(1+\cosh(2\sqrt{3}\pi)\right)}\right)}$$

Multiple-argument formulas:

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}=-1-\frac{\pi}{6+12T_{\sqrt{3}}(\cosh(\pi))}$$

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}=-1+\frac{\pi}{12\left(\frac{1}{2}-2\cosh^2\left(\frac{\sqrt{3}\pi}{2}\right)\right)}$$

$$-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}=-1+\frac{\pi}{12\left(-\frac{3}{2}-2\sinh^2\left(\frac{\sqrt{3}\pi}{2}\right)\right)}$$

And:

-1/((((-1+(((((Pi/12 * 1/((cos((2Pi)/2)*((((((cos(2Pi)/2)))+cosh((2sqrt3Pi)/2))))))))))))))

Input:

$$-\frac{1}{-1+\frac{\pi}{12}\times\frac{1}{\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{1}{2}\left(2\sqrt{3}\pi\right)\right)\right)}}$$

cosh(x) is the hyperbolic cosine function

Exact result:

$$-\frac{1}{\frac{\pi}{12\left(-\frac{1}{2}-\cosh\left(\sqrt{3}\,\pi\right)\right)}-1}$$

Decimal approximation:

0.99774595077604353928060876558068386280612736515956148847 4...

0.9977459507673043…. result very near to the value of the following Rogers-Ramanujan continued fraction:

$$\frac{e^{-\frac{\pi}{\sqrt{5}}}}{\frac{\sqrt{5}}{1+\sqrt[5]{\sqrt{\varphi^5\sqrt[4]{5^3}}-1}}-\varphi+1}=1-\cfrac{e^{-\pi\sqrt{5}}}{1+\cfrac{e^{-2\pi\sqrt{5}}}{1+\cfrac{e^{-3\pi\sqrt{5}}}{1+\cfrac{e^{-4\pi\sqrt{5}}}{1+\dots}}}}\approx 0.9991104684$$

and to the dilaton value $\mathbf{0.989117352243=\phi}$

Alternate forms:

$$1-\frac{\pi}{6+\pi+12\cosh\left(\sqrt{3}\,\pi\right)}$$

$$\frac{6+12\cosh\left(\sqrt{3}\,\pi\right)}{6+\pi+12\cosh\left(\sqrt{3}\,\pi\right)}$$

$$\frac{6\left(1+2\cosh\left(\sqrt{3}\,\pi\right)\right)}{6+\pi+12\cosh\left(\sqrt{3}\,\pi\right)}$$

Alternative representations:

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}}=-\frac{1}{-1+\frac{\pi}{12\left(\cosh(i\pi)\left(\frac{1}{2}\cosh(2i\pi)+\cos\left(-i\pi\sqrt{3}\right)\right)\right)}}$$

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}}=-\frac{1}{-1+\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(i\pi\sqrt{3}\right)\right)\right)}}$$

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}} = -\frac{1}{-1+\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(-i\pi\sqrt{3}\right)\right)\right)}}$$

Series representations:

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}} = \frac{1}{1+\frac{\pi}{6+12\sum_{k=0}^{\infty}\frac{3^k\pi^{2k}}{(2k)!}}}$$

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}} = \frac{1}{1+\frac{\pi}{6+12\,I_0\left(\sqrt{3}\,\pi\right)+24\sum_{k=1}^{\infty}I_{2k}\left(\sqrt{3}\,\pi\right)}}$$

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}} = -\frac{1}{-1+\frac{i\pi}{-6i+12\sum_{k=0}^{\infty}\frac{\left(\left(-\frac{i}{2}+\sqrt{3}\right)\pi\right)^{1+2k}}{(1+2k)!}}}$$

Integral representations:

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}} = \frac{1}{1+\frac{\pi}{18+12\sqrt{3}\,\pi\int_0^1\sinh\left(\sqrt{3}\,\pi\,t\right)dt}}$$

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}} = \frac{1}{1+\frac{\pi}{6+12\int_{\frac{i\pi}{2}}^{\sqrt{3}\,\pi}\sinh(t)\,dt}}$$

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}} = -\frac{1}{-1+\frac{\pi}{12\left(-\frac{1}{2}+\frac{i}{2\sqrt{\pi}}\int_{-i\infty+\gamma}^{i\infty+\gamma}\frac{e^{(3\pi^2)/(4s)+s}}{\sqrt{s}}\,ds\right)}} \quad \text{for } \gamma>0$$

Half-argument formula:

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)12}} = -\frac{1}{-1+\frac{\pi}{12\left(-\frac{1}{2}-\sqrt{\frac{1}{2}\left(1+\cosh\left(2\sqrt{3}\,\pi\right)\right)}\right)}}$$

Multiple-argument formulas:

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}} = \frac{6+12\,T_{\sqrt{3}}(\cosh(\pi))}{6+\pi+12\,T_{\sqrt{3}}(\cosh(\pi))}$$

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}} = -\frac{1}{-1+\frac{\pi}{12\left(\frac{1}{2}-2\cosh^2\left(\frac{\sqrt{3}\pi}{2}\right)\right)}}$$

$$-\frac{1}{-1+\frac{\pi}{\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)12}} = -\frac{1}{-1+\frac{\pi}{12\left(-\frac{3}{2}-2\sinh^2\left(\frac{\sqrt{3}\pi}{2}\right)\right)}}$$

32*1/log base 0.9910142417484 (((-1/((((-1+(((((Pi/12 * 1/((cos((2Pi)/2)*((((((cos(2Pi)/2)))+cosh((2sqrt3Pi)/2)))))))))))))))))-Pi+1/golden ratio

Input interpretation:

$$32\times\frac{1}{\log_{0.9910142417484}\left(-\frac{1}{-1+\frac{\pi}{12}\times\frac{1}{\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{1}{2}\left(2\sqrt{3}\,\pi\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}$$

$\cosh(x)$ is the hyperbolic cosine function

$\log_b(x)$ is the base- b logarithm

ϕ is the golden ratio

Result:

125.47644134...

125.47644134... result very near to the dilaton mass calculated as a type of Higgs boson: 125 GeV for T = 0 and to the Higgs boson mass 125.18

Alternative representations:

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}=$$

$$-\pi+\frac{1}{\phi}+\frac{32}{\frac{\log\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos(\pi)\left(\cosh\left(\pi\sqrt{3}\right)+\frac{1}{2}\cos(2\pi)\right)\right)}}\right)}{\log(0.99101424174840000)}}$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}=$$

$$-\pi+\frac{1}{\phi}+\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(i\pi\sqrt{3}\right)\right)\right)}}\right)}$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}=$$

$$-\pi+\frac{1}{\phi}+\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(-i\pi\sqrt{3}\right)\right)\right)}}\right)}$$

Series representations:

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}=$$

$$\frac{1}{\phi}-\pi-\frac{32\log(0.99101424174840000)}{\sum_{k=1}^{\infty}\frac{(-1)^k\left(-\frac{\pi}{\pi-12\cosh\left(\pi\sqrt{3}\right)\cos(\pi)-6\cos(\pi)\cos(2\pi)}\right)^k}{k}}$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}=$$

$$-\left(\left(-32\,\phi-\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{6\left(2\,I_0\left(\pi\sqrt{3}\right)+4\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)+\phi\,\pi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{6\left(2\,I_0\left(\pi\sqrt{3}\right)+4\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)\right)\middle/\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{6\left(2\,I_0\left(\pi\sqrt{3}\right)+4\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)\right)\right)$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}=$$

$$-\left(\left(-32\,\phi-\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(I_0\left(\pi\sqrt{3}\right)+2\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\frac{1}{2}\sum_{k=0}^{\infty}\frac{(-4)^k\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\pi^{2k}}{(2k)!}}}\right)+\phi\,\pi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(I_0\left(\pi\sqrt{3}\right)+2\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\frac{1}{2}\sum_{k=0}^{\infty}\frac{(-4)^k\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\pi^{2k}}{(2k)!}}}\right)\right)\Big/\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(I_0\left(\pi\sqrt{3}\right)+2\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\frac{1}{2}\sum_{k=0}^{\infty}\frac{(-4)^k\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\pi^{2k}}{(2k)!}}}\right)\right)\right)$$

Integral representations:

$$
\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}=
$$

$$
-\left(\left(-32\,\phi-\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{12\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\left(1+\int_{\frac{\pi}{2}}^{2\pi}\frac{1}{6}\left(-3\sin(t)+4\sinh\left(-\frac{1}{3}(\pi-2t)\sqrt{3}\right)\sqrt{3}\right)dt\right)}}\right)+\right.\right.
$$

$$
\left.\left.\phi\,\pi\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{12\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\left(1+\int_{\frac{\pi}{2}}^{2\pi}\frac{1}{6}\left(-3\sin(t)+4\sinh\left(-\frac{1}{3}(\pi-2t)\sqrt{3}\right)\sqrt{3}\right)dt\right)}}\right)\right)\right/
$$

$$
\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{12\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\left(1+\int_{\frac{\pi}{2}}^{2\pi}\frac{1}{6}\left(-3\sin(t)+4\sinh\left(-\frac{1}{3}(\pi-2t)\sqrt{3}\right)\sqrt{3}\right)dt\right)}}\right)\right)\right)
$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}-\pi+\frac{1}{\phi}=$$

$$-\left(\left(-32\,\phi-\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{6\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\int_{\frac{i\pi}{2}}^{\pi\sqrt{3}}\left(2\sinh(t)+\frac{3\sin\left(\frac{2i\pi-3t-\pi\sqrt{3}}{i-2\sqrt{3}}\right)}{i-2\sqrt{3}}\right)dt}}\right)+\right.\right.$$

$$\left.\left.\phi\,\pi\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{6\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\int_{\frac{i\pi}{2}}^{\pi\sqrt{3}}\left(2\sinh(t)+\frac{3\sin\left(\frac{2i\pi-3t-\pi\sqrt{3}}{i-2\sqrt{3}}\right)}{i-2\sqrt{3}}\right)dt}}\right)\right)\right/$$

$$\left.\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{6\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\int_{\frac{i\pi}{2}}^{\pi\sqrt{3}}\left(2\sinh(t)+\frac{3\sin\left(\frac{2i\pi-3t-\pi\sqrt{3}}{i-2\sqrt{3}}\right)}{i-2\sqrt{3}}\right)dt}}\right)\right)\right)$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)}}\right)} - \pi + \frac{1}{\phi} =$$

$$-\left(\left(-32\phi - \log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(1-\pi\int_0^1\sin(\pi t)\,dt\right)\left(1+\frac{1}{2}\left(1-2\pi\int_0^1\sin(2\pi t)\,dt\right)+\pi\sqrt{3}\int_0^1\sinh\left(\pi t\sqrt{3}\right)dt\right)}}\right) + \phi\pi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(1-\pi\int_0^1\sin(\pi t)\,dt\right)\left(1+\frac{1}{2}\left(1-2\pi\int_0^1\sin(2\pi t)\,dt\right)+\pi\sqrt{3}\int_0^1\sinh\left(\pi t\sqrt{3}\right)dt\right)}}\right)\right)\right/ \left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(1-\pi\int_0^1\sin(\pi t)\,dt\right)\left(1+\frac{1}{2}\left(1-2\pi\int_0^1\sin(2\pi t)\,dt\right)+\pi\sqrt{3}\int_0^1\sinh\left(\pi t\sqrt{3}\right)dt\right)}}\right)\right)\right)$$

32*1/log base 0.9910142417484 (((-1/((((-1+(((((Pi/12 * 1/((cos((2Pi)/2)*((((((cos(2Pi)/2))+cosh((2sqrt3Pi)/2))))))))))))))))+11+1/golden ratio

Input interpretation:

$$32\times\frac{1}{\log_{0.9910142417484}\left(-\frac{1}{-1+\frac{\pi}{12}\times\frac{1}{\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{1}{2}\left(2\sqrt{3}\pi\right)\right)\right)}}\right)} + 11 + \frac{1}{\phi}$$

$\cosh(x)$ is the hyperbolic cosine function

$\log_b(x)$ is the base- b logarithm

ϕ is the golden ratio

Result:

139.61803399...

139.61803399… result practically equal to the rest mass of Pion meson 139.57

Alternative representations:

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$11+\frac{1}{\phi}+\frac{32}{\frac{\log\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos(\pi)\left(\cosh\left(\pi\sqrt{3}\right)+\frac{1}{2}\cos(2\pi)\right)\right)}}\right)}{\log(0.99101424174840000)}}$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$11+\frac{1}{\phi}+\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(i\pi\sqrt{3}\right)\right)\right)}}\right)}$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$11+\frac{1}{\phi}+\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cosh(-i\pi)\left(\frac{1}{2}\cosh(-2i\pi)+\cos\left(-i\pi\sqrt{3}\right)\right)\right)}}\right)}$$

Series representations:

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$11+\frac{1}{\phi}-\frac{32\log(0.99101424174840000)}{\sum_{k=1}^{\infty}\frac{(-1)^k\left(-\frac{\pi}{\pi-12\cosh\left(\pi\sqrt{3}\right)\cos(\pi)-6\cos(\pi)\cos(2\pi)}\right)^k}{k}}$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$\left(32\,\phi+\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{6\left(2\,I_0\left(\pi\sqrt{3}\right)+4\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)+\right.$$

$$\left.11\,\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{6\left(2\,I_0\left(\pi\sqrt{3}\right)+4\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)\right)\Big/$$

$$\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{6\left(2\,I_0\left(\pi\sqrt{3}\right)+4\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)\right)$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$\left(32\,\phi+\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(I_0\left(\pi\sqrt{3}\right)+2\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\frac{1}{2}\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)+\right.$$

$$\left.11\,\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(I_0\left(\pi\sqrt{3}\right)+2\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\frac{1}{2}\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)\right)\Bigg/$$

$$\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(I_0\left(\pi\sqrt{3}\right)+2\sum_{k=1}^{\infty}I_{2k}\left(\pi\sqrt{3}\right)+\frac{1}{2}\sum_{k=0}^{\infty}\frac{(-4)^k\,\pi^{2k}}{(2k)!}\right)\sum_{k=0}^{\infty}\frac{(-1)^k\,\pi^{2k}}{(2k)!}}}\right)\right)$$

Integral representations:

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$\left(32\phi+\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{12\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\left(1+\int_{\frac{\pi}{2}}^{2\pi}\frac{1}{6}\left(-3\sin(t)+4\sinh\left(-\frac{1}{3}(\pi-2t)\sqrt{3}\right)\sqrt{3}\right)dt\right)}}\right)+\right.$$

$$\left.11\phi\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{12\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\left(1+\int_{\frac{\pi}{2}}^{2\pi}\frac{1}{6}\left(-3\sin(t)+4\sinh\left(-\frac{1}{3}(\pi-2t)\sqrt{3}\right)\sqrt{3}\right)dt\right)}}\right)\right)\Big/$$

$$\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{12\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\left(1+\int_{\frac{\pi}{2}}^{2\pi}\frac{1}{6}\left(-3\sin(t)+4\sinh\left(-\frac{1}{3}(\pi-2t)\sqrt{3}\right)\sqrt{3}\right)dt\right)}}\right)\right)$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$\left(32\,\phi+\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{6\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\int_{\frac{i\pi}{2}}^{\pi\sqrt{3}}\left(2\sinh(t)+\frac{3\sin\left(\frac{2i\pi-3t-\pi\sqrt{3}}{i-2\sqrt{3}}\right)}{i-2\sqrt{3}}\right)dt}}\right)+\right.$$

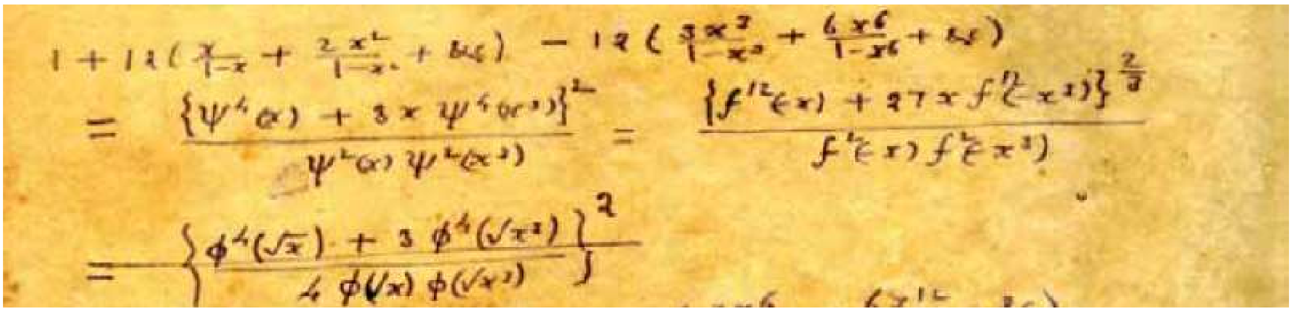
$$\left.11\,\phi\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{6\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\int_{\frac{i\pi}{2}}^{\pi\sqrt{3}}\left(2\sinh(t)+\frac{3\sin\left(\frac{2i\pi-3t-\pi\sqrt{3}}{i-2\sqrt{3}}\right)}{i-2\sqrt{3}}\right)dt}}\right)\right)\Bigg/$$

$$\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1-\frac{\pi}{6\left(\int_{\frac{\pi}{2}}^{\pi}\sin(t)\,dt\right)\int_{\frac{i\pi}{2}}^{\pi\sqrt{3}}\left(2\sinh(t)+\frac{3\sin\left(\frac{2i\pi-3t-\pi\sqrt{3}}{i-2\sqrt{3}}\right)}{i-2\sqrt{3}}\right)dt}}\right)\right)$$

$$\frac{32}{\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(\cos\left(\frac{2\pi}{2}\right)\left(\frac{1}{2}\cos(2\pi)+\cosh\left(\frac{2\sqrt{3}\,\pi}{2}\right)\right)\right)}}\right)}+11+\frac{1}{\phi}=$$

$$\left(32\,\phi+\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(1-\pi\int_0^1\sin(\pi t)\,dt\right)\left(1+\frac{1}{2}\left(1-2\pi\int_0^1\sin(2\pi t)\,dt\right)+\pi\sqrt{3}\int_0^1\sinh\left(\pi t\sqrt{3}\right)dt\right)}}\right)+\right.$$
$$\left.11\,\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(1-\pi\int_0^1\sin(\pi t)\,dt\right)\left(1+\frac{1}{2}\left(1-2\pi\int_0^1\sin(2\pi t)\,dt\right)+\pi\sqrt{3}\int_0^1\sinh\left(\pi t\sqrt{3}\right)dt\right)}}\right)\right)/$$
$$\left(\phi\log_{0.99101424174840000}\left(-\frac{1}{-1+\frac{\pi}{12\left(1-\pi\int_0^1\sin(\pi t)\,dt\right)\left(1+\frac{1}{2}\left(1-2\pi\int_0^1\sin(2\pi t)\,dt\right)+\pi\sqrt{3}\int_0^1\sinh\left(\pi t\sqrt{3}\right)dt\right)}}\right)\right)$$

Page 309



For x = 2, 2.91563611528…. = ϕ and 0.0395671… = ψ, we obtain:

1+12((2/(1-2)+(2*2^2)/(1-2^2)))-12((3*2^3)/(1-2^3)+(6*2^6)/(1-2^6))

Input:

$$1+12\left(\frac{2}{1-2}+\frac{2\times 2^2}{1-2^2}\right)-12\left(\frac{3\times 2^3}{1-2^3}+\frac{6\times 2^6}{1-2^6}\right)$$

Exact result:

$$\frac{415}{7}$$

Decimal approximation:

59.28571428571428571428571428571428571428571428571428571428...

59.2857142857…. (A)

Repeating decimal:

$59.\overline{285714}$ (period 6)

[((((((2.91563611528^4(sqrt2)+3*2.91563611528^4(sqrt8)))))) / ((((((4*2.91563611528*(sqrt2)*2.91563611528*(sqrt8))))))]^2

Input interpretation:

$$\left(\frac{2.91563611528^4\sqrt{2}+3\times 2.91563611528^4\sqrt{8}}{4\times 2.91563611528\sqrt{2}\times 2.91563611528\sqrt{8}}\right)^2$$

Result:

27.664281474167572190664552884868725115527900048

Repeating decimal:

27.664281474167572190664552884868725115527900048

27.664281474....

(((0.0395671^4*2+3*2*0.0395671^4*8)))^2 / (((0.0395671^2*2*0.0395671^2*8)))

Input interpretation:

$$\frac{(0.0395671^4\times 2+3\times 2\times 0.0395671^4\times 8)^2}{0.0395671^2\times 2\times 0.0395671^2\times 8}$$

Result:

0.000382963080939865161532515625

0.0003829630809….

((((1+12((2/(1-2)+(2*2^2)/(1-2^2)))-12((3*2^3)/(1-2^3)+(6*2^6)/(1-2^6))))))*6.45962×10^-6

Input interpretation:

$$\left(1+12\left(\frac{2}{1-2}+\frac{2\times 2^2}{1-2^2}\right)-12\left(\frac{3\times 2^3}{1-2^3}+\frac{6\times 2^6}{1-2^6}\right)\right)\times 6.45962\times 10^{-6}$$

Result:

0.000382963185714285714285714285714285714285714285714...

Repeating decimal:

$0.000382963\overline{1857142}$ (period 6)

0.0003829631857142

And:

(((0.0395671^4*2+3*2*0.0395671^4*8)))^2 / (((0.0395671^2*2*0.0395671^2*8)))*154808

Input interpretation:

$$\frac{(0.0395671^4\times 2+3\times 2\times 0.0395671^4\times 8)^2}{0.0395671^2\times 2\times 0.0395671^2\times 8}\times 154808$$

Result:

59.28574863413864592652567887 5

59.2857486341.....

((((1+12((2/(1-2)+(2*2^2)/(1-2^2)))-12((3*2^3)/(1-2^3)+(6*2^6)/(1-2^6))))))

Input:

$$1+12\left(\frac{2}{1-2}+\frac{2\times 2^2}{1-2^2}\right)-12\left(\frac{3\times 2^3}{1-2^3}+\frac{6\times 2^6}{1-2^6}\right)$$

Exact result:

$$\frac{415}{7}$$

Decimal approximation:

59.285714285714285714285714285714285714285714285714285714285714285714285714285714285714285714285714285714285714285714...

59.2857142857…..

We have:

2 ((((1+12((2/(1-2)+(8)/(1-4)))-12((24)/(1-8)+(384)/(1-64)))))) + 7

Where 2 and 7 are Lucas numbers

Input:

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7$$

Exact result:

$$\frac{879}{7}$$

Decimal approximation:

125.57142857142857142857142857142857142857142857142857142857142857142857142857142857142857142857142857142857142857142857...

Repeating decimal:

$125.\overline{571428}$ (period 6)

125.571428 result very near to the dilaton mass calculated as a type of Higgs boson: 125 GeV for T = 0 and to the Higgs boson mass 125.18

And:

2 ((((1+12((2/(1-2)+(8)/(1-4)))-12((24)/(1-8)+(384)/(1-64)))))) + 7 +11 + Pi

Where 2, 7 and 11 are Lucas numbers

Input:

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi$$

Result:

$$\frac{956}{7}+\pi$$

Decimal approximation:

139.7130212250183646670340719547080743127685979708036772495...

139.713021225018…. result practically equal to the rest mass of Pion meson 139.57

Property:

$\frac{956}{7} + \pi$ is a transcendental number

Alternate form:

$\frac{1}{7}(956 + 7\pi)$

Alternative representations:

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = 18+180^\circ+2\left(-55-12\left(-\frac{384}{63}+-\frac{24}{7}\right)\right)$$

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = 18-i\log(-1)+2\left(-55-12\left(-\frac{384}{63}+-\frac{24}{7}\right)\right)$$

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = 18+\cos^{-1}(-1)+2\left(-55-12\left(-\frac{384}{63}+-\frac{24}{7}\right)\right)$$

Series representations:

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = \frac{956}{7}+4\sum_{k=0}^{\infty}\frac{(-1)^k}{1+2k}$$

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = \frac{956}{7}+\sum_{k=0}^{\infty}-\frac{4(-1)^k\,1195^{-1-2k}\left(5^{1+2k}-4\times 239^{1+2k}\right)}{1+2k}$$

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = \frac{956}{7}+\sum_{k=0}^{\infty}\left(-\frac{1}{4}\right)^k\left(\frac{1}{1+2k}+\frac{2}{1+4k}+\frac{1}{3+4k}\right)$$

Integral representations:

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = \frac{956}{7}+4\int_0^1\sqrt{1-t^2}\,dt$$

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = \frac{956}{7}+2\int_0^1\frac{1}{\sqrt{1-t^2}}\,dt$$

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{24}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = \frac{956}{7}+2\int_0^{\infty}\frac{1}{1+t^2}\,dt$$

From which, we obtain also:

2 ((((1+12((2/(1-2)+(8)/(1-4)))-12((x)/(1-8)+(384)/(1-64)))))) + 7 +11 + Pi = 139.713021225018364667

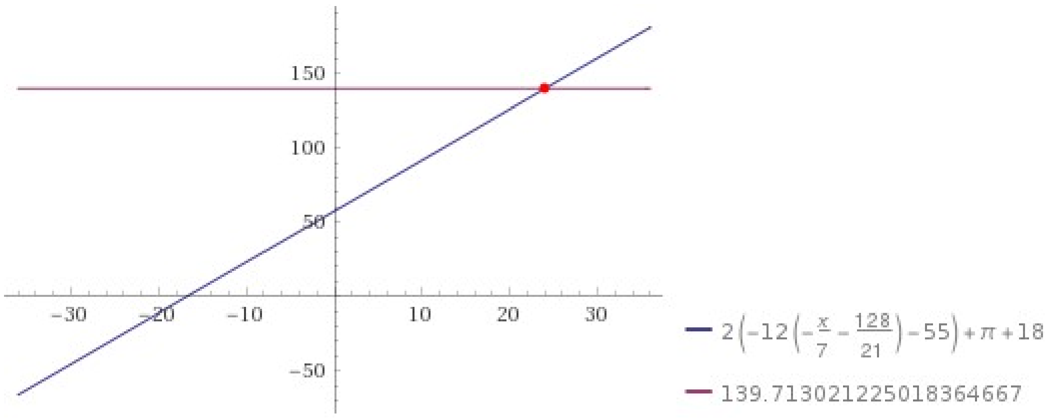
Input interpretation:

$$2\left(1+12\left(\frac{2}{1-2}+\frac{8}{1-4}\right)-12\left(\frac{x}{1-8}+\frac{384}{1-64}\right)\right)+7+11+\pi = 139.713021225018364667$$

Result:

$$2\left(-12\left(-\frac{x}{7}-\frac{128}{21}\right)-55\right)+\pi+18 = 139.713021225018364667$$

Plot:



Alternate forms:

$$\frac{24x}{7} - 82.285714285714285714 = 0$$

$$\frac{4}{7}(6x + 95) + \pi = 139.713021225018364667$$

$$\frac{1}{7}(24x + 7\pi + 380) = 139.713021225018364667$$

Expanded form:

$$\frac{24x}{7} + \pi + \frac{380}{7} = 139.713021225018364667$$

Solution:

$x \approx 24.000000000000000000$

Integer solution:

$x = 24$

24

This value is linked to the "Ramanujan function" (an elliptic modular function that satisfies the need for "conformal symmetry") that has 24 "modes" corresponding to the physical vibrations of a bosonic string.

And:

1/2 * 59.2857486341386459*1/((((((((0.0395671^4*2+3*2*0.0395671^4*8)))^2 /(((0.0395671^2*2*0.0395671^2*8)))))))-64*60-72

Input interpretation:

$$\frac{1}{2}\times 59.2857486341386459\times\frac{1}{\frac{(0.0395671^4\times 2+3\times 2\times 0.0395671^4\times 8)^2}{0.0395671^2\times 2\times 0.0395671^2\times 8}}-64\times 60-72$$

Result:

73491.99999999999996536783805647678225083652794810420178645...

73491.99999.....

Thence, we have the following mathematical connections:

$$\left(\frac{1}{2}\times 59.2857486341386459\times\frac{1}{\frac{(0.0395671^4\times 2+3\times 2\times 0.0395671^4\times 8)^2}{0.0395671^2\times 2\times 0.0395671^2\times 8}}-64\times 60-72\right)=73491.999...\Rightarrow$$

$$\Rightarrow -3927+2\left(\sqrt[13]{\begin{array}{c}N\exp\left[\int d\hat{\sigma}\left(-\frac{1}{4u^2}\mathbf{P}_i D\mathbf{P}_i\right)\right]|Bp\rangle_{NS}+\\ \int[d\mathbf{X}^\mu]\exp\left\{\int d\hat{\sigma}\left(-\frac{1}{4v^2}D\mathbf{X}^\mu D^2\mathbf{X}^\mu\right)\right\}|\mathbf{X}^\mu,\mathbf{X}^i=0\rangle_{NS}\end{array}}\right)=$$

$$-3927+2\sqrt[13]{2.2983717437\times 10^{59}+2.0823329825883\times 10^{59}}$$

$$=73490.8437525....\Rightarrow$$

$$\Rightarrow\left(A(r)\times\frac{1}{B(r)}\left(-\frac{1}{\phi(r)}\right)\times\frac{1}{e^{\Lambda(r)}}\right)\Rightarrow$$

$$\Rightarrow\left(-0.000029211892\times\frac{1}{0.0003644621}\left(-\frac{1}{0.0005946833}\right)\times\frac{1}{0.00183393}\right)=$$

$$=73491.7883254811871054915957204222054802519572656341339870 0...$$

$$=73491.7883254...\Rightarrow$$

$$\left(\begin{array}{c} I_{21} \ll \int_{-\infty}^{+\infty} \exp\left(-\left(\frac{t}{H}\right)^2\right) \left| \sum_{\lambda \leq P^{1-\varepsilon_1}} \frac{a(\lambda)}{\sqrt{\lambda}} B(\lambda) \lambda^{-i(T+t)} \right|^2 dt \ll \\ \ll H \left\{ \left(\frac{4}{\varepsilon_2 \log T}\right)^{2r} (\log T)(\log X)^{-2\beta} + (\varepsilon_2^{-2r} (\log T)^{-2r} + \varepsilon_2^{-r} h_1^r (\log T)^{-r}) T^{-\varepsilon_1} \right\} \end{array} \right) /$$

$$/(26 \times 4)^2 - 24 = \left(\frac{7.9313976505275 \times 10^8}{(26 \times 4)^2 - 24} \right) = 73493.30662\ldots$$

Mathematical connections with the boundary state corresponding to the NSNS-sector of N Dp-branes in the limit of u → ∞, with the ratio concerning the general asymptotically flat solution of the equations of motion of the p-brane and with the Karatsuba's equation concerning the zeros of a special type of function connected with Dirichlet series.

Now, we have that:

1/89 * 59.2857486341386459*1/(((((((0.0395671^4*2+3*2*0.0395671^4*8)))^2 /(((0.0395671^2*2*0.0395671^2*8)))))))-11

Where 89 is a Fibonacci number and 11 is a Lucas number

Input interpretation:

$$\frac{1}{89} \times 59.2857486341386459 \times \frac{1}{\frac{(0.0395671^4 \times 2 + 3 \times 2 \times 0.0395671^4 \times 8)^2}{0.0395671^2 \times 2 \times 0.0395671^2 \times 8}} - 11$$

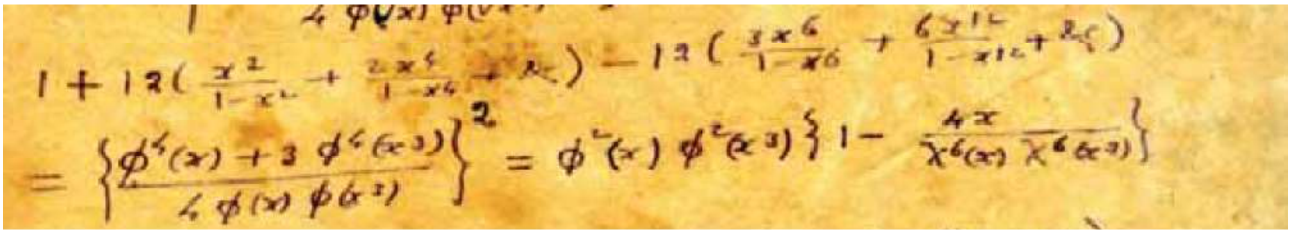
Result:

1728.415730337078650907142428235433309007562425800094422167...

1728.41573....

This result is very near to the mass of candidate glueball $f_0(1710)$ meson. Furthermore, 1728 occurs in the algebraic formula for the j-invariant of an elliptic curve. As a consequence, it is sometimes called a Zagier as a pun on the Gross–Zagier theorem. The number 1728 is one less than the Hardy–Ramanujan number 1729

Now, we have that:



For x = 2, we obtain:

1+12((2^2/(1-2^2)+(2*2^4)/(1-2^4)))-12((3*2^6)/(1-2^6)+(6*2^12)/(1-2^12))

Input:

$$1+12\left(\frac{2^2}{1-2^2}+\frac{2\times 2^4}{1-2^4}\right)-12\left(\frac{3\times 2^6}{1-2^6}+\frac{6\times 2^{12}}{1-2^{12}}\right)$$

Exact result:

$$\frac{6187}{91}$$

Decimal approximation:

67.989010989...

Repeating decimal:

$67.\overline{989010}$ (period 6)

67.989010 (B)

[(((((2.91563611528^4*(2)+3*2.91563611528^4*(8)))))) / (((((4*2.91563611528*(2)*2.91563611528*(8))))))]^2

Input interpretation:

$$\left(\frac{2.91563611528^4\times 2+3\times 2.91563611528^4\times 8}{4\times 2.91563611528\times 2\times 2.91563611528\times 8}\right)^2$$

Result:

11.92669277840387678628140162638473098092912036

11.9266927784... result very near to the black hole entropy 11.8477

Previously, we have obtained 59.2857142857 = 415/7. From the division of the two results, we obtain:

(6187/91) *7/415

Input:

$$\frac{6187}{91} \times \frac{7}{415}$$

Exact result:

$$\frac{6187}{5395}$$

Decimal approximation:

1.1468025949953660797034291010194624652455977757182576459 68...

1.1468025949….

From which:

1/10^52 * (((6187/91) *7/415 - (64*(1+2e))/10^4))

Input:

$$\frac{1}{10^{52}}\left(\frac{6187}{91} \times \frac{7}{415} - \frac{64(1+2e)}{10^4}\right)$$

Result:

$$\frac{\frac{6187}{5395} - \frac{4}{625}(1+2e)}{10\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000}$$

Decimal approximation:

$1.1056085875910903006908174213861483852743050129188981... \times 10^{-52}$

$1.1056085…*10^{-52}$ result practically equal to the value of the Cosmological Constant

Property:

$$\frac{\frac{6187}{5395} - \frac{4}{625}(1+2e)}{10\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000}$$ is a transcendental number

Alternate forms:

$$\frac{769\,059 - 8632\,e}{6\,743\,750\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000}$$

$$\frac{769\,059}{6\,743\,750\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000} - \frac{e}{781\,250\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000}$$

$$\frac{6187}{53\,950\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000} + \frac{-1 - 2\,e}{1\,562\,500\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000}$$

Alternative representation:

$$\frac{\frac{6187\times 7}{91\times 415} - \frac{64\,(1+2\,e)}{10^4}}{10^{52}} = \frac{\frac{6187\times 7}{91\times 415} - \frac{64\,(1+2\exp(z))}{10^4}}{10^{52}} \quad \text{for } z = 1$$

Series representations:

$$\frac{\frac{6187\times 7}{91\times 415} - \frac{64\,(1+2\,e)}{10^4}}{10^{52}} = \frac{769\,059}{6\,743\,750\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000} - \frac{\sum_{k=0}^{\infty} \frac{1}{k!}}{781\,250\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000}$$

$$\frac{\frac{6187\times 7}{91\times 415} - \frac{64\,(1+2\,e)}{10^4}}{10^{52}} = \frac{769\,059}{6\,743\,750\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000} - \frac{\sum_{k=0}^{\infty} \frac{1+k}{k!}}{1\,562\,500\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000}$$

$$\frac{\frac{6187\times 7}{91\times 415} - \frac{64\,(1+2\,e)}{10^4}}{10^{52}} = \frac{743\,163}{6\,743\,750\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000} + \frac{\sum_{k=0}^{\infty} \frac{1+k}{(3+k)!}}{781\,250\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000\,000}$$

And:

((1/(((6187/91) *7/415))))^1/16

Input:

$$\sqrt[16]{\frac{1}{\frac{6187}{91}\times\frac{7}{415}}}$$

Result:

$$\sqrt[16]{\frac{5395}{6187}}$$

Decimal approximation:

0.991475434560598806185017845740980870692286243597695028738...

0.99147543456…. result very near to the value of the following Rogers-Ramanujan continued fraction:

$$\frac{e^{-\frac{\pi}{\sqrt{5}}}}{\frac{\sqrt{5}}{1+\sqrt[5]{\sqrt{\varphi^5\sqrt[4]{5^3}}-1}}-\varphi+1}=1-\frac{e^{-\pi\sqrt{5}}}{1+\frac{e^{-2\pi\sqrt{5}}}{1+\frac{e^{-3\pi\sqrt{5}}}{1+\frac{e^{-4\pi\sqrt{5}}}{1+\dots}}}}\approx 0.9991104684$$

and to the dilaton value **0.989117352243 = ϕ**

Alternate form:

$$\frac{\sqrt[16]{5395}\;6187^{15/16}}{6187}$$

From which:

8*log base 0.99147534560598 ((1/(((6187/91) *7/415))))-Pi+1/golden ratio

Input interpretation:

$$8\log_{0.99147534560598}\left(\frac{1}{\frac{6187}{91}\times\frac{7}{415}}\right)-\pi+\frac{1}{\phi}$$

$\log_b(x)$ is the base- b logarithm

ϕ is the golden ratio

Result:

125.475099924...

125.475099924… result very near to the dilaton mass calculated as a type of Higgs boson: 125 GeV for T = 0 and to the Higgs boson mass 125.18

Alternative representation:

$$8 \log_{0.991475345605980000}\left(\frac{1}{\frac{7\times 6187}{415\times 91}}\right) - \pi + \frac{1}{\phi} = -\pi + \frac{1}{\phi} + \frac{8 \log\left(\frac{1}{\frac{43\,309}{91\times 415}}\right)}{\log(0.991475345605980000)}$$

Series representations:

$$8 \log_{0.991475345605980000}\left(\frac{1}{\frac{7\times 6187}{415\times 91}}\right) - \pi + \frac{1}{\phi} = \frac{1}{\phi} - \pi - \frac{8 \sum_{k=1}^{\infty} \frac{(-1)^k \left(-\frac{792}{6187}\right)^k}{k}}{\log(0.991475345605980000)}$$

$$8 \log_{0.991475345605980000}\left(\frac{1}{\frac{7\times 6187}{415\times 91}}\right) - \pi + \frac{1}{\phi} = \frac{1}{\phi} - 1.0000000000000000\,\pi - 934.454467504508 \log\left(\frac{5395}{6187}\right) - 8 \log\left(\frac{5395}{6187}\right) \sum_{k=0}^{\infty} (-0.0085246543940200000)^k\, G(k)$$

$$\text{for } \left(G(0) = 0 \text{ and } G(k) = \frac{(-1)^{1+k}\, k}{2\,(1+k)\,(2+k)} + \sum_{j=1}^{k} \frac{(-1)^{1+j}\, G(-j+k)}{1+j}\right)$$

8*log base 0.99147534560598 ((1/(((6187/91) *7/415))))+11+1/golden ratio

Input interpretation:

$$8 \log_{0.99147534560598}\left(\frac{1}{\frac{6187}{91} \times \frac{7}{415}}\right) + 11 + \frac{1}{\phi}$$

$\log_b(x)$ is the base- b logarithm

ϕ is the golden ratio

Result:

139.616692577...

139.616692577…. result practically equal to the rest mass of Pion meson 139.57

Alternative representation:

$$8 \log_{0.99147534560598000}\left(\frac{1}{\frac{7 \times 6187}{415 \times 91}}\right) + 11 + \frac{1}{\phi} = 11 + \frac{1}{\phi} + \frac{8 \log\left(\frac{1}{\frac{43\,309}{91 \times 415}}\right)}{\log(0.991475345605980000)}$$

Series representations:

$$8 \log_{0.99147534560598000}\left(\frac{1}{\frac{7 \times 6187}{415 \times 91}}\right) + 11 + \frac{1}{\phi} = 11 + \frac{1}{\phi} - \frac{8 \sum_{k=1}^{\infty} \frac{(-1)^k \left(-\frac{792}{6187}\right)^k}{k}}{\log(0.991475345605980000)}$$

$$8 \log_{0.99147534560598000}\left(\frac{1}{\frac{7 \times 6187}{415 \times 91}}\right) + 11 + \frac{1}{\phi} = 11 + \frac{1}{\phi} - 934.454467504508 \log\left(\frac{5395}{6187}\right) - 8 \log\left(\frac{5395}{6187}\right) \sum_{k=0}^{\infty} (-0.00852465439402000)^k\, G(k)$$

$$\text{for } \left(G(0) = 0 \text{ and } G(k) = \frac{(-1)^{1+k}\, k}{2\,(1+k)\,(2+k)} + \sum_{j=1}^{k} \frac{(-1)^{1+j}\, G(-j+k)}{1+j}\right)$$

From the sum of the two result, we obtain:

(6187/91) + (415/7)

Input:

$$\frac{6187}{91} + \frac{415}{7}$$

Exact result:

$$\frac{11582}{91}$$

Decimal approximation:

127.27472527472527472527472527472527472527472527472527472527472527472...

127.274725...

(6187/91) + (415/7) - golden ratio

Input:

$$\frac{6187}{91} + \frac{415}{7} - \phi$$

ϕ is the golden ratio

Result:

$$\frac{11582}{91} - \phi$$

Decimal approximation:

125.6566912859753798770701384403596366075544160949195118631...

125.656691285….. result very near to the dilaton mass calculated as a type of Higgs boson: 125 GeV for T = 0 and to the Higgs boson mass 125.18

Alternate forms:

$$\frac{1}{182}\left(23073 - 91\sqrt{5}\right)$$

$$\frac{1}{91}(11582 - 91\phi)$$

$$\frac{23073}{182} - \frac{\sqrt{5}}{2}$$

Alternative representations:

$$\frac{6187}{91} + \frac{415}{7} - \phi = \frac{415}{7} + \frac{6187}{91} - 2\sin(54°)$$

$$\frac{6187}{91} + \frac{415}{7} - \phi = 2\cos(216°) + \frac{415}{7} + \frac{6187}{91}$$

$$\frac{6187}{91} + \frac{415}{7} - \phi = \frac{415}{7} + \frac{6187}{91} + 2\sin(666°)$$

(6187/91) + (415/7) +11+ golden ratio

Input:

$$\frac{6187}{91} + \frac{415}{7} + 11 + \phi$$

ϕ is the golden ratio

Result:

$$\phi + \frac{12583}{91}$$

Decimal approximation:

139.8927592634751695734793121090909128429950344545310375874...

139.89275926…. result practically equal to the rest mass of Pion meson 139.57

Alternate forms:

$$\frac{1}{182}\left(25257 + 91\sqrt{5}\right)$$

$$\frac{1}{91}(91\phi + 12583)$$

$$\frac{25\,257}{182} + \frac{\sqrt{5}}{2}$$

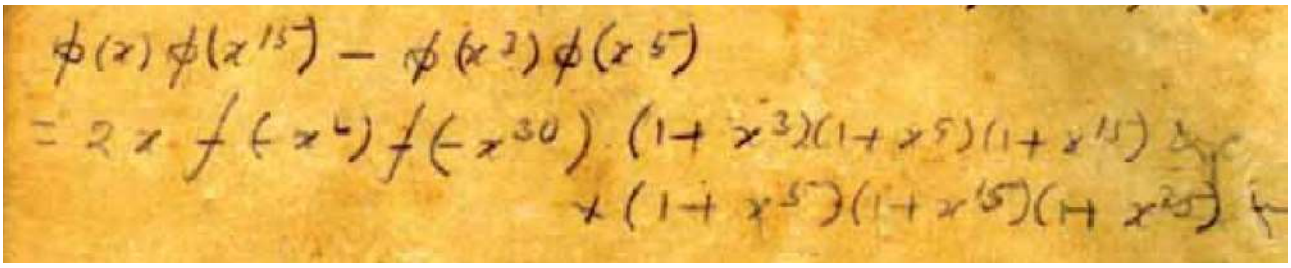
Alternative representations:

$$\frac{6187}{91} + \frac{415}{7} + 11 + \phi = 11 + \frac{415}{7} + \frac{6187}{91} + 2\sin(54\,°)$$

$$\frac{6187}{91} + \frac{415}{7} + 11 + \phi = 11 - 2\cos(216\,°) + \frac{415}{7} + \frac{6187}{91}$$

$$\frac{6187}{91} + \frac{415}{7} + 11 + \phi = 11 + \frac{415}{7} + \frac{6187}{91} - 2\sin(666\,°)$$

Now, from the following expression (page 281), we calculate the value of *f*:



2.91563611528*2*2.91563611528*2^15 – 2.91563611528*2^3*2.91563611528*2^5

Input interpretation:

$$2.91563611528 \times 2 \times 2.91563611528 \times 2^{15} + 2^3 \times 2.91563611528 \times 2^5 \times (-2.91563611528)$$

Result:

554940.96869501122806194995 2

554940.96869501122806194995 2

Repeating decimal:

554940.96869501122806194995 2

554940.968695… partial result

2*2*x(2^2)*x*(-2^30)*(1+2^3)(1+2^5)(1+2^15)*(1+2^5)(1+2^15)(1+2^25)

Input:

$$2\times 2\,x\,(2^2\,x\,(-2^{30})\,(1+2^3))\,(1+2^5)\,((1+2^{15})\,(1+2^5))\,(1+2^{15})\,(1+2^{25})$$

Result:

$$-6\,066\,895\,620\,286\,660\,493\,405\,105\,160\,192\,x^2$$

$-6066895620286660493405105160192x^2$ partial result

We note that:

(6066895620286660493405105160192)^1/14-18-1/golden ratio

Input:

$$\sqrt[14]{6\,066\,895\,620\,286\,660\,493\,405\,105\,160\,192}-18-\frac{1}{\phi}$$

ϕ is the golden ratio

Result:

$$-\frac{1}{\phi}-18+4\times 2^{3/7}\times 3^{9/14}\times 11^{5/14}\,\sqrt[7]{331}\,\sqrt[14]{1\,016\,801}$$

Decimal approximation:

139.4278984534431795594670234572829277865469534849921555943...

139.427898453… result practically equal to the rest mass of Pion meson 139.57

Alternate forms:

$$\frac{1}{2}\left(-35-\sqrt{5}+8\times 2^{3/7}\times 3^{9/14}\times 11^{5/14}\,\sqrt[7]{331}\,\sqrt[14]{1\,016\,801}\right)$$

$$-\frac{1-2\left(2\times 2^{3/7}\times 3^{9/14}\times 11^{5/14}\,\sqrt[7]{331}\,\sqrt[14]{1\,016\,801}-9\right)\phi}{\phi}$$

$$-18+4\times 2^{3/7}\times 3^{9/14}\times 11^{5/14}\,\sqrt[7]{331}\,\sqrt[14]{1\,016\,801}-\frac{2}{1+\sqrt{5}}$$

Alternative representations:

$$\sqrt[14]{6066895620286660493405105160192} - 18 - \frac{1}{\phi} = -18 + \sqrt[14]{6066895620286660493405105160192} - \frac{1}{2\sin(54°)}$$

$$\sqrt[14]{6066895620286660493405105160192} - 18 - \frac{1}{\phi} = -18 + \sqrt[14]{6066895620286660493405105160192} - -\frac{1}{2\cos(216°)}$$

$$\sqrt[14]{6066895620286660493405105160192} - 18 - \frac{1}{\phi} = -18 + \sqrt[14]{6066895620286660493405105160192} - -\frac{1}{2\sin(666°)}$$

In conclusion:

554940.96869501122806194995 2= 2*2*x(2^2)*x*(-2^30)*(1+2^3)(1+2^5)(1+2^15)*(1+2^5)(1+2^15)(1+2^25)

Input interpretation:

$$554940.9686950112280619499 52 = 2\times 2\,x\,(2^2\,x\,(-2^{30})(1+2^3))(1+2^5)((1+2^{15})(1+2^5))(1+2^{15})(1+2^{25})$$

Result:

$$554940.96869501122806194995 2 = -6066895620286660493405105160192\,x^2$$

Alternate form:

$$6066895620286660493405105160192\,x^2 + 554940.96869501122806194995 2 = 0$$

Complex solutions:

$$x = -3.0244062887467334370524 8272\times 10^{-13}\,i$$

$$x = 3.0244062887467334370524 8272\times 10^{-13}\,i$$

Polar coordinates:

$r = 3.0244062887467334370524 8272\times 10^{-13}$ (radius), $\theta = 90°$ (angle)

$3.024406288...*10^{-13} = f$ final result

We perform the following equation:

(59.2857142857 - 27.664281474 - 0.0003829630809 - 3.02440628874673343705248272×10^-13 i)x = 31.621049849

Input interpretation:

$$(59.2857142857 - 27.664281474 - 0.0003829630809 - 3.02440628874673343705248272 \times 10^{-13}\, i)\, x = 31.621049849$$

i is the imaginary unit

Result:

$$(31.621 - 3.02441 \times 10^{-13}\, i)\, x = 31.621049849$$

Alternate form:

$$-31.621049849 + (31.621 - 3.02441 \times 10^{-13}\, i)\, x = 0$$

Alternate form assuming x is real:

$$i\,(0 - 3.02441 \times 10^{-13}\, x) + 31.621\, x + 0 = 31.621049849$$

(59.2857142857 - 27.664281474 - 0.0003829630809 + 3.02440628874673343705248272×10^-13)x = 31.621049849

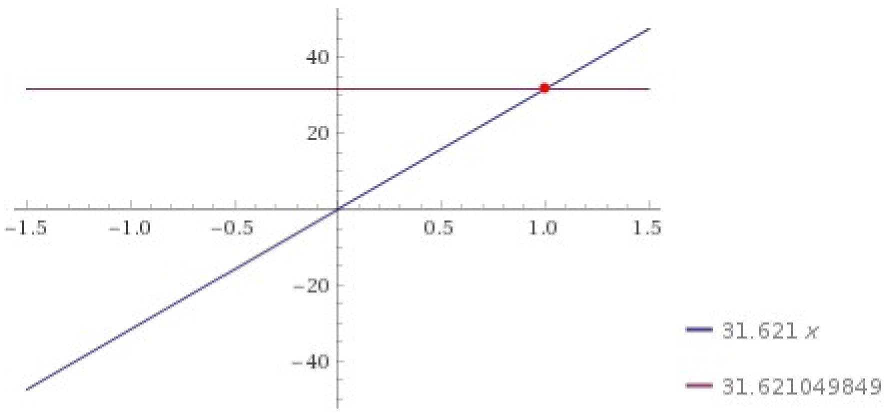
Input interpretation:

$$(59.2857142857 - 27.664281474 - 0.0003829630809 + 3.02440628874673343705248272 \times 10^{-13})\, x = 31.621049849$$

Result:

$$31.621\, x = 31.621049849$$

Plot:



Alternate form:

$$31.621\, x - 31.621049849 = 0$$

Alternate form assuming x is real:

$31.621\,x + 0 = 31.621049849$

31.621049849/31.621

Input interpretation:

$$\frac{31.621049849}{31.621}$$

Result:

1.0000015764523576104487524113721893678251794693399955725 62...

1.000001576452…

(1/(31.621049849/31.621))^4096

Input interpretation:

$$\left(\frac{1}{\frac{31.621049849}{31.621}}\right)^{4096}$$

Result:

0.99356365878662089804326464655089613430690515596885568922 9...

0.9935636587… result very near to the value of the following Rogers-Ramanujan continued fraction:

$$\frac{e^{-\frac{\pi}{\sqrt{5}}}}{\frac{\sqrt{5}}{1+\sqrt[5]{\sqrt{\varphi^5\sqrt[4]{5^3}}-1}}-\varphi+1} = 1-\frac{e^{-\pi\sqrt{5}}}{1+\frac{e^{-2\pi\sqrt{5}}}{1+\frac{e^{-3\pi\sqrt{5}}}{1+\frac{e^{-4\pi\sqrt{5}}}{1+\dots}}}} \approx 0.9991104684$$

and to the dilaton value $\mathbf{0.989117352243 = \phi}$

2sqrt(((1/log base 0.9935636587 (1/(31.621049849/31.621)))))-Pi+1/golden ratio

Input interpretation:

$$2\sqrt{\frac{1}{\log_{0.9935636587}\left(\frac{1}{\frac{31.621049849}{31.621}}\right)}}-\pi+\frac{1}{\phi}$$

$\log_b(x)$ is the base- b logarithm

ϕ is the golden ratio

Result:

125.4764421992650663948968386275861013270602702572945694409...

125.47644219… result very near to the dilaton mass calculated as a type of Higgs boson: 125 GeV for T = 0 and to the Higgs boson mass 125.18

Alternative representation:

$$2\sqrt{\frac{1}{\log_{0.993564}\left(\frac{1}{\frac{31.6210498490000}{31.621}}\right)}}-\pi+\frac{1}{\phi}=$$

$$\left(-\pi+\frac{1}{\phi}+2\sqrt{\frac{1}{\frac{\log\left(\frac{1}{\frac{31.6210498490000}{31.621}}\right)}{\log(0.993564)}}}=\frac{1}{\phi}-\pi+2\sqrt{\frac{\log(0.993564)}{\log(0.999998)}}\right)$$

Series representations:

$$2\sqrt{\frac{1}{\log_{0.993564}\left(\frac{1}{\frac{31.6210498490000}{31.621}}\right)}}-\pi+\frac{1}{\phi}=\frac{1}{\phi}-\pi+2\sqrt{-\frac{\log(0.993564)}{\sum_{k=1}^{\infty}\frac{(-1)^k\left(-1.57645\times10^{-6}\right)^k}{k}}}$$

$$2\sqrt{\frac{1}{\log_{0.993564}\left(\frac{1}{\frac{31.6210498490000}{31.621}}\right)}}-\pi+\frac{1}{\phi}=$$

$$\frac{1}{\phi}-\pi+2\sqrt{-1+\frac{1}{\log_{0.993564}(0.999998)}}\sum_{k=0}^{\infty}\binom{\frac{1}{2}}{k}\left(-1+\frac{1}{\log_{0.993564}(0.999998)}\right)^{-k}$$

$$2\sqrt{\frac{1}{\log_{0.993564}\left(\frac{\frac{1}{31.6210498490000}}{31.621}\right)}} - \pi + \frac{1}{\phi} =$$

$$\frac{1}{\phi} - \pi + 2\sqrt{-1 + \frac{1}{\log_{0.993564}(0.999998)}} \sum_{k=0}^{\infty} \frac{(-1)^k \left(-1 + \frac{1}{\log_{0.993564}(0.999998)}\right)^{-k} \left(-\frac{1}{2}\right)_k}{k!}$$

From the sum, we obtain:

(59.2857142857 + 27.664281474 + 0.0003829630809 + 3.02440628874673343705248272×10^-13 i)

Input interpretation:

$59.2857142857 + 27.664281474 + 0.0003829630809 + 3.02440628874673343705248272 \times 10^{-13}\, i$

i is the imaginary unit

Result:

$86.950378723\ldots + 3.0244062887\ldots \times 10^{-13}\, i$

Polar coordinates:

$r = 86.9504$ (radius), $\theta = 1.99293 \times 10^{-13}$° (angle)

86.9504

Alternate form:

86.9504

From the difference, we obtain:

(59.2857142857 - 27.664281474 - 0.0003829630809 - 3.02440628874673343705248272×10^-13 i)

Input interpretation:

$59.2857142857 - 27.664281474 - 0.0003829630809 - 3.02440628874673343705248272 \times 10^{-13}\, i$

i is the imaginary unit

Result:

31.621049849... –
3.0244062887... × 10^{-13} i

Polar coordinates:

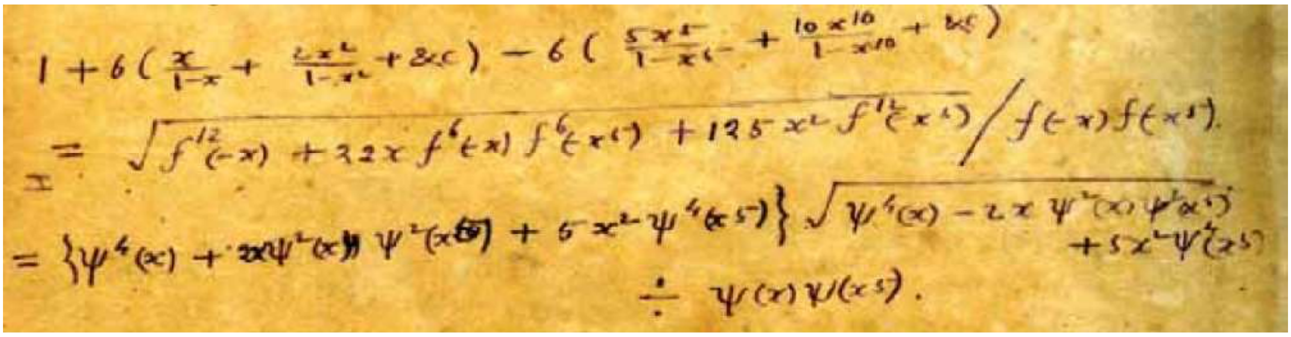
$r = 31.621$ (radius), $\theta = -5.48007 \times 10^{-13}$° (angle)

31.621

Alternate form:

31.621

Now, we have that:



$$1+6\left(\frac{x}{1-x}+\frac{2x^2}{1-x^2}+\&c\right)-6\left(\frac{5x^5}{1-x^5}+\frac{10x^{10}}{1-x^{10}}+\&c\right)$$

$$=\sqrt{f^{12}(-x)+32x f^6(-x) f^6(-x^5)+125x^2 f^{12}(-x^5)} \Big/ f(-x)f(-x^5)$$

$$=\{\psi^4(x)+2x\psi^2(x)\psi^2(x^5)+5x^2\psi^4(x^5)\}\sqrt{\psi^4(x)-2x\psi^2(x)\psi^2(x^5)+5x^2\psi^4(x^5)}$$

$$\div\ \psi(x)\psi(x^5).$$

For x = 2, we obtain:

1+6((2/(1-2)+(2*2^2)/(1-2^2)))-6((5*2^5)/(1-2^5)+(10*2^10)/(1-2^10))

Input:

$$1+6\left(\frac{2}{1-2}+\frac{2\times 2^2}{1-2^2}\right)-6\left(\frac{5\times 2^5}{1-2^5}+\frac{10\times 2^{10}}{1-2^{10}}\right)$$

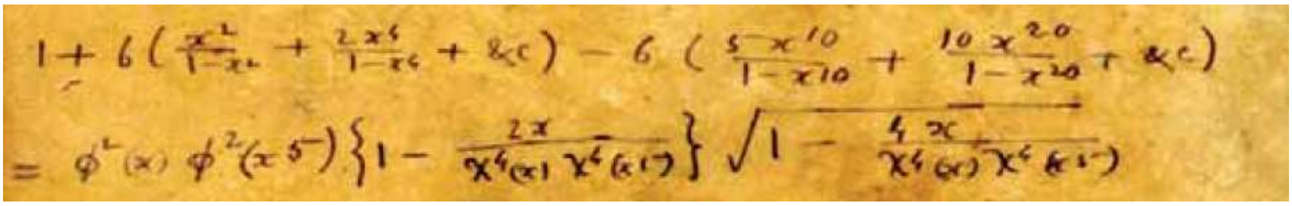
Exact result:

$$\frac{21833}{341}$$

Decimal approximation:

64.026392961876832844574780058651026392961876832844574780 05...

64.026392961876….. (C)



$$1+6\left(\frac{x^2}{1-x^2}+\frac{2x^4}{1-x^4}+\&c\right)-6\left(\frac{5x^{10}}{1-x^{10}}+\frac{10x^{20}}{1-x^{20}}+\&c\right)$$
$$=\phi^2(x)\,\phi^2(x^5)\left\{1-\frac{2x}{\chi^4(x)\chi^4(x^5)}\right\}\sqrt{1-\frac{4x}{\chi^4(x)\chi^4(x^5)}}$$

For x = 2, we obtain:

1+6((2^2/(1-2^2)+(2*2^4)/(1-2^4))-6((5*2^10)/(1-2^10)+(10*2^20)/(1-2^20))

Input:

$$1+6\left(\frac{2^2}{1-2^2}+\frac{2\times 2^4}{1-2^4}\right)-6\left(\frac{5\times 2^{10}}{1-2^{10}}+\frac{10\times 2^{20}}{1-2^{20}}\right)$$

Exact result:

$$\frac{981877}{13981}$$

Decimal approximation:

70.22938273371003504756455189185322938273371003504756455189...

70.2293827337….. (D)

These are the four results that we have obtained:

59.2857142857…. (A)

67.989010 (B)

64.026392961876….. (C)

70.2293827337….. (D)

From the sum of the first four results, dividing by (123+29+7), that are Lucas numbers, we obtain;

(59.2857142857 + 67.989010 + 64.026392961876 +70.2293827337)/(123+29+7)

Input interpretation:

$$\frac{59.2857142857 + 67.989010 + 64.026392961876 + 70.2293827337}{123 + 29 + 7}$$

Result:

1.644845911831924528301886792452830188679245283018867924528...

Repeating decimal:

$1.6448459118319\overline{245283018867}$ (period 13)

$1.6448559118319.... \approx \zeta(2) = \frac{\pi^2}{6} = 1.644934 ...$

And:

(59.2857142857 + 67.989010 + 64.026392961876 +70.2293827337)/(123+29+7+3)

Input interpretation:

$$\frac{59.2857142857 + 67.989010 + 64.026392961876 + 70.2293827337}{123 + 29 + 7 + 3}$$

Result:

1.614385802353555555555555555555555555555555555555555555555...

Repeating decimal:

$1.614385802353\overline{5}$ (period 1)

1.6143858023535

And also:

(59.2857142857 + 67.989010 + 64.026392961876 +70.2293827337)^1/11

Input interpretation:

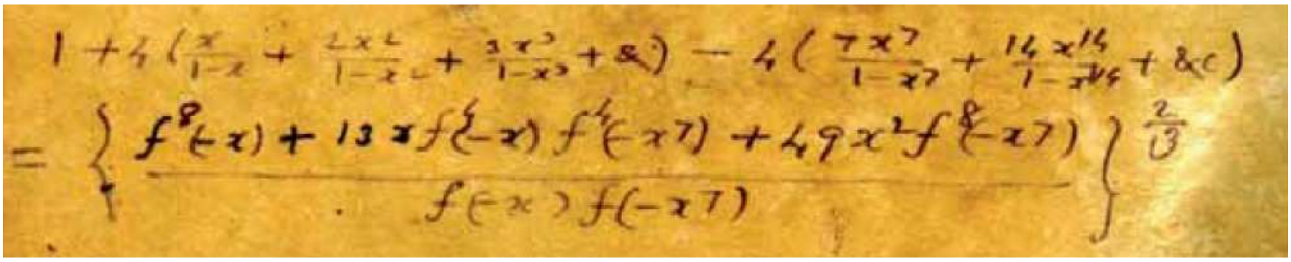
$$\sqrt[11]{59.2857142857 + 67.989010 + 64.026392961876 + 70.2293827337}$$

Result:

1.658726406...

1.658726406…. is very near to the 14th root of the following Ramanujan's class invariant $Q = \left(G_{505}/G_{101/5}\right)^3$ = 1164,2696 i.e. 1,65578...

We have that:



$$1+4\left(\frac{x}{1-x}+\frac{2x^2}{1-x^2}+\frac{3x^3}{1-x^3}+\&c\right)-4\left(\frac{7x^7}{1-x^7}+\frac{14x^{14}}{1-x^{14}}+\&c\right) = \left\{\frac{f^8(-x)+13xf^4(-x)f^4(-x^7)+49x^2f^8(-x^7)}{f(-x)f(-x^7)}\right\}^{\frac{2}{3}}$$

For x = 2, we obtain:

1+4((2/(1-2)+(2*2^2)/(1-2^2)+(3*2^3)/(1-2^3)))-4((7*2^7)/(1-2^7)+(14*2^14)/(1-2^14))

Input:

$$1+4\left(\frac{2}{1-2}+\frac{2\times 2^2}{1-2^2}+\frac{3\times 2^3}{1-2^3}\right)-4\left(\frac{7\times 2^7}{1-2^7}+\frac{14\times 2^{14}}{1-2^{14}}\right)$$

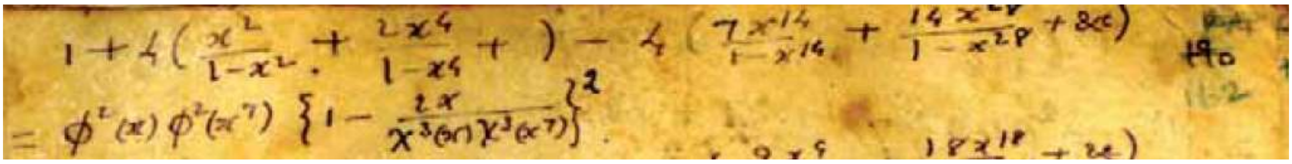
Exact result:

$$\frac{2020027}{38227}$$

Decimal approximation:

52.842938237371491354278389619902163392366651842938237371 49...

52.84293823737....



1+4((2^2/(1-2^2)+(2*2^4)/(1-2^4))-4((7*2^14)/(1-2^14)+(14*2^28)/(1-2^28))

Input:

$$1+4\left(\frac{2^2}{1-2^2}+\frac{2\times 2^4}{1-2^4}\right)-4\left(\frac{7\times 2^{14}}{1-2^{14}}+\frac{14\times 2^{28}}{1-2^{28}}\right)$$

Exact result:

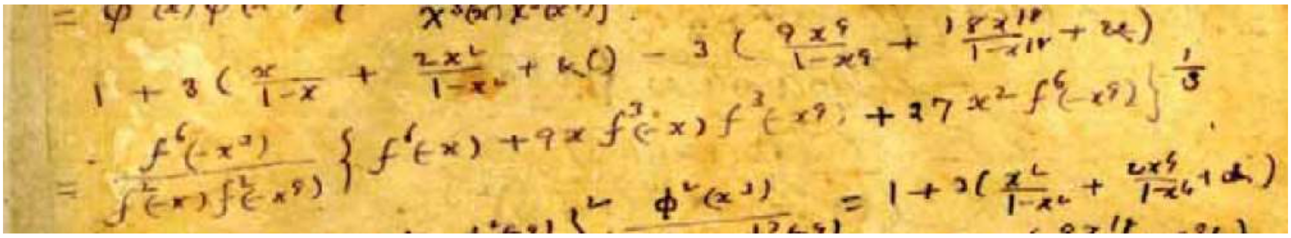
$$\frac{1273011169}{17895697}$$

Decimal approximation:

71.13504263063908603280442220272281096399877579509755892715...

71.135042630639….

We have that:



1+3((2/(1-2)+(2*2^2)/(1-2^2))-3((9*2^9)/(1-2^9)+(18*2^18)/(1-2^18))

Input:

$$1+3\left(\frac{2}{1-2}+\frac{2\times 2^2}{1-2^2}\right)-3\left(\frac{9\times 2^{9}}{1-2^{9}}+\frac{18\times 2^{18}}{1-2^{18}}\right)$$

Exact result:

$$\frac{660727}{9709}$$

Decimal approximation:

68.05304356782366876094345452672777834998455041713873725409...

68.0530435678236….

From the sum of these seven results, we obtain:

59.2857142857 + 67.989010 + 64.026392961876 +70.2293827337+52.84293823737 +71.135042630639+68.0530435678236

Input interpretation:

59.2857142857 + 67.989010 + 64.026392961876 + 70.2293827337 + 52.84293823737 + 71.135042630639 + 68.0530435678236

Result:

453.5615244171086

453.5615244171086

(59.2857142857 + 67.989010 + 64.026392961876 +70.2293827337+52.84293823737 +71.135042630639+68.0530435678236)+29+11

Where 29 and 11 are Lucas numbers

Input interpretation:

(59.2857142857 + 67.989010 + 64.026392961876 + 70.2293827337 + 52.84293823737 + 71.135042630639 + 68.0530435678236) + 29 + 11

Result:

493.5615244171086

493.5615244171086 result practically equal to the rest mass of Kaon meson 493.677

We obtain also:

493.5615244171086/4+2

Input interpretation:

$$\frac{493.5615244171086}{4} + 2$$

Result:

125.39038110427715

125.39038110427715 result very near to the dilaton mass calculated as a type of Higgs boson: 125 GeV for T = 0 and to the Higgs boson mass 125.18

And:

(493.5615244171086/4)+2+11+Pi

Where 2 and 11 are Lucas numbers

Input interpretation:

$$\frac{493.5615244171086}{4} + 2 + 11 + \pi$$

Result:

139.5319737578669...

139.5319737578669… result practically equal to the rest mass of Pion meson 139.57

Alternative representations:

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 13 + 180° + \frac{493.56152441710860000}{4}$$

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 13 - i\log(-1) + \frac{493.56152441710860000}{4}$$

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 13 + \cos^{-1}(-1) + \frac{493.56152441710860000}{4}$$

Series representations:

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 136.39038110427715000 + 4\sum_{k=0}^{\infty} \frac{(-1)^k}{1 + 2k}$$

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 134.39038110427715000 + 2\sum_{k=1}^{\infty} \frac{2^k}{\binom{2k}{k}}$$

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 136.39038110427715000 + \sum_{k=0}^{\infty} \frac{2^{-k}(-6+50k)}{\binom{3k}{k}}$$

Integral representations:

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 136.39038110427715000 + 2\int_0^{\infty} \frac{1}{1+t^2}\,dt$$

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 136.39038110427715000 + 4\int_0^{1} \sqrt{1-t^2}\,dt$$

$$\frac{493.56152441710860000}{4} + 2 + 11 + \pi = 136.39038110427715000 + 2\int_0^{\infty} \frac{\sin(t)}{t}\,dt$$

(493.5615244171086)*4-199-47

Where 4, 199 and 47 are Lucas numbers

Input interpretation:

$493.5615244171086 \times 4 - 199 - 47$

Result:

1728.2460976684344

1728.2460976684344

This result is very near to the mass of candidate glueball $f_0(1710)$ meson. Furthermore, 1728 occurs in the algebraic formula for the j-invariant of an elliptic curve. As a consequence, it is sometimes called a Zagier as a pun on the Gross–Zagier theorem. The number 1728 is one less than the Hardy–Ramanujan number 1729

Repeating decimal:

1728.2460976684344

(493.5615244171086)*4-199+7

Where 7 is a Lucas number

Input interpretation:

$493.5615244171086 \times 4 - 199 + 7$

Result:

1782.2460976684344

1782.2460976684344 result in the range of the hypothetical mass of Gluino (gluino = 1785.16 GeV).

Repeating decimal:

1782.2460976684344

We note that:

((((493.5615244171086)*4-199+7))) - ((((493.5615244171086)*4-199-47)))

Input interpretation:

$(493.5615244171086 \times 4 - 199 + 7) - (493.5615244171086 \times 4 - 199 - 47)$

Result:

54

54

(59.2857142857 + 67.989010 + 64.026392961876 +70.2293827337+52.84293823737 +71.135042630639+68.0530435678236)/7-1/golden ratio

Where 7 is a Lucas number

Input interpretation:

$$\frac{1}{7}(59.2857142857 + 67.989010 + 64.026392961876 + 70.2293827337 + 52.84293823737 + 71.135042630639 + 68.0530435678236) - \frac{1}{\phi}$$

ϕ is the golden ratio

Result:

64.1764695...

64.1764695…

Alternative representations:

$$\frac{1}{7}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) - \frac{1}{\phi} = \frac{453.562}{7} - \frac{1}{2\sin(54°)}$$

$$\frac{1}{7}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) - \frac{1}{\phi} = \frac{453.562}{7} - -\frac{1}{2\cos(216°)}$$

$$\frac{1}{7}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) - \frac{1}{\phi} = \frac{453.562}{7} - -\frac{1}{2\sin(666°)}$$

(59.2857142857 + 67.989010 + 64.026392961876 +70.2293827337+52.84293823737 +71.135042630639+68.0530435678236)/7+2-e

Input interpretation:

$$\frac{1}{7}(59.2857142857 + 67.989010 + 64.026392961876 + 70.2293827337 + 52.84293823737 + 71.135042630639 + 68.0530435678236) + 2 - e$$

Result:

64.0762217...

64.0762217…

Alternative representation:

$$\frac{1}{7}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) + 2 - e = \frac{1}{7}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) + 2 - \exp(z) \quad \text{for } z = 1$$

Series representations:

$$\frac{1}{7}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) + 2 - e = 66.7945 - \sum_{k=0}^{\infty} \frac{1}{k!}$$

$$\frac{1}{7}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) + 2 - e = 63.7945 + \sum_{k=0}^{\infty} \frac{1+k}{(3+k)!}$$

$$\frac{1}{7}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) + 2 - e = 66.7945 - \frac{\sum_{k=0}^{\infty} \frac{-1+k+z}{k!}}{z}$$

(59.2857142857 + 67.989010 + 64.026392961876 +70.2293827337+52.84293823737 +71.135042630639+68.0530435678236)/8-e

Input interpretation:

$$\frac{1}{8}(59.2857142857 + 67.989010 + 64.026392961876 + 70.2293827337 + 52.84293823737 + 71.135042630639 + 68.0530435678236) - e$$

Result:

53.9769087...

53.9769087…

Alternative representation:

$$\frac{1}{8}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) - e = \frac{1}{8}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) - \exp(z) \text{ for } z = 1$$

Series representations:

$$\frac{1}{8}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) - e = 56.6952 - \sum_{k=0}^{\infty} \frac{1}{k!}$$

$$\frac{1}{8}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) - e = 53.6952 + \sum_{k=0}^{\infty} \frac{1+k}{(3+k)!}$$

$$\frac{1}{8}(59.28571428570000 + 67.989 + 64.0263929618760000 + 70.22938273370000 + 52.842938237370000 + 71.1350426306390000 + 68.05304356782360000) - e = 56.6952 - \frac{\sum_{k=0}^{\infty} \frac{-1+k+z}{k!}}{z}$$

(((59.2857142 + 67.989010 + 64.02639296 +70.2293827+52.8429382 +71.13504263+68.053043567)/7+2-e)) - (((59.285714 + 67.989010 + 64.0263929 +70.229382+52.842938 +71.1350426+68.0530435)/8-e))

Input interpretation:

$$\left(\frac{1}{7}(59.2857142 + 67.989010 + 64.02639296 + 70.2293827 + 52.8429382 + 71.13504263 + 68.053043567) + 2 - e\right) - \left(\frac{1}{8}(59.285714 + 67.989010 + 64.0263929 + 70.229382 + 52.842938 + 71.1350426 + 68.0530435) - e\right)$$

Result:

10.099313090285714285714285714285714285714285714285714285714285714...

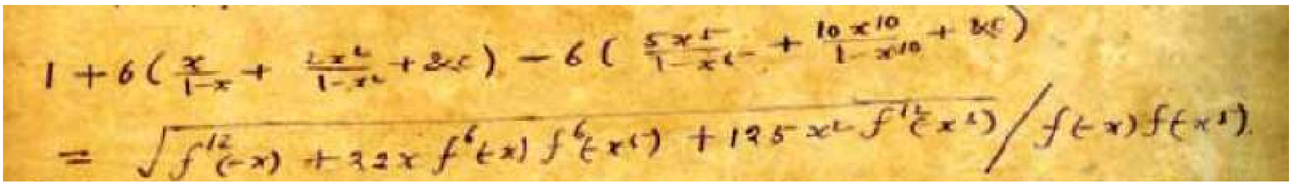
10.09931309028… result practically equal to the dimensions number of superstrings, that is 10

Repeating decimal:

$10.099313090\overline{285714}$ (period 6)

Alternative representation:

$$\left(\frac{1}{7}(59.2857 + 67.989 + 64.0264 + 70.2294 + 52.8429 + 71.135 + 68.0530435670000) + 2 - e\right) - \left(\frac{1}{8}(59.2857 + 67.989 + 64.0264 + 70.2294 + 52.8429 + 71.135 + 68.053) - e\right) = \left(\frac{1}{7}(59.2857 + 67.989 + 64.0264 + 70.2294 + 52.8429 + 71.135 + 68.0530435670000) + 2 - \exp(z)\right) - \left(\frac{1}{8}(59.2857 + 67.989 + 64.0264 + 70.2294 + 52.8429 + 71.135 + 68.053) - \exp(z)\right) \text{ for } z = 1$$



f = 3.024406288e-13 and x = 2

[sqrt((((3.024406288e-13)^12*(-2)+22*2*(3.024406288e-13)^6*(-2)*(3.024406288e-13)^6*(-2^5)+125*2^2*(3.024406288e-13)^12*(-2^5))))*1/(((3.024406288e-13*(-2)* 3.024406288e-13*(-2^5))))]

Input interpretation:

$$\sqrt{\left((3.024406288\times10^{-13})^{12}\times(-2)+22\times2\,(3.024406288\times10^{-13})^{6}\times(-2)\,(3.024406288\times10^{-13})^{6}\,(-2^{5})+125\times2^{2}\,(3.024406288\times10^{-13})^{12}\,(-2^{5})\right)\times\frac{1}{3.024406288\times10^{-13}\times(-2)\times3.024406288\times10^{-13}\,(-2^{5})}}$$

Result:

$1.50119494\ldots\times10^{-50}\,i$

Polar coordinates:

$r = 1.50119\times10^{-50}$ (radius), $\theta = 90°$ (angle)

$1.50119*10^{-50}$

From this result, we obtain also:

1/(csc(3^2/26))((((1.50119×10^-50)/sqrt(-(-2122.1867)))))

Where -2122.1867 is a value of Ramanujan mock theta function

Input interpretation:

$$\frac{1}{\csc\left(\frac{3^2}{26}\right)}\times\frac{1.50119\times10^{-50}}{\sqrt{-(-2122.1867)}}$$

csc(x) is the cosecant function

Result:

$1.10562\ldots\times10^{-52}$

$1.10562...*10^{-52}$ result practically equal to the value of the Cosmological Constant

From which, we obtain also:

1/(csc(x)) = (1.10561795398627*10^-52)/((((1.50119×10^-50)/sqrt(-(-2122.1867)))))

Input interpretation:

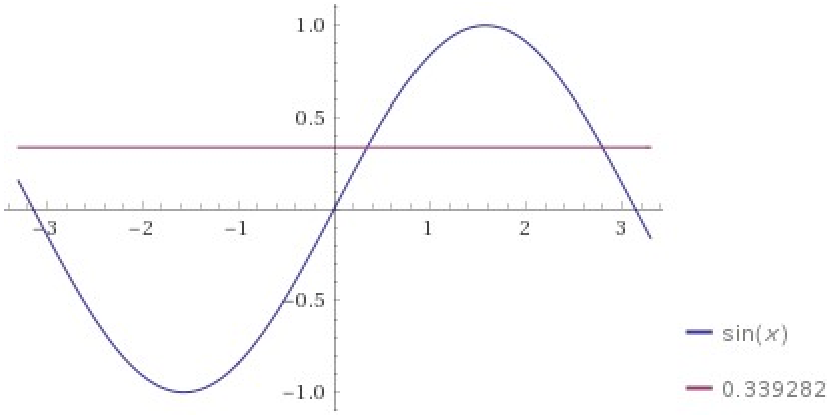
$$\frac{1}{\csc(x)}=\frac{1.10561795398627\times10^{-52}}{\frac{1.50119\times10^{-50}}{\sqrt{-(-2122.1867)}}}$$

csc(x) is the cosecant function

Result:

$\sin(x) = 0.339282$

Plot:



Alternate form:

$\frac{1}{2} i e^{-i x} - \frac{1}{2} i e^{i x} = 0.339282$

Solutions:

$x \approx 6.28319 n + 0.346154, \quad n \in \mathbb{Z}$

$x \approx 6.28319 n + 2.79544, \quad n \in \mathbb{Z}$

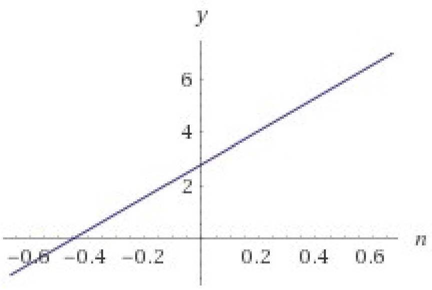
$\mathbb{Z}$ is the set of integers

2.79544 + 6.28319 n

Input interpretation:

$2.79544 + 6.28319 n$

Plot:



(n from -0.7 to 0.7)

Values:

n	1	2	3	4	5
$6.28319\,n + 2.79544$	9.07863	15.3618	21.645	27.9282	34.2114

Geometric figure:

line

Alternate forms:

$6.28319\,(n + 0.444908)$

$0.00001\,(628\,319\,n + 279\,544)$

Root:

$n \approx -0.444908$

For 3 < n < 4, i.e. 21.645 and 27.9282, we have:

2.79544 + 6.28319 *3.6938

Input interpretation:

$2.79544 + 6.28319 \times 3.6938$

Result:

26.004287222

26.004287222 ≈ 26 that is the dimensions number of bosonic strings

Or:

1/(csc(3^2/x)) = (1.10561795398627*10^-52)/((((1.50119×10^-50)/sqrt(-(-2122.1867)))))

Input interpretation:

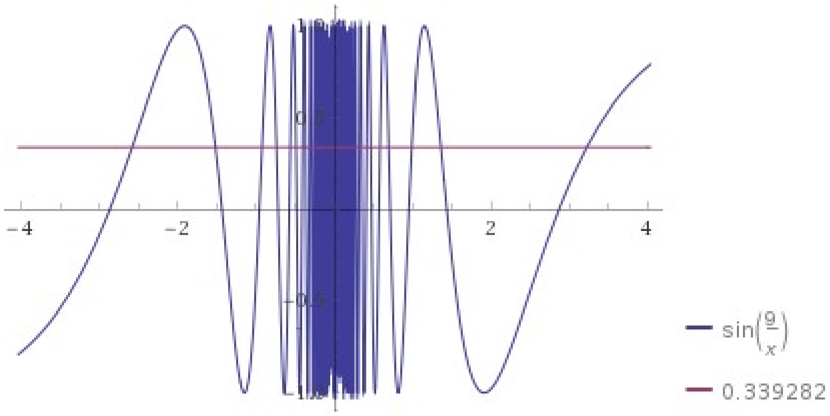
$$\frac{1}{\csc\left(\frac{3^2}{x}\right)} = \frac{1.10561795398627 \times 10^{-52}}{\frac{1.50119 \times 10^{-50}}{\sqrt{-(-2122.1867)}}}$$

$\csc(x)$ is the cosecant function

Result:

$$\sin\left(\frac{9}{x}\right) = 0.339282$$

Plot:



Alternate forms:

$$\frac{1}{2} i e^{-(9 i)/x} - \frac{1}{2} i e^{(9 i)/x} = 0.339282$$

$$\sin\left(\frac{1}{x}\right)\left(2 \cos\left(\frac{2}{x}\right)+1\right)\left(2 \cos\left(\frac{6}{x}\right)+1\right) = 0.339282$$

$$\sin^9\left(\frac{1}{x}\right)+9 \sin\left(\frac{1}{x}\right)\cos^8\left(\frac{1}{x}\right)-84 \sin^3\left(\frac{1}{x}\right)\cos^6\left(\frac{1}{x}\right)+ 126 \sin^5\left(\frac{1}{x}\right)\cos^4\left(\frac{1}{x}\right)-36 \sin^7\left(\frac{1}{x}\right)\cos^2\left(\frac{1}{x}\right) = 0.339282$$

Solutions:

$$x \approx \frac{9}{6.28319 n + 0.346154}, \quad n \in \mathbb{Z}$$

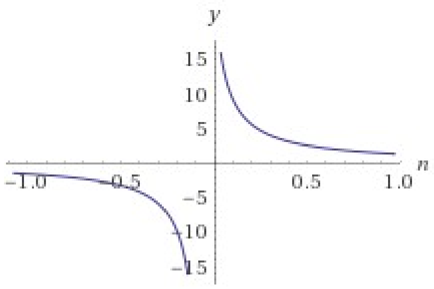
$$x \approx \frac{9}{6.28319 n + 2.79544}, \quad n \in \mathbb{Z}$$

9/(0.346154 + 6.28319 n)

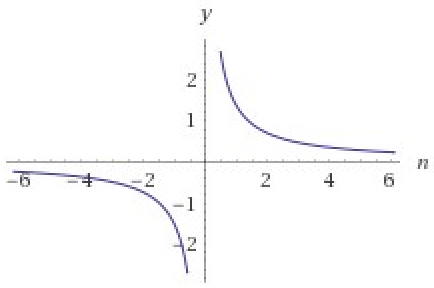
Input interpretation:

$$\frac{9}{0.346154 + 6.28319 n}$$

Plots:



(n from −1.1 to 1)



(n from −6.2 to 6.1)

Values:

n	1	2	3	4	5
9/ (6.28319 n + 0.346154)	1.3576	0.696997	0.468854	0.353233	0.283357

Alternate forms:

$$\frac{1.43239}{n+0.0550921}$$

$$\frac{1.43239}{n+0.0550921}$$

Alternate form assuming n is real:

$$\frac{9}{6.28319\,n+0.346154}+0$$

Series expansion at n = 0:

$$26. - 471.937\,n + 8566.33\,n^2 - 155491.\,n^3 + 2.82239\times10^6\,n^4 + O(n^5)$$

(Taylor series)

Series expansion at n = ∞:

$$\frac{1.43239}{n} - \frac{0.0789135}{n^2} + \frac{0.00434751}{n^3} - \frac{0.000239513}{n^4} + O\left(\left(\frac{1}{n}\right)^5\right)$$

(Laurent series)

Derivative:

$$\frac{d}{dn}\left(\frac{9}{6.28319\,n + 0.346154}\right) = -\frac{1.43239}{(n + 0.0550921)^2}$$

Indefinite integral:

$$\int \frac{9}{0.346154 + 6.28319\,n}\,dn = 1.43239 \log(6.28319\,n + 0.346154) + \text{constant}$$

(assuming a complex-valued logarithm)

log(x) is the natural logarithm

Limit:

$$\lim_{n\to\pm\infty} \frac{9}{0.346154 + 6.28319\,n} = 0 \approx 0$$

Series representations:

$$\frac{9}{0.346154 + 6.28319\,n} = \sum_{\nu=0}^{\infty} n^{\nu}\, 288\left((-628\,319)^{\nu}\, 5^{6+\nu} \times 173\,077^{-1-\nu}\right) \text{ for } |n| < \frac{173\,077}{3\,141\,595}$$

$$\frac{9}{0.346154 + 6.28319\,n} = \sum_{\nu=0}^{\infty} (-1+n)^{\nu}\, 9\left((-628\,319)^{\nu}\, 2^{1-4\nu} \times 5^{6+\nu} \times 207\,167^{-1-\nu}\right)$$

for $3\,141\,595\,|-1+n| < 3\,314\,672$

Note that from the following Taylor series:

$$26. - 471.937\,n + 8566.33\,n^2 - 155\,491.\,n^3 + 2.82239\times 10^6\,n^4 + O(n^5)$$

(Taylor series)

There is the value of incognita of the above expression: 26

From the solution 64.026392961876….. (C), we obtain:

64.026392961876x = 1.50119×10^-50

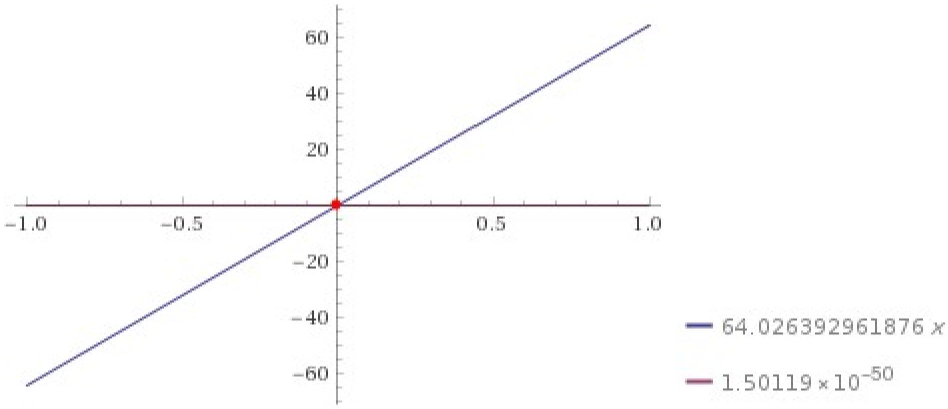
Input interpretation:

$$64.026392961876\,x = 1.50119 \times 10^{-50}$$

Result:

$64.026392961876\,x = 1.50119\times10^{-50}$

Plot:



Alternate form:

$64.026392961876\,x - 1.50119\times10^{-50} = 0$

Solution:

$x \approx 2.34464\times10^{-52}$

$2.34464*10^{-52}$

We note that:

2.34464*10^-52 *1/(sqrt((55*log(Pi))/(11+3)))

Input interpretation:

$$2.34464\times10^{-52}\times\frac{1}{\sqrt{\frac{55\log(\pi)}{11+3}}}$$

log(x) is the natural logarithm

Result:

$1.10562...\times10^{-52}$

$1.10562...*10^{-52}$ result practically equal to the value of the Cosmological Constant

(1/64.026392961876)x = 1/(2.34464×10^-52)

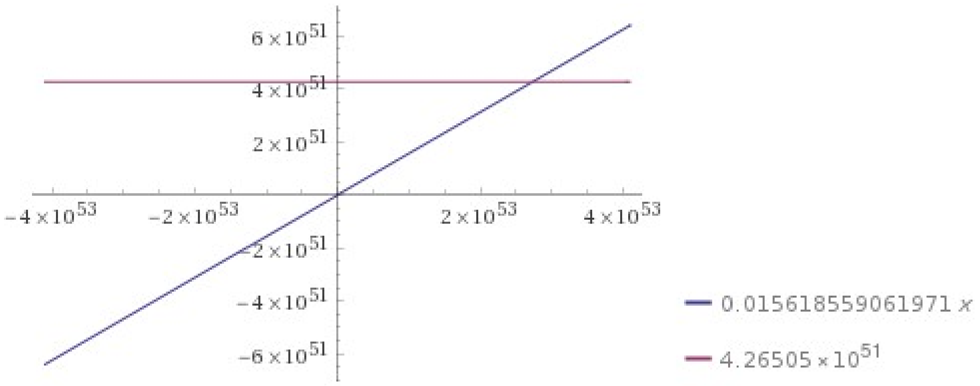
Input interpretation:

$$\frac{1}{64.026392961876} x = \frac{1}{2.34464 \times 10^{-52}}$$

Result:

$$0.015618559061971\, x = 4.26505 \times 10^{51}$$

Plot:



Alternate form:

$$0.015618559061971\, x - 4.26505 \times 10^{51} = 0$$

Solution:

$$x = 273\,075\,580\,736\,812\,440\,849\,937\,715\,484\,541\,712\,110\,208\,175\,193\,456\,640$$

Integer solution:

$$x = 273\,075\,580\,736\,812\,440\,849\,937\,715\,484\,541\,712\,110\,208\,175\,193\,456\,640$$

273075580736812440849937715484541712110208175193456640

From which, dividing by 4096^{14}:

1/4096^14(2730755807368124408499377154845417121102081751934566409)

Input:

$$\frac{1}{4096^{14}} \times 2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409$$

Exact result:

$$\frac{2730755807368124408499377154845417121102081751934566409}{374144419156711147060143317175368453031918731001856}$$

Decimal approximation:

7298.6677538128446940390858799219131469726562500000000024054...

7298.66775381...

1/3((((1/4096^14(2730755807368124408499377154845417121102081751934566409)))))+21

Input:

$$\frac{1}{3}\left(\frac{1}{4096^{14}}\times 2730755807368124408499377154845417121102081751934566409\right)+21$$

Exact result:

$$\frac{2754326905774997210764166183827465333643092631987683337}{1122433257470133441180429951526105359095756193005568}$$

Decimal approximation:

2453.8892512709482313463619599739710489908854166666666674684...

2453.88925127... result practically equal to the rest mass of charmed Sigma baryon 2453.98

ln(2730755807368124408499377154845417121102081751934566409)

Input:

log(2730755807368124408499377154845417121102081751934566409)

log(x) is the natural logarithm

Decimal approximation:

125.3441734450745459023619859912938649194496662509238375659...

125.344173445… result very near to the dilaton mass calculated as a type of Higgs boson: 125 GeV for T = 0 and to the Higgs boson mass 125.18

Property:

$\log(2730755807368124408499377154845417121102081751934566409)$ is a transcendental number

Alternative representations:

$\log(2730755807368124408499377154845417121102081751934566409) = \log_e(2730755807368124408499377154845417121102081751934566409)$

$\log(2730755807368124408499377154845417121102081751934566409) = \log(a) \log_a(2730755807368124408499377154845417121102081751934566409)$

$\log(2730755807368124408499377154845417121102081751934566409) = -\text{Li}_1(-2730755807368124408499377154845417121102081751934566408)$

Integral representations:

$$\log(2730755807368124408499377154845417121102081751934566409) = \int_1^{2730755807368124408499377154845417121102081751934566409} \frac{1}{t}\,dt$$

$$\log(2730755807368124408499377154845417121102081751934566409) = -\frac{i}{2\pi} \int_{-i\infty+\gamma}^{i\infty+\gamma} \frac{1}{\Gamma(1-s)} 2730755807368124408499377154845417121102081751934566408^{-s}\,\Gamma(-s)^2\,\Gamma(1+s)\,ds \quad \text{for } -1 < \gamma < 0$$

ln(2730755807368124408499377154845417121102081751934566409)+11+Pi

Input:

$\log(2730755807368124408499377154845417121102081751934566409) + 11 + \pi$

$\log(x)$ is the natural logarithm

Decimal approximation:

139.4857660986643391408246293745733678036468356502989433869...

139.485766098… result practically equal to the rest mass of Pion meson 139.57

Alternative representations:

$$\log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409) + 11 + \pi = 11 + \pi + \log_e(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409)$$

$$\log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409) + 11 + \pi = 11 + \pi + \log(a)\log_a(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409)$$

$$\log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409) + 11 + \pi = 11 + \pi - \text{Li}_1(-2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,408)$$

Series representations:

$$\log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409) + 11 + \pi = 11 + \pi + \log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,408) - \sum_{k=1}^{\infty} \frac{\left(-\frac{1}{2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,408}\right)^k}{k}$$

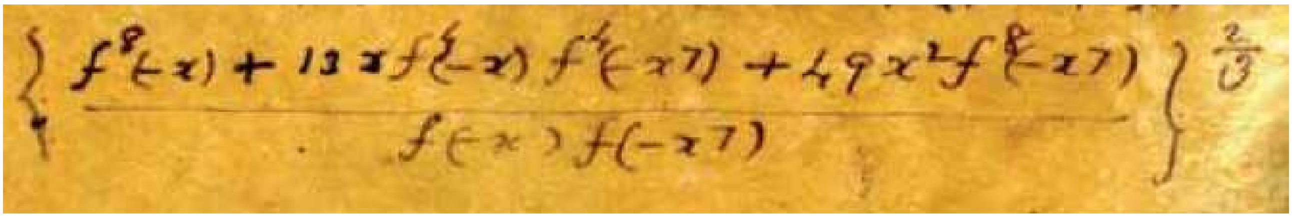
$$\log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409) + 11 + \pi = 11 + \pi + 2 i \pi \left\lfloor \frac{1}{2\pi} \arg(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409 - x) \right\rfloor + \log(x) - \sum_{k=1}^{\infty} \frac{1}{k} (-1)^k (2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409 - x)^k x^{-k} \quad \text{for } x < 0$$

$$\log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409) + 11 + \pi = 11 + \pi + 2 i \pi \left\lfloor \frac{\pi - \arg\left(\frac{1}{z_0}\right) - \arg(z_0)}{2\pi} \right\rfloor + \log(z_0) - \sum_{k=1}^{\infty} \frac{1}{k} (-1)^k (2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409 - z_0)^k z_0^{-k}$$

Integral representations:

$$\log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409) + 11 + \pi = 11 + \pi + \int_1^{2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409} \frac{1}{t}\, dt$$

$$\log(2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,409) + 11 + \pi = 11 + \pi - \frac{i}{2\pi}\int_{-i\infty+\gamma}^{i\infty+\gamma} \frac{1}{\Gamma(1-s)} 2\,730\,755\,807\,368\,124\,408\,499\,377\,154\,845\,417\,121\,102\,081\,751\,934\,566\,408^{-s}\,\Gamma(-s)^2\,\Gamma(1+s)\,ds \quad \text{for } -1 < \gamma < 0$$



f = 3.024406288e-13 and x = 2

((((((((3.024406288e-13)^8*(-2)+13*2*(3.024406288e-13)^4*(-2)*(3.024406288e-13)^4*(-2^7)+49*2^2*(3.024406288e-13)^8*(-2^7))))/((((3.024406288e-13)*(-2)*(3.024406288e-13)*(-2^7)))))))^(2/3)

Input interpretation:

$$\left(\left((3.024406288\times10^{-13})^8\times(-2) + 13\times2\,(3.024406288\times10^{-13})^4\times(-2)\,(3.024406288\times10^{-13})^4\,(-2^7) + 49\times2^2\,(3.024406288\times10^{-13})^8\,(-2^7)\right)/\left(3.024406288\times10^{-13}\times(-2)\times3.024406288\times10^{-13}\,(-2^7)\right)\right)^{2/3}$$

Result:

$$-7.24075099\ldots\times10^{-50} + 1.25413486\ldots\times10^{-49}\,i$$

Polar coordinates:

$r = 1.44815\times10^{-49}$ (radius), $\theta = 120°$ (angle)

((((1+4((2/(1-2)+(2*2^2)/(1-2^2)+(3*2^3)/(1-2^3)))-4((7*2^7)/(1-2^7)+(14*2^14)/(1-2^14))))))x = 1.44815×10^-49

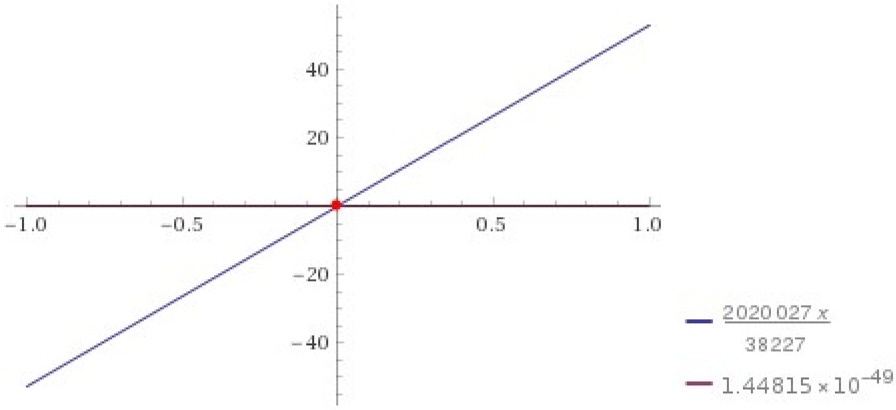
Input interpretation:

$$\left(1 + 4\left(\frac{2}{1-2} + \frac{2\times2^2}{1-2^2} + \frac{3\times2^3}{1-2^3}\right) - 4\left(\frac{7\times2^7}{1-2^7} + \frac{14\times2^{14}}{1-2^{14}}\right)\right)x = 1.44815\times10^{-49}$$

Result:

$$\frac{2020027\,x}{38227} = 1.44815\times10^{-49}$$

Plot:



Alternate form:

$$\frac{2020027\,x}{38227} - 1.44815\times10^{-49} = 0$$

Solution:

$$x \approx 2.74048\times10^{-51}$$

$2.74048*10^{-51}$

1/3(((1/4096^13(((1/(2.74048×10^-51)))))))-11+1/golden ratio

Input interpretation:

$$\frac{1}{3}\left(\frac{1}{4096^{13}}\times\frac{1}{2.74048\times10^{-51}}\right)-11+\frac{1}{\phi}$$

ϕ is the golden ratio

Result:

1321.21...

1321.21… result practically equal to the rest mass of Xi baryon 1321.71

1/29(((1/4096^13(((1/(2.74048×10^-51)))))))-11-golden ratio

Input interpretation:

$$\frac{1}{29}\left(\frac{1}{4096^{13}} \times \frac{1}{2.74048 \times 10^{-51}}\right) - 11 - \phi$$

ϕ is the golden ratio

Result:

125.133...

125.133... result very near to the dilaton mass calculated as a type of Higgs boson: 125 GeV for T = 0 and to the Higgs boson mass 125.18

1/29(((1/4096^13(((1/(2.74048×10^-51)))))))+golden ratio

Input interpretation:

$$\frac{1}{29}\left(\frac{1}{4096^{13}} \times \frac{1}{2.74048 \times 10^{-51}}\right) + \phi$$

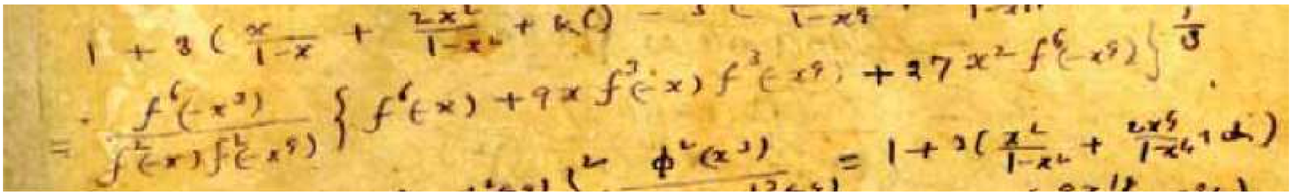
ϕ is the golden ratio

Result:

139.369...

139.369... result practically equal to the rest mass of Pion meson 139.57

We have also that:



f = 3.024406288e-13 and x = 2

((((3.024406288e-13)^6(-2)^3))) / ((((3.024406288e-13)^2(-2)*(3.024406288e-13)^2(-2)^9)))

[((((3.024406288e-13)^6*(-2)+9(2)*(3.024406288e-13)^3*(-2)*(3.024406288e-13)^3*(-2)^9+27*(-2)^2*(3.024406288e-13)^6*(-2)^9)))]^1/3

Input interpretation:

$$\left((3.024406288\times 10^{-13})^6\times(-2)+ 9\times 2\,(3.024406288\times 10^{-13})^3\times(-2)\,(3.024406288\times 10^{-13})^3\,(-2)^9 + 27\,(-2)^2\,(3.024406288\times 10^{-13})^6\,(-2)^9\right)\text{^}(1/3)$$

Result:

$1.52215522\ldots\times 10^{-24} +$
$2.63645018\ldots\times 10^{-24}\, i$

Polar coordinates:

$r = 3.04431\times 10^{-24}$ (radius), $\theta = 60°$ (angle)

$3.04431*10^{-24}$

From which:

((((3.024406288e-13)^6(-2)^3))) / ((((3.024406288e-13)^2(-2)*(3.024406288e-13)^2(-2)^9))) *(((3.04431×10^-24)))

Input interpretation:

$$\frac{(3.024406288\times 10^{-13})^6\,(-2)^3}{(3.024406288\times 10^{-13})^2\times(-2)\,(3.024406288\times 10^{-13})^2\,(-2)^9}\times 3.04431\times 10^{-24}$$

Result:

$-2.1755004089382474427038\times 10^{-51}$

$-2.1755004089382474427038*10^{-51}$ final result

From which, we obtain also:

-(Pi/((47+7)ln(Pi)))*((((3.024406288e-13)^6(-2)^3))) / ((((3.024406288e-13)^2(-2)*(3.024406288e-13)^2(-2)^9))) *(((3.04431×10^-24)))

Input interpretation:

$$-\frac{\pi}{(47+7)\log(\pi)}\left(\frac{(3.024406288\times 10^{-13})^6\,(-2)^3}{(3.024406288\times 10^{-13})^2\times(-2)\,(3.024406288\times 10^{-13})^2\,(-2)^9}\times 3.04431\times 10^{-24}\right)$$

log(x) is the natural logarithm

Result:

$1.10564... \times 10^{-52}$

1.10564...*10^{-52} result practically equal to the value of Cosmological Constant 1.1056 * 10^{-52}

Further, we have that:

68.0530435678236 = ((((3.024406288e-13)^6(-2)^3))) / ((((3.024406288e-13)^2(-2)*(3.024406288e-13)^2(-2)^9))) *(((3.04431×10^-24)))

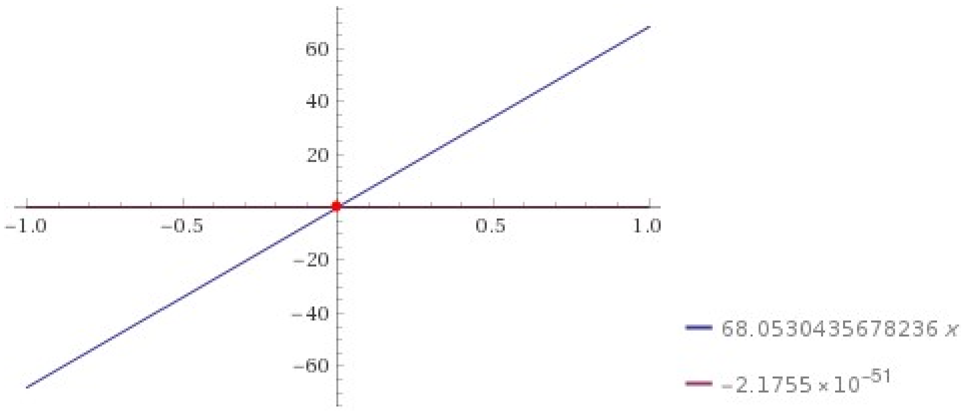
Input interpretation:

$$68.0530435678236\,x = \frac{(3.024406288\times10^{-13})^6\,(-2)^3}{(3.024406288\times10^{-13})^2\times(-2)\,(3.024406288\times10^{-13})^2\,(-2)^9}\times3.04431\times10^{-24}$$

Result:

$68.0530435678236\,x = -2.1755\times10^{-51}$

Plot:



Alternate form:

$68.0530435678236\,x + 2.1755\times10^{-51} = 0$

Solution:

$x \approx -3.19677 \times 10^{-53}$

$-3.19677*10^{-53}$

From which:

-(-3.19677×10^-53)*(2/3*(Pi!-2))

Input interpretation:

$$-(-3.19677 \times 10^{-53})\left(\frac{2}{3}(\pi! - 2)\right)$$

$n!$ is the factorial function

Result:

$1.10567... \times 10^{-52}$

$1.10567...*10^{-52}$ result practically equal to the value of the Cosmological Constant $1.1056 * 10^{-52}$

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References

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