

The collapse of Riemann Empire

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Abstract

When we calculate by the sum method of (1) we found that the non-trivial zero point will never converge to zero.

Calculating $\zeta(2)$, $\zeta(3)$, $\zeta(4)$, $\zeta(5)$ etc. by the sum method of (1) gives the correct calculation result.

It was thought that the above equation could possibly be an expression that can be composed only of real numbers.

It seems to have not been noticed before (old) because there was no computer.

Thus, Riemann hypothesis is fundamentally wrong, and it is natural that it cannot be tried to prove it.

Introduction

$$\zeta(s) = \sum_{n=1}^{\infty} \frac{1}{n^s} \quad (1)$$

$$\zeta(s) = \frac{2^s}{2^s - 1} \frac{3^s}{3^s - 1} \frac{5^s}{5^s - 1} \frac{7^s}{7^s - 1} \dots \quad (2)$$

from Eq.(1)

$\sum_{n=1}^{960} \frac{1}{n^2} = 1.6438929425279\dots$

$\sum_{n=1}^{3000} \frac{1}{n^2} = 1.644600789064275819\dots$

$$\begin{aligned}
\sum_{n=1}^{6000} \frac{1}{n^2} &= 1.64476741406967705\dots \\
\sum_{n=1}^{19000} \frac{1}{n^2} &= 1.64488143665429632\dots \\
\sum_{n=1}^{\infty} \frac{1}{n^2} &= 1.644934066848226\dots \\
\sum_{n=1}^{960} \frac{1}{n^3} &= 1.202056361189718\dots \\
\sum_{n=1}^{\infty} \frac{1}{n^3} &= 1.2020569031595942\dots \\
\sum_{n=1}^{100} \frac{1}{n^4} &= 1.082322905344473\dots \\
\sum_{n=1}^{\infty} \frac{1}{n^4} &= 1.08232290534\dots \\
\sum_{n=1}^{\infty} \frac{1}{n^4} &= \frac{n^4}{90} = 1.0823232\dots \\
\sum_{n=1}^{\infty} \frac{1}{n^5} &= \zeta(5) = 1.036927755\dots
\end{aligned}$$

from Eq.(1)

$$\begin{aligned}
\sum_{n=1}^{1000} \frac{1}{n^{0.5+i14.1347}} &\approx -0.64400833290674557 - 2.14171029186038 i \\
\sum_{n=1}^{10000} \frac{1}{n^{0.5+i14.1347}} &\approx -6.9861766974308474 - 1.0889940418467455 i \\
\sum_{n=1}^{100000} \frac{1}{n^{0.5+i14.1347}} &\approx -12.54399779245066288889008560010620933913 + \\
&\quad 18.50811907247960094582017289468456068125 i
\end{aligned}$$

$$\begin{aligned}
\sum_{n=1}^{1000000} \frac{1}{n^{0.5+i14.1347}} &\approx 36.0305 + 60.8343 i \\
\sum_{n=1}^{10000000} \frac{1}{n^{0.5+i14.1347}} &\approx 222.590393145802812\dots - 21.0615183606215218\dots i \\
\sum_{n=1}^{100000000} \frac{1}{n^{0.5+i14.1347}} &\approx 239.80585913605135567530434\dots - 665.12693498341811\dots i \\
\sum_{n=1}^{1000000000} \frac{1}{n^{0.5+i14.1347}} &=
\end{aligned}$$

$$\begin{aligned}
\sum_{n=1}^{1000000000} \frac{1}{n^{0.5+i14.1347}} &= H_{1000000000}^{(2 + \frac{141347i}{10000})} \\
&\approx -1579.383960254909741780\dots - 1582.57794631972093803\dots i \\
\sum_{n=1}^{10000000000} \frac{1}{n^{0.5+i14.1347}} &\approx -6656.1000759912304219924\dots + 2384.616865835426630\dots i \\
\sum_{n=1}^{100000000000} \frac{1}{n^{0.5+i14.1347}} &\approx -2151.09868395108841943\dots + 22254.739564424448969937\dots i \\
\sum_{n=1}^{1000000000000} \frac{1}{n^{0.5+i14.1347}} &\approx 60761.60888713651014375\dots + 36152.917995178266038629\dots i \\
\sum_{n=1}^{10000000000000} \frac{1}{n^{0.5+i14.1347}} &
\end{aligned}$$

$\approx 185325.127835655705179843759817096294830229316110534745\dots$
 $- 125078.627072683763152385742538118327478376662875943110\dots i$
 $\text{sum}(n=1)^{(1000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx -107976.97181033342746155860534212933040443228824743654\dots -$
 $698742.89484867232066859063423271881858739238721904295\dots i$
 $\text{sum}(n=1)^{(1000000000000000)}[1/n^{(0.5+i14.1347)}]$

$$\sum_{n=1}^{1000000000000000} \frac{1}{n^{0.5+i14.1347}} = H_{1000000000000000}^{\left(\frac{1}{2} + \frac{141347i}{10000}\right)}$$

$\approx -2.14435869309561158\dots \times 10^6 - 633034.2727819928245\dots i$
 $\text{sum}(n=1)^{(1000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx -4.70145108301652\dots \times 10^6 + 5.280759762133081\dots \times 10^6 i$
 $\text{sum}(n=1)^{(1000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx 8.76840955314081\dots \times 10^6 + 2.056734434543311\dots \times 10^7 i$
 $\text{sum}(n=1)^{(1000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx 7.065426469450\dots \times 10^7 + 2.6422482167909\dots \times 10^6 i$
 $\text{sum}(n=1)^{(1000000000000000)}[1/n^{(0.5+i14.1347)}]$

$$\sum_{n=1}^{1000000000000000000} \frac{1}{n^{0.5+i14.1347}} = H_{1000000000000000000}^{\left(\frac{1}{2} + \frac{141347i}{10000}\right)}$$

$\approx 1.02800782794563708\dots \times 10^8 - 1.98549905586\dots \times 10^8 i$
 $\text{sum}(n=1)^{(1000000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx -4.293903096147310\dots \times 10^8 - 5.61715783581848\dots \times 10^8 i$
 $\text{sum}(n=1)^{(1000000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx -2.18565006277682\dots \times 10^9 + 4.711055064881\dots \times 10^8 i$
 $\text{sum}(n=1)^{(1000000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx -1.598639810799431\dots \times 10^9 + 6.887264820443\dots \times 10^9 i$
 $\text{sum}(n=1)^{(1000000000000000000)}[1/n^{(0.5+i14.1347)}]$

$$\sum_{n=1}^{100000000000000000000} \frac{1}{n^{0.5+i14.1347}} = H_{100000000000000000000}^{\left(\frac{1}{2} + \frac{141347i}{10000}\right)}$$

$\approx 1.754654550809\dots \times 10^{10} + 1.38571064890\dots \times 10^{10} i$
 $\text{sum}(n=1)^{(100000000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx 6.329212835090\dots \times 10^{10} - 3.1513696767796\dots \times 10^{10} i$
 $\text{sum}(n=1)^{(100000000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx -4.8289985267162\dots \times 10^9 - 2.23532428799106\dots \times 10^{11} i$
 $\text{sum}(n=1)^{(100000000000000000000)}[1/n^{(0.5+i14.1347)}]$
 $\approx -6.4594033056549\dots \times 10^{11} - 2.8750956308428\dots \times 10^{11} i$

$$\begin{aligned}
&= -63.1851670026069178... + 136.46659567012566947.. i \\
&\text{sum}(n=1)^{(100000000)}[1/n^{(0.5+i21.022)}] \\
&= -356.47074263289028321... - 314.775654021204605269706... i \\
&\text{sum}(n=1)^{(1000000000)}[1/n^{(0.5+i21.022)}] \\
&= 1275.9808593427914733501... - 795.87911225145912156997... i \\
&\text{sum}(n=1)^{(10000000000)}[1/n^{(0.5+i21.022)}] \\
&= 1259.062032784859917... + 4585.8771307392965... i \\
&\text{sum}(n=1)^{(100000000000)}[1/n^{(0.5+i21.022)}] \\
&= -15034.88208574726416... - 327.70088546176690286769... i \\
&\text{sum}(n=1)^{(1000000000000)}[1/n^{(0.5+i21.022)}] \\
&= 14576.7929741422843... - 45266.629861812063... i \\
&\text{sum}(n=1)^{(10000000000000)}[1/n^{(0.5+i21.022)}] \\
&= 124009.15552787626864... + 85071.9461571473102091980654... i
\end{aligned}$$

$$\begin{aligned}
&\text{sum}(n=1)^{(100000)}[1/n^{(0.5+i30.4249)}] \\
&\approx 0.2945846691190546568 - 0.99689560968071545129 i \\
&\text{sum}(n=1)^{(100000)} [1/n^{(0.5+i30.4249)}] \approx -10.3919 + 0.0895001 i \\
&\text{sum}(n=1)^{(1000000)} [1/n^{(0.5+i30.4249)}] \approx -19.1333 + 26.7193 i \\
&\text{sum}(n=1)^{(10000000)} [1/n^{(0.5+i30.4249)}]= \\
&32.63436099806842243120... + 98.6662125794575583280... i \\
&\text{sum}(n=1)^{(100000000)} [1/n^{(0.5+i30.4249)}]= \\
&312.92018627765525351... + 100.404853255295694942... i
\end{aligned}$$

$$\sum_{n=1}^{100000000} \frac{1}{n^{0.5+i30.4249}} = H_{100000000}^{\left(\frac{1}{2} + \frac{304249i}{100000000}\right)}$$

$$\begin{aligned}
&\text{sum}(n=1)^{(1000000000)} [1/n^{(0.5+i30.4249)}] \\
&= 839.484844776578991605... - 612.59024352244781... i \\
&\text{sum}(n=1)^{(10000000000)} [1/n^{(0.5+i30.4249)}] \\
&= -1.5860951202313929804... - 3286.3373950911780935689... i \\
&\text{sum}(n=1)^{(100000000000)} [1/n^{(0.5+i30.4249)}] \\
&= -8400.757619283915347... - 6117.79637460241866879... i \\
&\text{sum}(n=1)^{(1000000000000)} [1/n^{(0.5+i30.4249)}] \\
&= -31282.309027112205988... + 10070.68806036089448666... i \\
&\text{sum}(n=1)^{(10000000000000)} [1/n^{(0.5+i30.4249)}] \\
&= -32538.939122001894... + 98697.6879688897250... i \\
&\text{sum}(n=1)^{(100000000000000)} [1/n^{(0.5+i30.4249)}] \\
&= 191594.8278938723272438... + 267004.838155005406... i
\end{aligned}$$

$$\sum_{n=1}^{10000000000000000} \frac{1}{n^{0.5+i30.4249}} = 1.0392020943681722543966... \times 10^6 + 7786.11771679... i$$

$$\sum_{n=1}^{10000000000000000} \frac{1}{n^{0.5+i30.4249}} = 1.95574107798631... \times 10^6 - 2.6410401362... \times 10^6 i$$

$$\sum_{n=1}^{10000000000000000} \frac{1}{n^{0.5+i30.4249}} = H_{10000000000000000}^{(\frac{1}{2} + \frac{304249i}{10000})}$$

$$\sum_{n=1}^{10000000000000000} \frac{1}{n^{0.5+i30.4249}} = -3.10564040473811... \times 10^6 - 9.9174169686... \times 10^6 i$$

$$\sum_{n=1}^{10000} \frac{1}{n^{0.5+i32.9351}} \approx 2.977478515055261719341 - 0.5930464706360487404 i$$

$$\sum_{n=1}^{100000} \frac{1}{n^{0.5+i32.9351}} \approx 7.74164 - 5.67757 i$$

$$\sum_{n=1}^{1000000} \frac{1}{n^{0.5+i32.9351}} \approx 14.5687 - 26.6352 i$$

$$\sum_{n=1}^{10000000} \frac{1}{n^{0.5+i32.9351}} = H_{10000000}^{(\frac{1}{2} + \frac{329351i}{10000})}$$

$$= 6.033182441052222344181... - 95.8145609333341521849... i$$

$$\sum_{n=1}^{100000000} \frac{1}{n^{0.5+i32.9351}} = -111.129971852232151... - 282.52166130679593236... i$$

$$\sum_{n=1}^{1000000000} \frac{1}{n^{0.5+i32.9351}} = -696.9386542842356483... - 660.272878946684486... i$$

$$\sum_{n=1}^{10000000000} \frac{1}{n^{0.5+i32.9351}} = -2881.0970814786626646... - 957.1402695949227267... i$$

$$\sum_{n=1}^{100000000000} \frac{1}{n^{0.5+i32.9351}} = H_{100000000000}^{(\frac{1}{2} + \frac{329351i}{10000})}$$

$$= -9534.9087282050386826... + 1119.77420417116907983... i$$

Example

$$\begin{aligned} \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], \{s=0.88455622 + 14.524 i\} &= 0.265871940946923 + 0.260238347039527 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], \{s=0.88455622 + 14.524 i\} &= 0.279942716350483 + 0.262382138789002 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], \{s=0.88455622 + i14.1347\} &= 0.267372169557029 + 0.036534340733185 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], \{s=0.79 + i 14.1347\} &= 0.217899533447437 + 0.033289253858811 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], \{s=0.88455622 + i 14.1347\} &= 0.256814279634957 + 0.037180567586996 i \end{aligned}$$

$$\begin{aligned} \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], \{s=0.1154 + 14.524 i\} &= 4.11962 \times 10^{-9} + 6.61402 \times 10^{-8} i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1200\}], \{s=0.1154 + 14.524 i\} &= 3.14031 \times 10^{13} + 1.26047 \times 10^{13} i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], \{s=0.1154 + 14.524 i\} &= 148174. + 891998. i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], \{s=0.1154 + i14.524\} &= 0.353616 + 0.274539 i \end{aligned}$$

$$\begin{aligned} \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], \{s=0.8355+i39\} &= 1.36911957078225 - 0.07835844114770 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], \{s=0.8355+i39\} &= 1.37738832193452 - 0.09265670774308 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], \{s=0.1645+i39\} &= - 0.00855717 - 0.0106338 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1100\}], & \\ \{s=0.1645+i39\} &= 19.38638414929417 - 0.29817811424546 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1200\}], & \\ \{s=0.1645+i39\} &= 0.3313856 - 1.104768 i \\ \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], & \\ \{s=0.1645+i39\} &= 0.1184309737901299 - 0.0691326301941863 i \end{aligned}$$

$$\begin{aligned} i \text{ product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], \{s=0.5+i14.1347\} &= 0.0925155784852525 + 0.0351207219432035 i \end{aligned}$$

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], \{s=0.5+i14.1347\}$
=cannot calculated

$\{\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}],$
 $\{s=0.5+i14.1347\}=\text{cannot calculated}$

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}, \{s=0.5+i14.1347\}$
=cannot calculated

$\text{product}[\text{prime}(n)^{\{0.5+i14.1347\}}/(\text{prime}(n)^{\{0.5+i14.1347\}-1}),\{n,\infty\}$
=cannot calculated

$\text{product}[\text{prime}(n)^{\{0.5+i14.1347\}}/(\text{prime}(n)^{\{-0.5+i14.1347\}}),\{n,\infty\}$
=cannot calculated

$\text{zeta}(-0.5+i14.1347) = -1.18446\dots - 0.314336\dots i$

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=0.5+i21.022]$
=cannot calculated

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=0.5+i25.0108]$
=cannot calculated

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=0.5+i2]$
=cannot calculated

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=5+1I]$
=cannot calculated

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=5+10I]$
=cannot calculated

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=-2]$
= $3.90155339\dots \times 10^{-20}$

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=-2]$
=cannot calculated

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=-4]$
= $6.17761609\dots \times 10^{-40}$

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=-4]$
=cannot calculated

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=-6]$
= $1.387283740\dots \times 10^{-59}$

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=-6]$
=cannot calculated

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=-16]$
= $1.06137198\dots \times 10^{-157}$

$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=-16]$

=cannot calculated

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=-36]$$

$$=6.4296482725... \times 10^{-198}$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=-36]$$

=cannot calculated

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=2]$$

$$=1.63307049049573922.....$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=2]$$

$$=\pi^2/6=1.6449340668482....$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=3]$$

$$=1.20189927...$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=3]$$

=cannot calculated

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=4]$$

$$= 1.082319965338454....$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=4]$$

$$=\pi^4/90= 1.082323233711138...$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=5]$$

$$= 1.03692767494200648584...$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=5]$$

=cannot calculated

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=6]$$

$$= 1.01734305984....$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=6]$$

$$=\pi^6/945= 1.017343061984...$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=8]$$

$$= 1.0040773561961920485...$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=8]$$

$$=\pi^8/9450= 1.004077356197944...$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=10]$$

$$= 1.0009945751278.....$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,\infty\}], [s=10]$$

$$=\pi^{10}/93555= 1.0009945751....$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], \{s=0.5+i14.1347\}$$

$$\begin{aligned}
&= 0.377652 + 0.0334658 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i14.1347] \\
&= 0.213347 + 0.0240839 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i14.1347] \\
&= 0.127566 + 0.0283298 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,20\}], [s=0.5+i14.1347] \\
&= 0.0993201 + 0.0074479 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,30\}], [s=0.5+i14.1347] \\
&= 0.0763729 + 0.0115101 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,40\}], [s=0.5+i14.1347] \\
&= 0.0784141 - 0.00403302 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,80\}], [s=0.5+i14.1347] \\
&= 0.07038 - 0.0110989 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,160\}], [s=0.5+i14.1347] \\
&= 0.0770881 - 0.0118563 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,300\}], [s=0.5+i14.1347] \\
&= 0.0619651 + 0.0335354 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i14.1347] \\
&= 0.0925155784852525 + 0.0351207219432035 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i14.1347] \\
&= 0.0205870612401611 + 0.0175173833712662 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i14.1347] \\
&\prod_n^{1350} \frac{(p_n)^s}{(p_n)^s - 1} \text{ where } s = 0.5 + 14.1347 i \\
&= 0.0236476275066567 + 0.0329217483754596 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1400\}], [s=0.5+i14.1347] \\
&=\text{cannot calculate}
\end{aligned}$$

$$\begin{aligned}
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i21.022] \\
&= \\
&0.506267 - 0.0358867 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i21.022] \\
&= 0.259625 - 0.0721143 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i21.022] \\
&= 0.218131 - 0.0504925 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,20\}], [s=0.5+i21.022] \\
&= 0.177199 - 0.0543632 i
\end{aligned}$$

$$\begin{aligned} & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,120\}], [s=0.5+i21.022] \\ & = 0.0759949 - 0.017568 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,320\}], [s=0.5+i21.022] \\ & = 0.0598123 - 0.0229864 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,520\}], [s=0.5+i21.022] \\ & = 0.0564780081596529 - 0.03885265369355867 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i21.022] \\ & = 0.0810434072565851 + 0.0170292248690552 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i21.022] \\ & = 0.0733483857858449 + 0.0219411283963124 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i21.022] \\ & = 0.1101788403324873 + 0.0006482652372322 i \end{aligned}$$

$$\begin{aligned} & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i25.0108] \\ & = 0.539436 + 0.195767 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i25.0108] \\ & = 0.329809 + 0.192133 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i25.0108] \\ & = 0.187922 + 0.035742 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i25.0108] \\ & = 0.113093 + 0.0574211 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,200\}], [s=0.5+i25.0108] \\ & = 0.113807 + 0.0487198 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,300\}], [s=0.5+i25.0108] \\ & = 0.120129 + 0.0463811 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,400\}], [s=0.5+i25.0108] \\ & = 0.0939364940085029 + 0.00948564888126129 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,500\}], [s=0.5+i25.0108] \\ & = 0.0788647617769132 + 0.0064299591824090 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,600\}], [s=0.5+i25.0108] \\ & = 0.1068217706639720 + 0.01051275715312875 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,700\}], [s=0.5+i25.0108] \\ & = 0.0940882515680912 + 0.0654029681469763 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,800\}], [s=0.5+i25.0108] \\ & = 0.0601324372859493 + 0.0171239622290952 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,900\}], [s=0.5+i25.0108] \\ & = 0.1215484397090983 + 0.0419489116296102 i \\ & \text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i25.0108] \end{aligned}$$

= 0.0566503142350682 + 0.0201764891112796 i
 product[prime(n)^s/(prime(n)^s-1),{n,1200}], [s=0.5+i25.0108]
 = 0.0752348397695963 - 0.0063238237639172 i
 product[prime(n)^s/(prime(n)^s-1),{n,1300}], [s=0.5+i25.0108]
 = 0.0533173607716765 + 0.0447443983884782 i
 product[prime(n)^s/(prime(n)^s-1),{n,1350}], [s=0.5+i25.0108]
 = 0.0854559695534404 + 0.0687263613741341 i
 product[prime(n)^s/(prime(n)^s-1),{n,1400}], [s=0.5+i25.0108]
 =cannot calculate

product[prime(n)^s/(prime(n)^s-1),{n,2}], [s=0.5+i30.4248]
 = 0.34629 - 0.332933 i
 product[prime(n)^s/(prime(n)^s-1),{n,4}], [s=0.5+i30.4248]
 = 0.329357 - 0.155893 i
 product[prime(n)^s/(prime(n)^s-1),{n,10}], [s=0.5+i30.4248]
 = 0.151369 - 0.143805 i
 product[prime(n)^s/(prime(n)^s-1),{n,20}], [s=0.5+i30.4248]
 = 0.136511 - 0.0967734 i
 product[prime(n)^s/(prime(n)^s-1),{n,40}], [s=0.5+i30.4248]
 = 0.123619 - 0.0477287 i
 product[prime(n)^s/(prime(n)^s-1),{n,80}], [s=0.5+i30.4248]
 = 0.104979 - 0.0647724 i
 product[prime(n)^s/(prime(n)^s-1),{n,160}], [s=0.5+i30.4248]
 = 0.111697 - 0.0610105 i
 product[prime(n)^s/(prime(n)^s-1),{n,320}], [s=0.5+i30.4248]
 = 0.102568 - 0.0342745 i
 product[prime(n)^s/(prime(n)^s-1),{n,1000}], [s=0.5+i30.4248]
 = 0.0548568792970041 - 0.0650018624254304 i
 product[prime(n)^s/(prime(n)^s-1),{n,1200}], [s=0.5+i30.4248]
 = 0.0539981231806227 - 0.0718148037078559 i
 product[prime(n)^s/(prime(n)^s-1),{n,1300}], [s=0.5+i30.4248]
 = 0.0654390365225221 - 0.0191848204203633 i
 product[prime(n)^s/(prime(n)^s-1),{n,1350}], [s=0.5+i30.4248]
 = 0.0999719129954261 - 0.0348805486773332 i
 product[prime(n)^s/(prime(n)^s-1),{n,1400}], [s=0.5+i30.4248]
 =cannot calculate

product[prime(n)^s/(prime(n)^s-1),{n,2}], [s=0.5+i32.9350]

= 0.361634 + 0.436996 i
 product[prime(n)^s/(prime(n)^s-1),{n,4}], [s=0.5+i32.9350]
 = 0.389821 + 0.151269 i
 product[prime(n)^s/(prime(n)^s-1),{n,6}], [s=0.5+i32.9350]
 = 0.23851 + 0.0994475 i
 product[prime(n)^s/(prime(n)^s-1),{n,10}], [s=0.5+i32.9350]
 = 0.148803 + 0.103849 i
 product[prime(n)^s/(prime(n)^s-1),{n,20}], [s=0.5+i32.9350]
 = 0.165508 + 0.119011 i
 product[prime(n)^s/(prime(n)^s-1),{n,100}], [s=0.5+i32.9350]
 = 0.0983761 + 0.0841706 i
 product[prime(n)^s/(prime(n)^s-1),{n,200}], [s=0.5+i32.9350]
 = 0.111654 + 0.0659845 i
 product[prime(n)^s/(prime(n)^s-1),{n,600}], [s=0.5+i32.9350]
 = 0.0587750921725233 + 0.0643533427180150 i
 product[prime(n)^s/(prime(n)^s-1),{n,1000}], [s=0.5+i32.9350]
 = 0.0665507025489664 + 0.0753272749125431 i
 product[prime(n)^s/(prime(n)^s-1),{n,1200}], [s=0.5+i32.9350]
 = 0.0776863736204299 + 0.0838956395913934 i
 product[prime(n)^s/(prime(n)^s-1),{n,1300}], [s=0.5+i32.9350]
 = 0.0681181682902927 + 0.0251664185362439 i
 product[prime(n)^s/(prime(n)^s-1),{n,1350}], [s=0.5+i32.9350]
 = 0.0488420355218018 + 0.0488876968109086 i
 product[prime(n)^s/(prime(n)^s-1),{n,1400}], [s=0.5+i32.9350]
 =cannot calculate

product[prime(n)^s/(prime(n)^s-1),{n,2}], [s=0.5+i37.5861]
 = 0.662167 - 0.465778 i
 product[prime(n)^s/(prime(n)^s-1),{n,4}], [s=0.5+i37.5861]
 = 0.466129 - 0.0663061 i
 product[prime(n)^s/(prime(n)^s-1),{n,10}], [s=0.5+i37.5861]
 = 0.387315 - 0.110532 i
 product[prime(n)^s/(prime(n)^s-1),{n,40}], [s=0.5+i37.5861]
 = 0.232772 - 0.0785726 i
 product[prime(n)^s/(prime(n)^s-1),{n,400}], [s=0.5+i37.5861]
 = 0.1353063569477743 - 0.0696071170557717 i
 product[prime(n)^s/(prime(n)^s-1),{n,1000}], [s=0.5+i37.5861]

$$\begin{aligned}
&= 0.0921358554972438 - 0.0320010390700539 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i37.5861] \\
&= 0.1086255358658522 - 0.0680554946041234 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i37.5861] \\
&= 0.0895952637914474 - 0.0260528909344787 i
\end{aligned}$$

$$\begin{aligned}
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i40.9187] \\
&= 0.594355 - 0.388383 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i40.9187] \\
&= 0.378882 - 0.133335 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i40.9187] \\
&= 0.253207 - 0.0533546 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i40.9187] \\
&= 0.126478 - 0.0139816 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i40.9187] \\
&= 0.0842070345605124 - 0.0449075058788713 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i40.9187] \\
&= 0.0958678634387273 - 0.0498338879249424 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i40.9187] \\
&= 0.0680632641808921 - 0.0259102753591269 i
\end{aligned}$$

$$\begin{aligned}
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i43.3271] \\
&= 0.387273 + 0.438802 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i43.3271] \\
&= 0.602852 + 0.201332 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i43.3271] \\
&= 0.356195 + 0.244084 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i43.3271] \\
&= 0.286547 + 0.137597 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i43.3271] \\
&= 0.25859 + 0.104947 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i43.3271] \\
&= 0.139457 + 0.101296 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i43.3271]
\end{aligned}$$

$$\prod_n^{1000} \frac{(p_n)^s}{(p_n)^s - 1} \text{ where } s = 0.5 + 43.3271 i$$

$$\begin{aligned}
&= 0.0630445400724399 + 0.0795278251781460 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i43.3271] \\
&= 0.0604817697881812 + 0.0851958614850022 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i43.3271] \\
&= 0.109655464859025 + 0.091666294613241 i
\end{aligned}$$

$$\begin{aligned}
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i48.0051] \\
&= 0.352778 - 0.332182 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i48.0051] \\
&= 0.365422 - 0.346586 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i48.0051] \\
&= 0.226617 - 0.267092 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i48.0051] \\
&= 0.186604 - 0.158739 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i48.0051] \\
&= 0.263028 - 0.129222 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i48.0051] \\
&= 0.108987 - 0.105554 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i48.0051] \\
&= 0.0420939558943280 - 0.0748907389119029 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i48.0051] \\
&= 0.0576050312909078 - 0.0563671235348613 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i48.0051] \\
&= 0.0779355627730564 - 0.088725240158172 i
\end{aligned}$$

$$\begin{aligned}
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i49.7738] \\
&= 0.414443 + 0.184089 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i49.7738] \\
&= 0.237385 + 0.197494 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i49.7738] \\
&= 0.341823 + 0.179804 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i49.7738] \\
&= 0.271919 + 0.0646094 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i49.7738] \\
&= 0.234739 + 0.154132 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i49.7738] \\
&= 0.118287 + 0.0639912 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i49.7738]
\end{aligned}$$

$$\begin{aligned}
&= 0.0853972356838811 + 0.0624669726333817 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i49.7738] \\
&= 0.0927770370532244 + 0.0290553422776424 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i49.7738] \\
&= 0.0634320845423274 + 0.0442654597985283 i
\end{aligned}$$

$$\begin{aligned}
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i52.9703] \\
&= 0.957726 + 0.259615 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i52.9703] \\
&= 0.511406 + 0.122876 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i52.9703] \\
&= 0.440348 + 0.0405441 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i52.9703] \\
&= 0.39701 + 0.137965 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i52.9703] \\
&= 0.203966 + 0.0598304 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i52.9703] \\
&= 0.1242819647452082 + 0.0274983062885220 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i52.9703] \\
&= 0.167167745839329 + 0.061200264286554 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i52.9703] \\
&= 0.135765840524732 + 0.012849466931192 i
\end{aligned}$$

$$\begin{aligned}
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i56.4462] \\
&= 1.18789 - 0.0636653 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i56.4462] \\
&= 0.593433 - 0.0990827 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i56.4462] \\
&= 0.618563 - 0.128434 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i56.4462] \\
&= 0.398277 - 0.131197 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i56.4462] \\
&= 0.343641 - 0.290229 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i56.4462] \\
&= 0.195861 - 0.0666635 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i56.4462] \\
&= 0.1072003055265527 - 0.0585868208054271 i \\
&\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i56.4462]
\end{aligned}$$

$$= 0.144024845324995 - 0.0778129275329508 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i56.4462]$$

$$= 0.103602668697241 - 0.0498531004280057 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i59.347]$$

$$= 0.398034 - 0.0626195 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i59.347]$$

$$= 0.220079 - 0.233103 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i59.347]$$

$$= 0.168053 - 0.207246 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i59.347]$$

$$= 0.256395 - 0.114389 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i59.347]$$

$$= 0.251452 - 0.029267 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i59.347]$$

$$= 0.106294 - 0.071101 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i59.347]$$

$$= 0.0595365243904075 - 0.0250920356192947 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i59.347]$$

$$= 0.0555607681639736 - 0.0364034472964299 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i59.347]$$

$$= 0.0733222273325398 - 0.0196183053988868 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i60.8318]$$

$$= 0.341495 + 0.377987 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i60.8318]$$

$$= 0.0822419 + 0.413191 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i60.8318]$$

$$= 0.109173 + 0.467557 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i60.8318]$$

$$= 0.0837407 + 0.22717 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i60.8318]$$

$$= 0.0478625 + 0.123679 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i60.8318]$$

$$= 0.0344568785771721 + 0.0772946980089417 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i60.8318]$$

$$= 0.0359487592388053 + 0.0679248399553758 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i60.8318]$$

$$= 0.0525158803794204 + 0.0941780735565609 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i65.1125]$$

$$= 0.380781 - 0.589828 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i65.1125]$$

$$= 0.315121 - 0.556051 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i65.1125]$$

$$= 0.47053 - 0.364258 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i65.1125]$$

$$= 0.287343 - 0.297829 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i65.1125]$$

$$= 0.309815 - 0.249738 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i65.1125]$$

$$= 0.174057 - 0.135539 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i65.1125]$$

$$= 0.1202226973433774 - 0.0789887705572783 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i65.1125]$$

$$= 0.1324583600403318 - 0.0879530358433079 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i65.1125]$$

$$= 0.0874813592936400 - 0.100041608986563 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i67.0798]$$

$$= 0.491082 + 0.115201 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i67.0798]$$

$$= 0.540271 + 0.0787367 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i67.0798]$$

$$= 0.35284 + 0.0475876 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i67.0798]$$

$$= 0.281386 - 0.0511258 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i67.0798]$$

$$= 0.284469 - 0.0391593 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i67.0798]$$

$$= 0.175742 - 0.0119937 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i67.0798]$$

$$= 0.1021337227241550 + 0.0041100932021340 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i67.0798]$$

$$= 0.1162963261377133 + 0.0177035253652661 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i67.0798]$$

$$= 0.114901999894346 - 0.018682251339301 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i69.5464]$$

$$= 0.791132 - 0.140947 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i69.5464]$$

$$= 0.597654 + 0.220056 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i69.5464]$$

$$= 0.386812 + 0.106589 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i69.5464]$$

$$= 0.279649 + 0.0601736 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i69.5464]$$

$$= 0.249018 + 0.0561291 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i69.5464]$$

$$= 0.188525 + 0.0492936 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i69.5464]$$

$$= 0.1571027284707269 + 0.0387311308806077 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i69.5464]$$

$$= 0.1221183573498265 + 0.0275501570395058 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i69.5464]$$

$$= 0.148527246151295 + 0.061260374773663 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i72.0672]$$

$$= 1.16013 + 1.23254 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i72.0672]$$

$$= 0.876634 + 0.42437 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i72.0672]$$

$$= 0.562763 + 0.204358 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i72.0672]$$

$$= 0.406811 + 0.263395 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i72.0672]$$

$$= 0.390397 + 0.361653 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i72.0672]$$

$$= 0.263308 + 0.0806071 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i72.0672]$$

$$= 0.1498571865964130 + 0.0794656596227694 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i72.0672]$$

$$= 0.196318371686328 + 0.047454767781787 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i72.0672]$$

$$= 0.149753607872424 + 0.073282414948645 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i75.7047]$$

$$= 0.354014 - 0.468309 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i75.7047]$$

$$= 0.106994 - 0.294192 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i75.7047]$$

$$= 0.35902 - 0.354272 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i75.7047]$$

$$= 0.249381 - 0.406639 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i75.7047]$$

$$= 0.305591 - 0.279846 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i75.7047]$$

$$= 0.0832787 - 0.127981 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i75.7047]$$

$$= 0.0777966777004996 - 0.0855869073114268 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i75.7047]$$

$$= 0.0502964543382511 - 0.0708363512571197 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i75.7047]$$

$$= 0.0631861330215501 - 0.0948914980242509 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i77.1448]$$

$$= 0.371784 + 0.000475416 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i77.1448]$$

$$= 0.339775 + 0.320968 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i77.1448]$$

$$= 0.22452 + 0.174944 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i77.1448]$$

$$= 0.252993 + 0.210681 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i77.1448]$$

$$= 0.208204 + 0.128378 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i77.1448]$$

$$= 0.107291 + 0.0409591 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i77.1448]$$

$$= 0.0895582534182579 + 0.0333493306127753 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i77.1448]$$

$$= 0.0658699303945487 + 0.0282714089031475 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i77.1448]$$

$$= 0.0825108602038927 + 0.0159785422065299 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i79.3374]$$

$$= 0.380323 + 1.06137 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i79.3374]$$

$$= 0.344207 + 0.564736 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i79.3374]$$

$$= 0.407335 + 0.279223 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i79.3374]$$

$$= 0.438522 + 0.312443 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i79.3374]$$

$$= 0.285986 + 0.257881 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i79.3374]$$

$$= 0.17815 + 0.121896 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i79.3374]$$

$$= 0.1355659011279398 + 0.0973849106969286 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i79.3374]$$

$$= 0.1021393287384217 + 0.118037865893594 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i79.3374]$$

$$= 0.097918921572898 + 0.081984599865823 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i82.9104]$$

$$= 0.559189 - 0.558322 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i82.9104]$$

$$= 0.363752 - 0.492155 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i82.9104]$$

$$= 0.514062 - 0.264489 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i82.9104]$$

$$= 0.506877 - 0.214425 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i82.9104]$$

$$= 0.336731 - 0.226722 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i82.9104]$$

$$= 0.226146 - 0.158813 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i82.9104]$$

$$= 0.1054038747490071 - 0.1305233438653630 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i82.9104]$$

$$= 0.129722727270062 - 0.1299711142820603 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i82.9104]$$

$$= 0.139660279582208 - 0.089340306127117 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i84.7355]$$

$$= 0.689194 + 0.14951 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i84.7355]$$

$$= 0.544034 + 0.116818 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i84.7355]$$

$$= 0.374964 + 0.0432969 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i84.7355]$$

$$= 0.359862 + 0.027605 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i84.7355]$$

$$= 0.285673 - 0.0578493 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i84.7355]$$

$$= 0.22516 + 0.0372672 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i84.7355]$$

$$= 0.1547999668802079 + 0.0398153399168179 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i84.7355]$$

$$= 0.1431934420291319 + 0.0337569114547540 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i84.7355]$$

$$= 0.1239050011053785 + 0.0090958824487874 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i87.4253]$$

$$= 0.512343 - 0.0467799 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i87.4253]$$

$$= 0.46394 - 0.283016 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i87.4253]$$

$$= 0.343922 - 0.190301 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i87.4253]$$

$$= 0.35569 - 0.214614 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i87.4253]$$

$$= 0.387518 - 0.0978681 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i87.4253]$$

$$= 0.130133 - 0.0407992 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i87.4253]$$

$$= 0.1076552586913424 - 0.0122182074946771 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i87.4253]$$

$$= 0.1105763127269194 - 0.0192672907153070 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i87.4253]$$

$$= 0.0919861734426403 - 0.0326149627010606 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i88.8091]$$

$$= 0.437907 + 0.425294 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i88.8091]$$

$$= 0.147119 + 0.375158 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i88.8091]$$

$$= 0.191402 + 0.451246 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i88.8091]$$

$$= 0.189468 + 0.504962 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i88.8091]$$

$$= 0.18038 + 0.38151 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i88.8091]$$

$$= 0.0996069 + 0.176682 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i88.8091]$$

$$= 0.0644654441784986 + 0.1097283579097019 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i88.8091]$$

$$= 0.0768428577895150 + 0.1136535498069152 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i88.8091]$$

$$= 0.0748945129974856 + 0.0870633087349146 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i92.4919]$$

$$= 0.272198 - 1.04069 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i92.4919]$$

$$= 0.512182 - 0.45992 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i92.4919]$$

$$= 0.449275 - 0.390945 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i92.4919]$$

$$= 0.374845 - 0.295732 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i92.4919]$$

$$= 0.316701 - 0.323122 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i92.4919]$$

$$= 0.185264 - 0.181854 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i92.4919]$$

$$= 0.153749644766168 - 0.1162349873278976 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i92.4919]$$

$$= 0.1224380884546225 - 0.111660849113900 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i92.4919]$$

$$= 0.155712626906861 - 0.103916996766394 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i94.6513]$$

$$= 0.381547 - 0.0142201 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i94.6513]$$

$$= 0.21377 - 0.202223 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i94.6513]$$

$$= 0.202132 - 0.225844 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i94.6513]$$

$$= 0.162262 - 0.167492 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i94.6513]$$

$$= 0.150025 - 0.165188 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i94.6513]$$

$$= 0.0929646 - 0.0577548 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i94.6513]$$

$$= 0.0858778885118157 - 0.0575361270594186 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i94.6513]$$

$$= 0.0729306901538976 - 0.0434007187940284 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i94.6513]$$

$$= 0.0834801682377031 - 0.0567408885966960 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,2\}], [s=0.5+i95.8706]$$

$$= 0.399312 + 0.365186 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,4\}], [s=0.5+i95.8706]$$

$$= 0.129552 + 0.291117 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,6\}], [s=0.5+i95.8706]$$

$$= 0.154201 + 0.254503 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,8\}], [s=0.5+i95.8706]$$

$$= 0.228366 + 0.293689 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,10\}], [s=0.5+i95.8706]$$

$$= 0.197365 + 0.30213 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,100\}], [s=0.5+i95.8706]$$

$$= 0.0736847 + 0.101874 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1000\}], [s=0.5+i95.8706]$$

$$= 0.0638337117558314 + 0.0962527460612394 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1300\}], [s=0.5+i95.8706]$$

$$= 0.0751287495945912 + 0.0755938932874673 i$$

$$\text{product}[\text{prime}(n)^s/(\text{prime}(n)^{s-1}),\{n,1350\}], [s=0.5+i95.8706]$$

$$= 0.071517555262855 + 0.095310745325878 i$$

conclusion

In this way, Eq.(2) converges properly.

However, in Eq.(1), it does not converge but diverges.

This seems to have not been noticed in the days without computers.

Thus, Riemann hypothesis is fundamentally wrong, and it is natural that it cannot be tried to prove it.

References

1) https://en.wikipedia.org/wiki/Riemann_hypothesis



