

【Review article】

$\zeta(3)$

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【Abstract】

$\zeta(3)$ was obtained by another method.

$$\zeta(3) = \frac{-17.74063 + \pi^3 \log(4)}{21}$$

`\begin{equation}`

`\zeta(3) = \frac{-17.74063 + \pi^3 \log(4)}{21} =`

`\end{equation}`

and

$$\zeta(3) = \frac{11.5610 + \pi^2 \log(4)}{21}$$

`\begin{equation}`

`\zeta(3) = \frac{11.5610 + \pi^2 \log(4)}{21}`

`\end{equation}`

【discussion】

$$\sum_{k=1}^{\infty} \frac{1}{k^2 \times 2^{k-1}} + \log^2(2)$$

`\sum_{k=1}^{\infty} \frac{1}{k^2 * 2^{(k-1)}} + (\log 2)^2`

$$= \pi^2/6 = \zeta(2)$$

$$\sum_{k=1}^{\infty} \frac{1}{k^3 \times 2^{k-1}} + \log^3(2)$$

$$\sum_{k=1}^{\infty} \frac{1}{k^3 \times 2^{k-1}} + (\log 2)^3 \approx 1.40745$$

$$\frac{1}{12} (21 \zeta(3) + 4 \log^3(2) - \pi^2 \log(4)) + \log^3(2) \approx 1.40745$$

$$\begin{aligned} & (1/12) * \{ (21 \zeta(3) + 4 * \log^3(2) - \pi^3 * [\log(4)]) \} + [\log(2)]^3 = \\ & (1/12) * [21 * \zeta(3) + 4 * \log^3(2) - \pi^3 * \log(4)] + [\log(2)]^3 = \\ & 1.03435309358737087738620420123849589842463750128472095... \end{aligned}$$

$$\begin{aligned} & (1/12) * [21 * \zeta(3) + 4 * \log^3(2) - \pi^3 \log(4)] \\ & = -1.36737774557630035710505778385022644258076398663332760... \\ & = -1.367378 \end{aligned}$$

$$\begin{aligned} & [21 * \zeta(3) + 4 * \log^3(2) - \pi^3 \log(4)] = -1.367378 * 12 \\ & \zeta(3) = [-1.367378 * 12 - 4 * \log^3(2) + \pi^3 \log(4)] / 21 = 1.202057... \\ & \zeta(3) = [-17.74063 + \pi^3 \log(4)] / 21 = 1.202057... \end{aligned}$$

$$\zeta(3) = \frac{-17.74063 + \pi^3 \log(4)}{21}$$

$$\zeta(3) = 1.2020569031595942853997.....$$

$$\begin{aligned} & \zeta(3) = \{ [-1.034353 - [\log(2)]^3] * 12 - \\ & 4 * \log^3(2) + \pi^3 * \log(4) \} * (1/21) = -[\log(2)]^3 * 12 - 4 * \log^3(2) + \pi^3 * \\ & \log(4) \} * (1/21) = 1.202056903160..... \end{aligned}$$

$$(1.40745 - \log^3(2)) * 12 - 4 \log^3(2) = \zeta(3)$$

$$\zeta(3) = [11.5610 + \pi^2 * \log(4)] * (1/21) = 1.202056903160.....$$

$$(11.5610 + \pi^2 \log(4)) * \frac{1}{21} = \zeta(3)$$

$$\zeta(3) = \frac{11.5610 + \pi^2 \log(4)}{21}$$

References

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

postscript

I use wolframAlpha.



I am a psychiatrist now and also a doctor of brain surgery before.





(home)

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I would like to receive an email. I will not answer the phone.

Currently 57 years old

Born on November 26, 1961

(I am very poor of English. Almost all document are google-translation.)

When converted to English by Google translation, it becomes cryptic to me.

But, I read letter by google translation.

In my case, if you translate it into English by google translation, I do not know what is written in my paper. For me, foreign languages such as English (actually not good at Japanese) is a demon.

As soon as it is translated into English, it turns.

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