

Right triangle of zero

July 25, 2019

Yuji Masuda

(y_masuda0208@yahoo.co.jp)

$$\frac{1}{\pm\infty} = (-1) \cdot (\pm\infty) = i$$

$$(\pm\infty) \cdot i - 1 = 0$$



$$(-1) \cdot (\pm\infty) = \frac{1}{\pm\infty}$$

$$i^2 = (\pm\infty)^2 \rightarrow i = \pm(\pm\infty)$$

$$\therefore i = -(\pm\infty) = (-1)(\pm\infty) = \frac{1}{\pm\infty}, (\because i \neq +(\pm\infty))$$

$$\pi = \frac{2}{x} + 2 \arctan \left(\frac{1}{\tan\left(\frac{1}{x}\right)} \right)$$

$$\left(\because x \geq \frac{1}{\pi} \right)$$



$$x = \frac{2}{x} \left(\geq \frac{1}{x} \right)$$

$$\pi = \frac{2}{\left(\frac{2}{\pi}\right)} + 2 \arctan \left(\frac{1}{\tan\left(\frac{\pi}{2}\right)} \right) = \pi + 2 \arctan \left(\frac{1}{\pm\infty} \right)$$

$$\arctan \left(\frac{1}{\pm\infty} \right) = \arctan(i) = 0$$

$$\therefore \tan 0 = \frac{1}{\pm\infty} = (-1)(\pm\infty) = i$$

