

# ON PRIME NUMBERS⑮(DefinitionIX)

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From “ON PRIME NUMBERS⑭(DefinitionVIII)”

$$p[\infty] = 2 = -\infty = -e = i$$

$$\therefore \ln \sqrt{\ln p[\infty]} = \ln \sqrt{1 + \ln 4} = \frac{1}{2 \ln e} = 1/2$$

Here, from “ON PRIME NUMBERS⑪”

$$\frac{1}{2} \Leftrightarrow 2 = \left(\frac{1}{2}\right)^{-1} \quad \textcircled{1}$$

Here, from “ON PRIME NUMBERS⑪”

$$p[\infty] = 2 \quad \textcircled{2}$$

$$\frac{e}{\left(1 + \frac{1}{p[\infty]}\right)^{p[\infty]}} = -\frac{2}{\left(1 + \frac{1}{2}\right)^2} = -\frac{8}{9} = \frac{2}{4} = \frac{1}{2} \quad \textcircled{3}$$

$\therefore \textcircled{3} \Leftrightarrow \textcircled{2}$  fulfills  $\textcircled{1}$

That's all. (Proof End)