$$\sum_{n=1619}^{\infty} \frac{1}{(\ln n)^{\ln n}}$$

use cauchy condensation test

$$\sum_{n=1619}^{\infty} \frac{2^n}{(\ln 2^n)^{\ln 2^n}} = \underbrace{\sum \frac{2^n}{(n\log 2)^{n\log 2}}}_{\text{to check}}$$

use root test

$$\lim_{n\to\infty} (a_n)^{\frac{1}{n}} = \lim_{n\to\infty}\left(\frac{2^n}{(n\log 2)^{n\log 2}}\right)^{\frac{1}{n}} = \lim_{n\to\infty} \frac{2}{(n\log 2)^{\log 2}}$$

$$= 0 < 1$$

$$\Rightarrow \sum \frac{2^n}{(\ln 2^n)^{\ln 2^n}} \text{ is convergent}$$

$$\Rightarrow \sum_{n=1619}^{\infty} \frac{1}{(\ln n)^{\ln n}} \text{ is convergent}$$ [using cauchy condensation test]