

$$\text{LIB. I. } N = 1 + \frac{1}{2^{2n}} + \frac{1}{3^{2n}} + \frac{1}{4^{2n}} + \frac{1}{5^{2n}} + \frac{1}{6^{2n}} + \text{ &c. ,}$$

ut sit

$$N = \frac{1}{(1 - \frac{1}{2^{2n}})(1 - \frac{1}{3^{2n}})(1 - \frac{1}{5^{2n}})(1 - \frac{1}{7^{2n}})(1 - \frac{1}{11^{2n}}) \text{ &c.}}$$

fiet, Logarithmis hyperbolicis sumendis,

$$\begin{aligned} lN = & + 1 \left(\frac{1}{2^{2n}} + \frac{1}{3^{2n}} + \frac{1}{5^{2n}} + \frac{1}{7^{2n}} + \frac{1}{11^{2n}} + \text{ &c.} \right) \\ & + \frac{1}{2} \left(\frac{1}{2^{4n}} + \frac{1}{3^{4n}} + \frac{1}{5^{4n}} + \frac{1}{7^{4n}} + \frac{1}{11^{4n}} + \text{ &c.} \right) \\ & + \frac{1}{3} \left(\frac{1}{2^{6n}} + \frac{1}{3^{6n}} + \frac{1}{5^{6n}} + \frac{1}{7^{6n}} + \frac{1}{11^{6n}} + \text{ &c.} \right) \\ & + \frac{1}{4} \left(\frac{1}{2^{8n}} + \frac{1}{3^{8n}} + \frac{1}{5^{8n}} + \frac{1}{7^{8n}} + \frac{1}{11^{8n}} + \text{ &c.} \right) \\ & \quad \text{ &c.} \end{aligned}$$

$$\text{Ex his conjunctis fiet } lM = \frac{1}{2} lN =$$

$$\begin{aligned} & + 1 \left(\frac{1}{2^n} + \frac{1}{3^n} + \frac{1}{5^n} + \frac{1}{7^n} + \frac{1}{11^n} + \text{ &c.} \right) \\ & + \frac{1}{3} \left(\frac{1}{2^{3n}} + \frac{1}{3^{3n}} + \frac{1}{5^{3n}} + \frac{1}{7^{3n}} + \frac{1}{11^{3n}} + \text{ &c.} \right) \\ & + \frac{1}{5} \left(\frac{1}{2^{5n}} + \frac{1}{3^{5n}} + \frac{1}{5^{5n}} + \frac{1}{7^{5n}} + \frac{1}{11^{5n}} + \text{ &c.} \right) \\ & + \frac{1}{7} \left(\frac{1}{2^{7n}} + \frac{1}{3^{7n}} + \frac{1}{5^{7n}} + \frac{1}{7^{7n}} + \frac{1}{11^{7n}} + \text{ &c.} \right) \end{aligned}$$