

Calcoliamo

$$\int \frac{1}{2x(\cos^2 \log x)\sqrt{\tan \log x}} dx.$$

Poniamo $\log x = t$ da cui $dx = e^t dt$.

Si ha allora

$$\begin{aligned} \int \frac{1}{2x(\cos^2 \log x)\sqrt{\tan \log x}} dx &= \int \frac{1}{2e^t \sqrt{\tan t} \cos^2 t} e^t dt \\ &= \int \frac{1}{2\sqrt{\tan t} \cos^2 t} dt \\ &= \sqrt{\tan t} + C \\ &= \sqrt{\tan \log x} + C. \end{aligned}$$