12.14

tisdag 20 december 2022 14:40

a) $\int \frac{1}{x \cdot \ln x}\,dx = \left[\begin{matrix} t = \ln x & x = e^t \\ \frac{dt}{dx} = \frac{1}{x} & dt = \frac{1}{x}dx \end{matrix}\right] = \int \frac{1}{t}\,dt = \ln|t| + c = \underline{\ln|\ln x| + c}$

b) $\int \sin x \cdot (\cos x)^{-4/3}\,dx = \left[\begin{matrix} t = \cos x & t = \arccos x \\ \frac{dt}{dx} = -\sin x & -dt = \sin x\,dx \end{matrix}\right] = \int -(t)^{-4/3}\,dt = 3 \cdot t^{-1/3} = 3(\cos x)^{-1/3} + C$