

$$\int \frac{1}{x \sqrt{1 - \ln^2 x}} dx =$$

INT-S1-042

$$= \int \frac{1}{x} \cdot \frac{1}{\sqrt{1 - (\ln x)^2}} dx = \quad \text{TIP0} \quad \int \frac{f'(x)}{\sqrt{1 - f^2(x)}} dx = \arcsin f(x) + C$$

SOSTITUISCO $\ln x = z$

$$x = e^z$$

$$x' = \frac{dx}{dz} = e^z \rightarrow dx = e^z \cdot dz$$

$$= \int \frac{1}{e^z} \cdot \frac{1}{\sqrt{1 - z^2}} \cdot e^z dz =$$

$$= \int \frac{1}{\sqrt{1 - z^2}} dz =$$

$$= \arcsin z + C = \boxed{\arcsin(\ln x) + C}$$