

$$\int \frac{e^x}{e^{2x} + 1} dx =$$

INT-S1-046

TIPO $\int \frac{f'(x)}{f^2(x)+1} dx = \arctan f(x) + k$

= SOSTITUZIONE $e^x = z$

$$x = \ln z$$

$$x' = \frac{dx}{dz} = \frac{1}{z} \rightarrow dx = \frac{1}{z} dz$$

$$= \int \frac{\cancel{z}}{z^2 + 1} \frac{1}{\cancel{z}} dz =$$

$$= \arctan z + k = \boxed{\arctan e^x + k}$$