

$$\int \frac{x}{\sqrt{x^2+3}} dx =$$

INT-S1-026

TIPO:  $\int \frac{f'(x)}{2\sqrt{f(x)}} dx = \sqrt{f(x)} + k$

SOSTITUZIONE  $x^2 + 3 = z$

non esplicito x

$$z' = \frac{dz}{dx} = 2x \rightarrow dx = \frac{1}{2x} dz$$

$$= \int \frac{\cancel{x}}{\sqrt{z}} \frac{1}{2\cancel{x}} dz =$$

$$= \int \frac{1}{2\sqrt{z}} dz = \sqrt{z} + k =$$

$$= \boxed{\sqrt{x^2+3} + k}$$