

$$\int 2x dx = x^2 + c$$

$$\int \frac{3}{x} dx = 3 \int \frac{1}{x} dx = 3 \log|x| + c$$

$$\text{Se }]c, +\infty[, \\ \int \frac{3}{x} dx = 3 \log x + c$$

$$\begin{aligned} \int \operatorname{tg} x dx &= \int \frac{\operatorname{sen} x}{\cos x} dx = \int \frac{1}{\cos x} \cdot \operatorname{sen} x dx = \\ &= - \int \frac{1}{\cos x} \cdot (-\operatorname{sen} x) dx = - \log|\cos x| + c \end{aligned}$$

$$\int \frac{1}{\operatorname{tg} x} dx = \int \frac{\cos x}{\operatorname{sen} x} dx = \int \frac{1}{\operatorname{sen} x} \cdot \cos x dx = \log |\operatorname{sen} x| + c$$

$$\int \frac{1}{(1+x^2) \operatorname{arctg} x} dx = \int \frac{1}{\operatorname{arctg} x} \cdot \frac{1}{1+x^2} dx = \log |\operatorname{arctg} x| + c$$

Se $I \subset]0, +\infty[$,

$$\int \frac{1}{(1+x^2) \operatorname{arctg} x} dx = \log(\operatorname{arctg} x) + c$$

$$\int \frac{x}{1+x^2} dx = \frac{1}{2} \int \frac{2x}{1+x^2} dx = \frac{1}{2} \int \frac{1}{1+x^2} \cdot 2x dx = \frac{1}{2} \log(1+x^2) + c$$

$$\int \frac{1}{x \log x} dx = \int \frac{1}{\log x} \cdot \frac{1}{x} dx = \log |\log x| + c$$

Se $I \subset]1, +\infty[$,

$\log x > 0$
e quindi

$$\dots = \log(\log x) + c$$

$$\int -\frac{2}{x^3} dx = -2 \int x^{-3} dx = \cancel{(-2)} \cdot \frac{x^{-2}}{\cancel{-2}} + c = x^{-2} + c$$