

Formulaire PCSI-MPSI.
Primitives usuelles.

$$\int t^\alpha dt = \frac{t^{\alpha+1}}{\alpha+1} + C \quad (\alpha \neq -1)$$

$$\int \frac{dt}{1+t^2} = \operatorname{Arctan} t + C$$

$$\int \frac{dt}{\sqrt{1-t^2}} = \operatorname{Arcsin} t + C$$

$$\int \cos t dt = \sin t + C$$

$$\int \sin t dt = -\cos t + C$$

$$\int \frac{dt}{\cos^2 t} = \tan t + C$$

$$\int \frac{dt}{\sin^2 t} = -\cotan t + C$$

$$\int \frac{dt}{\cos t} = \ln \left| \tan \left(\frac{t}{2} + \frac{\pi}{4} \right) \right| + C$$

$$\int \frac{dt}{\sin t} = \ln \left| \tan \frac{t}{2} \right| + C$$

$$\int \tan t dt = -\ln |\cos t| + C$$

$$\int \cotan t dt = \ln |\sin t| + C$$

$$\int \frac{dt}{t} = \ln|t| + C$$

$$\int \frac{dt}{1-t^2} = \frac{1}{2} \ln \left| \frac{1+t}{1-t} \right| + C$$

$$\int \frac{dt}{\sqrt{t^2 + \alpha}} = \ln \left| t + \sqrt{t^2 + \alpha} \right| + C$$

$$\int \operatorname{ch} t \, dt = \operatorname{sh} t + C$$

$$\int \operatorname{sh} t \, dt = \operatorname{ch} t + C$$

$$\int \frac{dt}{\operatorname{ch}^2 t} = \operatorname{th} t + C$$

$$\int \frac{dt}{\operatorname{sh}^2 t} = -\operatorname{coth} t + C$$

$$\int \frac{dt}{\operatorname{ch} t} = 2 \operatorname{Arctan} e^t + C$$

$$\int \frac{dt}{\operatorname{sh} t} = \ln \left| \operatorname{th} \frac{t}{2} \right| + C$$

$$\int \operatorname{th} t \, dt = \ln(\operatorname{ch} t) + C$$

$$\int \operatorname{coth} t \, dt = \ln|\operatorname{sh} t| + C$$