▪ Calculer en utilisant les fonctions composées

$$\int \cos(x)\,(2\sin(x)-1)^3\,dx$$

$$\int \frac{1}{x^2-4}\,dx$$

$$\int \frac{2t-1}{t+3}\,dt$$

$$\int \frac{x^2+1}{x^3}\,dx$$

$$\int \sqrt{6}\,\sqrt{u}\,du$$

$$\int e^{1-x^2}\,x\,dx$$

$$\int \frac{1}{\sqrt{e^x}}\,dx$$

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

$$\int \mathrm{tg}^2[x]\,dx$$

$$\int e^{\sin(3t)}\cos(3t)\,dt$$

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

$$\int \frac{x^2-4}{x+1}\,dx$$

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

$$\int \frac{1}{x\,(\ln(x)+1)^3}\,dx$$

■ Solutions

$$\int \cos(x)\,(2\sin(x)-1)^3\,dx = \frac{1}{8}(2\sin(x)-1)^4 + k$$

$$\int \frac{1}{x^2-4}\,dx = \frac{1}{4}\ln\left(\left|\frac{x-2}{x+2}\right|\right) + k$$

$$\int \frac{2t-1}{t+3}\,dt = 2(t+3) - 7\ln(|t+3|) + k$$

$$\int \frac{x^2+1}{x^3}\,dx = \ln(|x|) - \frac{1}{2x^2} + k$$

$$\int \sqrt{6}\,\sqrt{u}\,du = 2\sqrt{\frac{2}{3}}\,u^{3/2} + k$$

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

$$\int \frac{1}{\sqrt{e^x}}\,dx = -2e^{-x/2} + k$$

$$\int \frac{x+1}{x^2+1}\,dx = \text{Arctg}(x) + \frac{1}{2}\ln\left(\left|x^2+1\right|\right) + k$$

$$\int \text{tg}^2[x]\,dx = \text{tg}(x) - x + k$$

$$\int e^{\sin(3t)}\cos(3t)\,dt = \frac{1}{3}e^{\sin(3t)} + k$$

$$\int \frac{x-1}{\sqrt{1-x^2}}\,dx = -\text{Arcsin}(x) - \sqrt{1-x^2} + k$$

$$\int \frac{x^2-4}{x+1}\,dx = \frac{1}{2}(x+1)^2 - 2(x+1) - 3\ln(|x+1|) + k$$

$$\int \frac{x}{\sqrt{1-2x^2}}\,dx = -\frac{1}{2}\sqrt{1-2x^2} + k$$

$$\int \frac{1}{x(\ln(x)+1)^3}\,dx = -\frac{1}{2(\ln(x)+1)^2} + k$$