$\boxed{Q\ 1}$ Calculer $\int_0^1 \dfrac{x^3+x+1}{(x^2+2)^2}\,\mathrm{d}x$.

$\boxed{Q\ 2}$ Calculer $\int \dfrac{x^2\ln x}{(x^3+1)^3}\,\mathrm{d}x$.

$\boxed{Q\ 3}$ Calculer $\int \dfrac{dx}{1-\operatorname{th} x}$.

$\boxed{Q\ 4}$ Calculer $\int \dfrac{dx}{2+\operatorname{sh} x}$.

$\boxed{Q\ 5}$ Calculer $\int \dfrac{dx}{\sin^3 x\cos^5 x}$.

$\boxed{Q\ 6}$ Calculer $\int \sqrt{\dfrac{1+\sqrt{1-x^2}}{1-x^2}}dx$

$\boxed{Q\ 7}$ Calculer $\int x(\arctan x)^2 dx$

$\boxed{Q\ 8}$ Calculer $\int \dfrac{dx}{x+\sqrt{x^2+1}}$

$\boxed{Q\ 9}$ Calculer $\int \dfrac{dx}{\sqrt{x^2+1}-\sqrt{x^2-1}}$

$\boxed{Q\ 10}$ Calculer $\int \dfrac{2+\sqrt{x+1}}{1+\sqrt{x+2}}dx$

Commencer par faire le changement de variables $t=\sqrt{x+2}$.

$\boxed{Q\ 11}$ Calculer l'intégrale $I=\int_0^1 \sqrt{x(1-x)}\,\mathrm{d}x$.