1.11 Tabel de integrale nedefinite

Peste tot în acest tabel J este un interval $\subset \mathbf{R}$

1.	$f : \mathbf{R} \to \mathbf{R}$ $f(x) = x^n;\ n \in \mathbf{N}$	$\int x^n dx = \frac{x^{n+1}}{n+1} + c.$
2.	$f : J \to \mathbf{R};\ J \subset (0,\infty)$ $f(x) = x^a;\ a \in \mathbf{R} \setminus \{-1\}$	$\int x^a dx = \frac{x^{a+1}}{a+1} + c.$
3.	$f: \mathbf{R} \to \mathbf{R}$ $f(x) = a^x;\ a \in \mathbf{R}_+^* \setminus \{1\}$	$\int a^x dx = \frac{a^x}{\ln a} + c.$
4.	$f : J \to \mathbf{R};\ J \subset \mathbf{R}^*$ $f(x) = \frac{1}{x}$	$\int \frac{1}{x} dx = \ln \lvert x \rvert + c.$
5.	$f: J \to \mathbf{R};\ J \subset \mathbf{R} \setminus \{-a, a\}$ $f(x) = \frac{1}{x^2 - a^2},\quad \{a \neq 0\}$	$\int \frac{1}{x^2 - a^2} dx = \frac{1}{2a} \ln \left\lvert \frac{x-a}{x+a} \right\rvert + c$
6.	$f : \mathbf{R} \to \mathbf{R}$ $f(x) = \frac{1}{x^2 + a^2};\ a \neq 0$	$\int \frac{1}{x^2 + a^2} dx = \frac{1}{a} \operatorname{arc\,tg} \frac{x}{a} + c.$
7.	$f : \mathbf{R} \to \mathbf{R}$ $f(x) = \sin x$	$\int \sin x\, dx = -\cos x + c.$
8.	$f : \mathbf{R} \to \mathbf{R}$ $f(x) = \cos x$	$\int \cos x\, dx = \sin x + c.$
9.	$f : J \to \mathbf{R};\ J \subset \mathbf{R} \setminus \left\{ (2k+1)\frac{\pi}{2} \,\middle|\, k \in Z \right\}$ $f(x) = \frac{1}{\cos^2 x}$	$\int \frac{1}{\cos^2 x} dx = \operatorname{tg} x + c.$
10.	$f : J \to \mathbf{R};\ J \subset \mathbf{R} \setminus \{k\pi \mid k \in \mathbf{Z}\}$ $f(x) = \frac{1}{\sin^2 x}$	$\int \frac{1}{\sin^2 x} dx = -\operatorname{ctg} x + c.$
11.	$f : J \to \mathbf{R};\ J \subset \mathbf{R} \setminus \left\{ (2k+1)\frac{\pi}{2} \,\middle|\, k \in \mathbf{Z} \right\}$ $f(x) = \operatorname{tg} x$	$\int \operatorname{tg} x\, dx = -\ln \lvert \cos x \rvert + c.$
12.	$f : J \to \mathbf{R};\ J \subset \mathbf{R} \setminus \{k\pi \mid k \in \mathbf{Z}\}$ $f(x) = \operatorname{ctg} x$	$\int \operatorname{ctg} x\, dx = \ln \lvert \sin x \rvert + c.$
13.	$f : \mathbf{R} \to \mathbf{R}$ $f(x) = \frac{1}{\sqrt{x^2 + a^2}};\ a \neq 0$	$\int \frac{1}{\sqrt{x^2 + a^2}} dx = \ln(x + \sqrt{x^2 + a^2}) + c.$
14.	$f : J \to \mathbf{R}$, $a > 0$, $J \subset (-\infty, -a)$ sau $J \subset (a, \infty)$ $f(x) = \frac{1}{\sqrt{x^2 - a^2}}$	$\int \frac{1}{\sqrt{x^2 - a^2}} dx = \ln \lvert x + \sqrt{x^2 - a^2} \rvert + c.$
15.	$f : J \to \mathbf{R};\ J \subset (-a, a), a > 0,$ $f(x) = \frac{1}{\sqrt{a^2 - x^2}}$	$\int \frac{1}{\sqrt{a^2 - x^2}} dx = \arcsin \frac{x}{a} + c.$