

2° HATÁROZATLAN INTEGRÁLOK TÁBLÁZATA (I.)

0. $\int dx = x + C$

1.	$\int x^n dx = \frac{x^{n+1}}{n+1} + C$	$x \in \mathbf{R}, n \in \mathbf{N}$
2.	$\int x^a dx = \frac{x^{a+1}}{a+1} + C$	$x \in (0, +\infty), a \in \mathbf{R} \setminus \{-1\}$
3.	$\int \frac{1}{x} dx = \ln x + C$	$x \in I \subset \mathbf{R}^*$
4.	$\int a^x dx = \frac{a^x}{\ln a} + C$; $\int e^x dx = e^x + C$	$x \in \mathbf{R}, a > 0, a \neq 1$
5.	$\int \frac{1}{x^2 + a^2} dx = \frac{1}{a} \operatorname{arctg} \frac{x}{a} + C$	$x \in \mathbf{R}, a \neq 0$
6.	$\int \frac{1}{x^2 - a^2} dx = \frac{1}{2a} \ln \left \frac{x-a}{x+a} \right + C$	$x \in I \subset \mathbf{R} \setminus \{-a, a\}, a \neq 0$
7.	$\int \sin x dx = -\cos x + C$	$x \in \mathbf{R}$
8.	$\int \cos x dx = \sin x + C$	$x \in \mathbf{R}$
9.	$\int \frac{1}{\cos^2 x} dx = \operatorname{tg} x + C$	$x \in I \subset \mathbf{R} \setminus \{(2k+1)\frac{\pi}{2} k \in \mathbf{Z}\}$
10.	$\int \frac{1}{\sin^2 x} dx = -\operatorname{ctg} x + C$	$x \in I \subset \mathbf{R} \setminus \{k\pi k \in \mathbf{Z}\}$
11.	$\int \operatorname{tg} x dx = -\ln \cos x + C$	$x \in I \subset \mathbf{R} \setminus \{(2k+1)\frac{\pi}{2} k \in \mathbf{Z}\}$
12.	$\int \operatorname{ctg} x dx = \ln \sin x + C$	$x \in I \subset \mathbf{R} \setminus \{k\pi k \in \mathbf{Z}\}$
13.	$\int \frac{1}{\sqrt{a^2 - x^2}} dx = \arcsin \frac{x}{a} + C$	$x \in I \subset (-a, a), a > 0$
14.	$\int \frac{1}{\sqrt{x^2 + a^2}} dx = \ln(x + \sqrt{x^2 + a^2}) + C$	$x \in \mathbf{R}, a \neq 0$
15.	$\int \frac{1}{\sqrt{x^2 - a^2}} dx = \ln x + \sqrt{x^2 - a^2} + C$	$x \in I \subset (-\infty, -a)$ vagy $x \in I \subset (a, +\infty), a > 0$

HATÁROZATLAN INTEGRÁLOK TÁBLÁZATA (II.)

1.	$\int \varphi^n(x) \varphi'(x) dx = \frac{\varphi^{n+1}(x)}{n+1} + C$	$n \in \mathbb{N}$
2.	$\int \varphi^a(x) \varphi'(x) dx = \frac{\varphi^{a+1}(x)}{a+1} + C$	$\varphi(I) \subset (0, +\infty), a \in \mathbb{R} \setminus \{-1\}$
3.	$\int \frac{\varphi'(x)}{\varphi(x)} dx = \ln \varphi(x) + C$	$\varphi(x) \neq 0, \forall x \in I$
4.	$\int a^{\varphi(x)} \varphi'(x) dx = \frac{a^{\varphi(x)}}{\ln a} + C$	$a > 0, a \neq 1$
5.	$\int \frac{\varphi'(x)}{\varphi^2(x) + a^2} dx = \frac{1}{a} \operatorname{arctg} \frac{\varphi(x)}{a} + C$	$a \neq 0$
6.	$\int \frac{\varphi'(x)}{\varphi^2(x) - a^2} dx = \frac{1}{2a} \ln \left \frac{\varphi(x) - a}{\varphi(x) + a} \right + C$	$\varphi(x) \neq \pm a, \forall x \in I, a \neq 0$
7.	$\int [\sin \varphi(x)] \varphi'(x) dx = -\cos \varphi(x) + C$	
8.	$\int [\cos \varphi(x)] \varphi'(x) dx = \sin \varphi(x) + C$	
9.	$\int \frac{\varphi'(x)}{\cos^2 \varphi(x)} dx = \operatorname{tg} \varphi(x) + C$	$\varphi(x) \notin \{(2k+1)\frac{\pi}{2} k \in \mathbb{Z}\}, \forall x \in I$
10.	$\int \frac{\varphi'(x)}{\sin^2 \varphi(x)} dx = -\operatorname{ctg} \varphi(x) + C$	$\varphi(x) \notin \{k\pi k \in \mathbb{Z}\}, \forall x \in I$
11.	$\int [\operatorname{tg} \varphi(x)] \varphi'(x) dx = -\ln \cos \varphi(x) + C$	$\varphi(x) \notin \{(2k+1)\frac{\pi}{2} k \in \mathbb{Z}\}, \forall x \in I$
12.	$\int [\operatorname{ctg} \varphi(x)] \varphi'(x) dx = \ln \sin \varphi(x) + C$	$\varphi(x) \notin \{k\pi k \in \mathbb{Z}\}, \forall x \in I$
13.	$\int \frac{\varphi'(x)}{\sqrt{a^2 - \varphi^2(x)}} dx = \arcsin \frac{\varphi(x)}{a} + C$	$\varphi(I) \subset (-a, a), a > 0$
14.	$\int \frac{\varphi'(x)}{\sqrt{\varphi^2(x) + a^2}} dx = \ln(\varphi(x) + \sqrt{\varphi^2(x) + a^2}) + C$	$a \neq 0$
15.	$\int \frac{\varphi'(x)}{\sqrt{\varphi^2(x) - a^2}} dx = \ln \varphi(x) + \sqrt{\varphi^2(x) - a^2} + C$	$\varphi(I) \subset (-\infty, -a)$ vagy $\varphi(I) \subset (a, +\infty), a > 0$