Tabulka neurčitých integrálů

1) $\int x^n \mathrm{d}x = \frac{x^{n+1}}{n+1} + c,\ c \in R,$ $x \in R$ pro $n \in Z,\ n > 0$; $x \in R - \{0\}$ pro $n \in Z,\ n < -1$, $x > 0$ pro $n \in R,\ n \notin Z$

2) $\int \frac{\mathrm{d}x}{x} = \ln|x| + c,$ $x \in R - \{0\},$

3) $\int \mathrm{e}^x \mathrm{d}x = \mathrm{e}^x + c;$ $x \in R,$

4) $\int a^x \mathrm{d}x = \frac{a^x}{\ln a} + c,$ $x \in R,\ a > 0,\ a \neq 1,$

5) $\int \sin x \,\mathrm{d}x = -\cos x + c,$ $x \in R,$

6) $\int \cos x \,\mathrm{d}x = \sin x + c,$ $x \in R,$

7) $\int \frac{1}{\cos^2 x} \mathrm{d}x = \mathrm{tg}\, x + c,$ $x \in ((2k-1)\frac{\pi}{2}, (2k+1)\frac{\pi}{2}), k \in Z,$

8) $\int \frac{1}{\sin^2 x} \mathrm{d}x = -\mathrm{cotg}\, x + c,$ $x \in (2k\pi, (2k+1)\pi),\ k \in Z,$

9) $\int \frac{1}{\sqrt{1-x^2}} \mathrm{d}x = \arcsin x + c,$ $x \in (-1; 1),$

10) $\int \frac{1}{1+x^2} \mathrm{d}x = \mathrm{arctg}\, x + c;$ $x \in R,$

11) $\int \cosh x \,\mathrm{d}x = \sinh x + c;$ $x \in R,$

12) $\int \sinh x \,\mathrm{d}x = \cosh x + c;$ $x \in R,$

13) $\int \frac{\mathrm{d}x}{\sqrt{1+x^2}} = \mathrm{argsinh}\, x + c = \ln(x + \sqrt{1+x^2}) + c,$ $x \in R,$

14) $\int \frac{\mathrm{d}x}{\sqrt{x^2-1}} = \mathrm{argcosh}\, x + c = \ln(x + \sqrt{x^2-1}) + c,$ $x \in (1; \infty),$

15) $\int \frac{\mathrm{d}x}{1-x^2} = \mathrm{argtgh}\, x + c = \frac{1}{2} \ln \frac{1+x}{1-x} + c;$ $x \in (-1, 1),$

16) $\int \frac{\mathrm{d}x}{1-x^2} = \mathrm{argcotgh}\, x + c = \frac{1}{2} \ln \frac{x+1}{x-1} + c;$ $x \in (-\infty; -1) \cup (1; \infty),$

17) $\int \frac{f'(x)}{f(x)} \,\mathrm{d}x = \ln|f(x)| + c,$ $f(x) > 0$ nebo $f(x) < 0,$

18) $\int \frac{1}{x^2 + a^2} \,\mathrm{d}x = \frac{1}{a} \,\mathrm{arctg}\, \frac{x}{a} + c,$ $x \in R.$