Beispiele von Stammfunktionen

- $n \in \mathbb{N}$: $\int x^n dx = \frac{x^{n+1}}{n+1}$ $(x \in \mathbb{R})$
- $n \in \mathbb{Z} \setminus \{-1\}$: $\int x^n dx = \frac{x^{n+1}}{n+1}$ $(x \in \mathbb{R} \setminus \{0\})$
- $\int \frac{dx}{x} = \log|x|$ $(x \in \mathbb{R} \setminus \{0\})$
- $\alpha \in \mathbb{R} \setminus \{-1\}$: $\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1}$ $(x > 0)$
- $\int e^x dx = e^x$ $(x \in \mathbb{R})$
- $\int \log x = x \log x - x$ $(x > 0)$
- $a \in \mathbb{R}_+^* \setminus \{1\}$: $\int a^x dx = \frac{a^x}{\log a}$ $(x \in \mathbb{R})$
- $\int \cos x \, dx = \sin x$ $(x \in \mathbb{R})$
- $\int \sin x \, dx = -\cos x$ $(x \in \mathbb{R})$
- $\int \tan x \, dx = -\log|\cos x|$ $(x \in \mathbb{R} \setminus (\frac{\pi}{2} + \pi\mathbb{Z}))$
- $\int \cot x \, dx = \log|\sin x|$ $(x \in \mathbb{R} \setminus \pi\mathbb{Z})$
- $\int \frac{dx}{\sin^2 x} = -\cot x$ $(x \in \mathbb{R} \setminus \pi\mathbb{Z})$
- $\int \frac{dx}{\cos^2 x} = \tan x$ $(x \in \mathbb{R} \setminus (\frac{\pi}{2} + \pi\mathbb{Z}))$
- $\int \frac{dx}{\sqrt{1-x^2}} = \arcsin x$ $(|x| < 1)$
- $\int \frac{dx}{1+x^2} = \arctan x$ $(x \in \mathbb{R})$
- $\int \frac{dx}{\sqrt{1+x^2}} = \log(x + \sqrt{1+x^2})$ $(x \in \mathbb{R})$
- $\int \frac{dx}{\sqrt{x^2-1}} = \log(x + \sqrt{x^2-1})$ $(x > 1)$
- $\int \frac{dx}{\sqrt{x^2-1}} = -\log(\sqrt{x^2-1} - x)$ $(x < -1)$
- $\alpha \in \mathbb{R} \setminus \{0\}$: $\int \frac{dx}{x^2-\alpha^2} = \frac{1}{2\alpha} \log|\frac{x-\alpha}{x+\alpha}|$ $(x \in \mathbb{R} \setminus \{\pm\alpha\})$