1 Grund- oder Stammintegrale

$$\int 0 dx = C$$

$$\int 1 dx = C + 1$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C$$

$$\int e^x dx = e^x + C$$

$$\int \sin x dx = -\cos x + C$$

$$\int \cos x dx = \sin x + C$$

$$\int \frac{1}{\cos^2 x} dx = \tan x + C$$

$$\int \frac{1}{\sin^2 x} dx = -\cot x + C$$

$$\int \frac{1}{\sqrt{1+x^2}} dx = \begin{cases} \arcsin x + C_1 \\ -\arccos x + C_2 \end{cases}$$

$$\int \frac{1}{\sqrt{1-x^2}} dx = \begin{cases} \arctan x + C_1 \\ -\arccos x + C_2 \end{cases}$$

$$\int \frac{1}{\sqrt{1-x^2}} dx = \begin{cases} \arctan x + C_1 \\ -\arccos x + C_2 \end{cases}$$

$$\int \sinh x dx = \cosh x + C$$

$$\int \frac{1}{\cosh^2 x} dx = \tanh x + C$$

$$\int \frac{1}{\cosh^2 x} dx = \tanh x + C$$

$$\int \frac{1}{\sinh^2 x} dx = -\coth x + C$$

$$\int \frac{1}{\sqrt{x^2+1}} dx = \arcsin x + C = \ln x + \sqrt{x^2+1} + C$$

$$\int \frac{1}{\sqrt{x^2-1}} dx = \operatorname{sgn} x * \operatorname{arcosh} |x| + C = \ln |x + \sqrt{x^2-1}| + C$$

$$\int \frac{1}{1-x^2} dx = \begin{cases} \operatorname{artanh} x + C_1 = \frac{1}{2} \ln \frac{1+x}{1-x} + C_1 & |x| < 1 \\ \operatorname{arcoth} x + C_2 = \frac{1}{2} \ln \frac{x-1}{x-1} + C_2 & |x| > 1 \end{cases}$$