

## Mathematischer Brückenkurs (Mathe/Info)

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### Einige Integrale

$$\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1} + C, \quad \alpha \neq -1.$$

$$\int \frac{dx}{x+a} = \ln|x+a| + C.$$

$$\int a^x dx = \frac{a^x}{\ln a} + C, \quad a > 0, \quad a \neq 1.$$

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

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

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

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

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

$$\int \frac{dx}{x^2 + a^2} = \frac{1}{a} \arctan \frac{x}{a} + C, \quad a \neq 0.$$

$$\int \frac{dx}{\sqrt{a^2 - x^2}} = \arcsin \frac{x}{a} + C, \quad |x| < a, \quad a \neq 0.$$