

Das unbestimmte Integral - Teil 2

Beispiele: Einige Grundintegrale

$$a) \int e^x dx = e^x + C, \quad \frac{d}{dx}(e^x + C) = e^x$$

$$b) \int \sin x dx = -\cos x + C, \quad \frac{d}{dx}(-\cos x + C) = -(-\sin x) = \sin x$$

$$c) \int \frac{1}{x} dx = \ln|x| + C, \quad \frac{d}{dx}(\ln|x| + C) = \frac{1}{x}$$

$$d) \int \frac{1}{\cos^2 x} dx = \tan x + C, \quad \frac{d}{dx}(\tan x + C) = \frac{1}{\cos^2 x}$$

$$e) \int \frac{1}{\sqrt{1-x^2}} dx = \arcsin x + C \\ = -\arccos x + C' \quad \left. \vphantom{\int} \right\} \arcsin x = \frac{\pi}{2} - \arccos x$$

aber: $\int \tan x dx$?

$\int \ln x dx$?