$$\int \frac{dx}{\sqrt{1+e^x}} = \int \frac{2tdt}{t(t^2-1)} = 2\int \frac{dt}{t^2-1} = \ln\left|\frac{t-1}{t+1}\right| + C = \ln\left|\frac{\sqrt{e^x+1}-1}{\sqrt{e^x+1}+1}\right| + C.$$

ИНТЕГРАЛЬНОЕ ИСЧИСЛЕНИЕ

积分学

$$\int \frac{dx}{\sqrt{1-x^2}} = \arcsin x + C. \qquad \int x^a\,dx = \frac{x^{a+1}}{a+1} + C, \quad (a \neq -1). \qquad \int \frac{dx}{x} = \ln|x| + C.$$

$$\int \frac{dx}{\sqrt{x^2 \pm b}} = \ln\left|x + \sqrt{x^2 \pm b}\right| + C.$$

$$\int \sin^{\frac{3}{4}} x \cos x dx = \int \sin^{\frac{3}{4}} x d(\sin x) = \frac{4}{7}\sin^{\frac{7}{4}} x + C.$$