

$$\int \frac{1}{e^x+1} dx$$

$$= \int \frac{(e^x+1)-e^x}{e^x+1} dx$$

$$= \int \left(1 - \frac{e^x}{e^x+1}\right) dx$$

$$= \boxed{x - \log(e^x+1) + C} \quad (C \text{は積分定数})$$