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

Nota: sumar y restar e^x en el numerador

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

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

$\frac{a+b}{c} = \frac{a}{c} + \frac{b}{c}$

$$= x - \ln|e^x+1| + C$$

$$\int \frac{f'(x)}{f(x)}\,dx = \ln|f(x)| + C$$