1 $\int \frac{\sin x}{\sin x - \cos x} dx$

$$= \frac{1}{2} \int \frac{\sin x + \cos x + \sin x - \cos x}{\sin x - \cos x} dx$$
$$= \frac{1}{2} \int \frac{\sin x + \cos x}{\sin x - \cos x} dx + \frac{1}{2} \int \frac{\sin x - \cos x}{\sin x - \cos x} dx$$

Let $\sin x - \cos x = t$
$\Rightarrow (\cos x + \sin x) dx = dt$

$$= \int \frac{dt}{2t} + \frac{x}{2} + C$$
$$= \frac{\ln |\sin x - \cos x|}{2} + \frac{x}{2} + C$$