$$\int \frac{\cos^2 x - 1}{\cos x(\sin x + 1)}\,dx = \int \frac{-y^2}{(1-y^2)(1+y)}\,dy = \int \frac{A}{y+1} + \frac{B}{(y+1)^2} + \frac{C}{y-1}\,dy$$

Substituce $\sin x = y$, $\cos x\,dx = dy$

$x \in (-\frac{\pi}{2}, \frac{\pi}{2}) + k\pi$.

$A(y^2-1) + B(y-1) + C(y+1)^2 = y^2$

$y = 1: 4C = 1 \Rightarrow C = \frac{1}{4}$

$y = -1: -2B = 1 \Rightarrow B = -\frac{1}{2}$

$y = 0: -A + \frac{1}{2} + \frac{1}{4} = 0 \Rightarrow A = \frac{3}{4}$

} Dosazování kořenů

$= \frac{1}{4}\left(3\log|y+1| + \frac{1}{y+1} + \log|y-1|\right)$

$= \frac{3}{4}\log(\sin x + 1) + \frac{1}{2(\sin x + 1)} + \frac{1}{4}\log(1 - \sin x)$, $x \in (-\frac{\pi}{2}, \frac{\pi}{2}) + k\pi$.