

Solución

$$\int_0^{\frac{\pi}{4}} \sec^2(x) dx$$

$$= \tan(x) \Big|_0^{\frac{\pi}{4} = b}$$

$$0 = a$$

$$= \left[ \tan\left(\frac{\pi}{4}\right) - \cancel{\tan(0)} \right]$$

$$= \underline{1}$$

$$\int \sec^2 u \, du = \tan u + C$$

$$\tan(0) = 0$$

$$\tan\left(\frac{\pi}{4}\right) = 1$$

$$\tan\left(\frac{3\pi}{4}\right) = -1$$