Trigonometrie Aufgabe 247

$2 \sin x = \sqrt{2} \tan x$

$$2 * \sin x = \sqrt{2} * \frac{\sin x}{\cos x} \quad | *\cos x$$

$2 * \sin x * \cos x - \sqrt{2} * \sin x = 0$

$\sin x * (2 * \cos x - \sqrt{2}) = 0$

$\sin x = 0 \longrightarrow x = 0°$ oder $180°$

$2 * \cos x - \sqrt{2} = 0 \quad | +\sqrt{2}$

$2 * \cos x = \sqrt{2} \quad | :2$

$$\cos x = \frac{1}{2} * \sqrt{2} \longrightarrow x = 45°$$

Lösungsmenge **L = {0°, 45°, 180°}**