

Zadatak 20. Ako je $\sin x + \cos y = a$ i $\cos x - \sin y = b$, koliko je $\sin(x - y)$?

Rješenje.

$$\begin{aligned}\sin x + \cos y &= a && /^2 \\ \cos x - \sin y &= b && /^2\end{aligned}$$

$$\left. \begin{aligned}\sin^2 x + 2 \sin x \cos y + \cos^2 y &= a^2 \\ \cos^2 x - 2 \sin y \cos x + \cos^2 x &= b^2\end{aligned} \right\} +$$

$$\begin{aligned}1 + 2 \sin x \cos y - 2 \sin y \cos x + 1 &= a^2 + b^2 && / : 2 \\ \sin(x - y) &= \frac{a^2 + b^2 - 2}{2}\end{aligned}$$