Zadatak 34. Ako je $\sin x + \cos y = a$, $\cos x - \sin y = b$, koliko je $\sin(x-y)$?

Rješenje.

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

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

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