

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

*Rješenje.*

$$\sin x + \cos y = a \quad /^2$$

$$\cos x - \sin y = b \quad /^2$$

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

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$$1 + 2 \sin x \cos y - 2 \sin y \cos x + 1 = a^2 + b^2 \quad / : 2$$

$$\sin(x - y) = \frac{a^2 + b^2 - 2}{2}$$