

**Zadatak 22.** Ako je  $\cos^2 \alpha + \cos^2 \beta = a$ , koliko je  $\cos(\alpha + \beta) \cdot \cos(\alpha - \beta)$ ?

**Rješenje.**

$$\begin{aligned}\cos^2 \alpha + \cos^2 \beta &= \frac{1 + \cos 2\alpha}{2} + \frac{1 + \cos 2\beta}{2} = 1 + \frac{1}{2}(\cos 2\alpha + \cos 2\beta) \\ &= 1 + \frac{1}{2} \cdot 2 \cos \frac{2\alpha + 2\beta}{2} \cos \frac{2\alpha - 2\beta}{2} = \cos(\alpha + \beta) \cdot \cos(\alpha - \beta) + 1 = a.\end{aligned}$$

Dakle,  $\cos(\alpha + \beta) \cdot \cos(\alpha - \beta) = a - 1$ .