Zadatak 32. Ako je $\cos(x+y)=\frac{1}{3}$, $\cos(x-y)=\frac{1}{5}$, koliko je $\operatorname{tg} x\cdot\operatorname{tg} y$?

Rješenje.

$$\left.\begin{aligned}\cos(x+y)&=\cos x\cos y-\sin x\sin y=\frac{1}{3}\\ \cos(x-y)&=\cos x\cos y+\sin x\sin y=\frac{1}{5}\end{aligned}\right\}\begin{matrix}+\\ -\end{matrix}$$

$$2\cos x\cos y=\frac{5+3}{15}=\frac{8}{15}\quad /:2$$

$$\cos x\cos y=\frac{4}{15}$$

$$-2\sin x\sin y=\frac{5-3}{15}$$

$$-2\sin x\sin y=\frac{2}{15}\quad /:(-2)$$

$$\sin x\sin y=-\frac{1}{15}$$

$$\operatorname{tg} x\cdot\operatorname{tg} y=\frac{\sin x\cdot\sin y}{\cos x\cdot\cos y}=\frac{-\frac{1}{15}}{\frac{4}{15}}=-\frac{1}{4}$$