

**Zadatak 13.** Ako je  $f(x) = \sin^2 \frac{x}{12} - \cos^2 \frac{x}{12}$ ,  $g(x) = ||x^2 - 1| - 1|$ , koliko je  $(g \circ f)(23\pi)$ ?

*Rješenje.*  $f(x) = \sin^2 \frac{x}{12} - \cos^2 \frac{x}{12} = -\cos \frac{x}{6};$

$$g(x) = ||x^2 - 1| - 1|;$$

$$\begin{aligned}(g \circ f)(23\pi) &= \left| \left| \cos^2 \frac{23\pi}{6} - 1 \right| - 1 \right| = \left| \left| \cos^2 \left( -\frac{\pi}{6} \right) - 1 \right| - 1 \right| \\ &= \left| \left| \frac{3}{4} - 1 \right| - 1 \right| = \left| \frac{1}{4} - 1 \right| = \frac{3}{4}.\end{aligned}$$