

Zadatak 41. Ako je $f(x) = \cos \frac{\pi}{6}x$, $g(x) = 2|x + 1|$, koliko je $(g \circ f)(101)$?

Rješenje. $f(x) = \cos \frac{\pi}{6}x$, $g(x) = 2|x + 1|$

$$(g \circ f)(x) = 2 \left| \cos \frac{\pi x}{6} + 1 \right|$$

$$(g \circ f)(101) = 2 \left| \cos \frac{101}{6}\pi + 1 \right| = 2 \left| \cos \frac{5\pi}{6} + 1 \right|$$

$$= 2 \left| -\frac{\sqrt{3}}{2} + 1 \right| = 2 \left| \frac{2 - \sqrt{3}}{2} \right| = 2 \cdot \frac{2 - \sqrt{3}}{2} = 2 - \sqrt{3}$$