



**Zadatak 32.** Ako je  $f\left(x + \frac{\pi}{2}\right) = \sin\left(\frac{\pi}{2} - x\right) - \cos(\pi - x)$ , koliko je  $f\left(\frac{67\pi}{6}\right)$ ?

**Rješenje.**  $f\left(x + \frac{\pi}{2}\right) = \sin\left(\frac{\pi}{2} - x\right) - \cos(\pi - x)$ ,

$$x + \frac{\pi}{2} = t \iff x = t - \frac{\pi}{2}$$

$$\begin{aligned} \implies f(t) &= \sin\left(\frac{\pi}{2} - t + \frac{\pi}{2}\right) - \cos\left(\pi - t + \frac{\pi}{2}\right) = \sin(\pi - t) - \cos\left(\frac{3\pi}{2} - t\right) \\ &= \sin t + \sin t = 2 \sin t \end{aligned}$$

$$\implies f\left(\frac{67\pi}{6}\right) = 2 \sin \frac{67\pi}{6} = 2 \sin \frac{7\pi}{6} = -2 \sin \frac{\pi}{6} = -2 \cdot \frac{1}{2} = -1.$$