Zadatak 34. Ako je $f(x+\pi) = 2\sin\left(\frac{\pi}{2} - x\right) + \cos(2\pi - x)$, koliko je $f\left(\frac{35\pi}{3}\right)$?

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

$$x + \pi = t \iff x = t - \pi;$$

$$f(t) = 2\sin\left(\frac{\pi}{2} - t - \pi\right) + \cos(2\pi - t + \pi) = 2\sin\left(-t - \frac{\pi}{2}\right) + \cos(\pi - t)$$

$$= -2\sin\left(\frac{\pi}{2} + t\right) - \cos t = -2\cos t - \cos t = -3\cos t;$$

$$f\left(\frac{35\pi}{3}\right) = -3\cos\frac{35\pi}{3} = -3\cos\frac{5\pi}{3} = -3\cdot\frac{1}{2} = -\frac{3}{2}.$$