Zadatak 9. Odredi osnovni (temeljni) period funkcije
$f(x) = \sin\frac{3}{2}x + 5\cos\frac{3}{4}x$.

Rješenje. $f(x) = \sin\frac{3}{2}x + 5\cos\frac{3}{4}x$

$$f(0) = 5, \quad f(P) = \sin\frac{3}{2}P + 5\cos\frac{3}{4}P = 5$$
$$f(-P) = -\sin\frac{3}{2}P + 5\cos\frac{3}{4}P = 5$$
$$10\cos\frac{3}{4}P = 10 \implies \cos\frac{3}{4}P = 1$$

$$\frac{3}{4}P = 2k\pi,\ k \in \mathbf{Z}^* \implies P = \frac{8k\pi}{3},\ k \in \mathbf{Z}^* \text{ – period},$$
$$k = 1 \implies P = \frac{8\pi}{3} \text{ – temeljni period.}$$