**Zadatak 6.** Prikaži grafički funkcije:

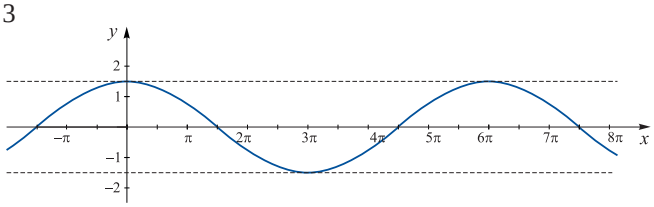
**1)** $f(x) = \frac{3}{2}\cos\frac{x}{3}$;

**2)** $f(x) = -2\cos 2x$;

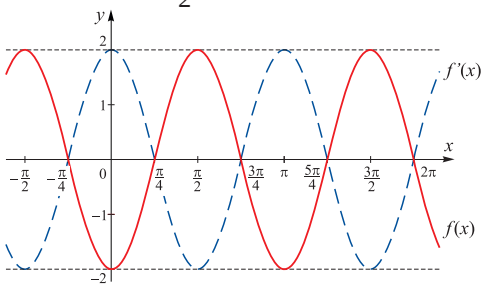
**3)** $f(x) = \cos\frac{\pi}{2}(x+1)$;

**4)** $f(x) = -\frac{1}{2}\cos\left(\frac{3\pi}{4} - 2x\right)$.

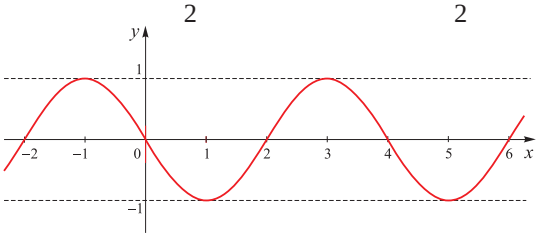
***Rješenje.*** **1)** $f(x) = \frac{3}{2}\cos\frac{x}{3} = \frac{2}{3}\sin\left(\frac{x}{3} + \frac{\pi}{2}\right) \Longrightarrow N = -\frac{\frac{\pi}{2}}{\frac{1}{3}} = -\frac{3\pi}{2}$, $C = \frac{3}{2}$, $P = \frac{2\pi}{\frac{1}{3}} = 6\pi$;




**2)** $f(x) = -2\cos 2x \Longrightarrow f'(x) = 2\cos 2x = 2\sin\left(2x + \frac{\pi}{2}\right) \Longrightarrow N' = -\frac{\frac{\pi}{2}}{2} = -\frac{\pi}{4}$, $C' = 2$, $P' = \frac{2\pi}{2} = \pi$;




**3)** $f(x) = \cos\frac{\pi}{2}(x+1) = \cos\left(\frac{\pi}{2}x + \frac{\pi}{2}\right) = \sin\left(\frac{\pi}{2}x + \frac{\pi}{2} + \frac{\pi}{2}\right) = \sin\left(\frac{\pi}{2}x + \pi\right) \Longrightarrow N = -\frac{\pi}{\frac{\pi}{2}} = -2$, $C = 1$, $P = \frac{2\pi}{\frac{\pi}{2}} = 4$;



**4)** $f(x) = -\frac{1}{2}\cos\left(\frac{3\pi}{4} - 2x\right) \implies$

$f'(x) = \frac{1}{2}\cos\left(\frac{3\pi}{4} - 2x\right) = \frac{1}{2}\sin\left(-2x + \frac{3\pi}{4} + \frac{\pi}{2}\right) = \frac{1}{2}\sin\left(-2x + \frac{5\pi}{4}\right) \implies$

$N' = -\frac{\frac{5\pi}{4}}{-2} = \frac{5\pi}{8}, \quad C' = \frac{1}{2}, \quad P' = \frac{2\pi}{2} = \pi;$