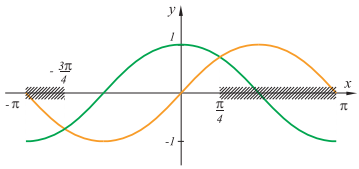
Zadatak 9. Riješi grafički nad intervalom $[-\pi, \pi]$ sljedeće nejednadžbe:

1) $\sin x > \cos x$; **2)** $\sin 2x < \cos x$;

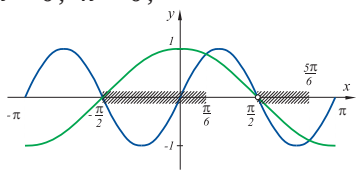
3) $2\sin\frac{x}{2} < \cos\frac{x}{2}$.

Rješenje. **1)**



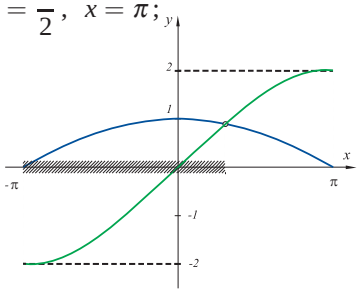
2) $f_1(x) = \sin 2x$, $C_1 = 1$, $P_1 = \frac{2\pi}{2} = \pi$,

N_1: $\sin 2x = 0$, $2x = 0$, $x = 0$;



3) $f_1(x) = 2\sin\frac{x}{2}$, $C_1 = 2$, $P_1 = \frac{2\pi}{\frac{1}{2}} = 4\pi$,

N_1: $\sin\frac{x}{2} = 0$, $\frac{x}{2} = 0$, $x = 0$;

$f_2(x) = \cos\frac{x}{2}$, $C_2 = 1$, $P_2 = \frac{2\pi}{\frac{1}{2}} = 4\pi$,

N_2: $\cos\frac{x}{2} = 0$, $\frac{x}{2} = \frac{\pi}{2}$, $x = \pi$;