

**Zadatak 3.** 1)  $|\sin 2x| > \frac{\sqrt{3}}{2}$ ;  
3)  $|\cos(\pi x)| > \frac{1}{2}$ .

2)  $|\operatorname{tg} \frac{x}{2}| \leq \sqrt{3}$ ;

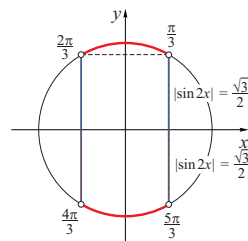
*Rješenje.*

1)  $|\sin 2x| > \frac{\sqrt{3}}{2}$ ;

$$\sin \frac{\pi}{3} = \frac{\sqrt{3}}{2} \implies |\sin \frac{\pi}{3}| = \frac{\sqrt{3}}{2};$$

$$\frac{\pi}{3} + k\pi < 2x < \frac{2\pi}{3} + k\pi, k \in \mathbf{Z};$$

$$\frac{\pi}{6} + \frac{k\pi}{2} < x < \frac{\pi}{3} + \frac{k\pi}{2}, k \in \mathbf{Z}.$$

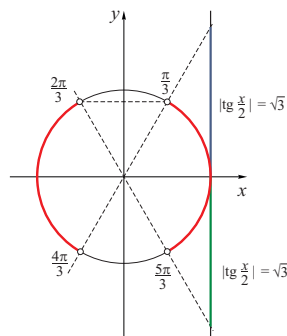


2)  $|\operatorname{tg} \frac{x}{2}| \leq \sqrt{3}$ ;

$$\operatorname{tg} \frac{\pi}{3} = \sqrt{3} \implies |\operatorname{tg} \frac{\pi}{3}| = \sqrt{3};$$

$$-\frac{\pi}{3} + k\pi \leq \frac{x}{2} \leq \frac{\pi}{3} + k\pi, k \in \mathbf{Z};$$

$$-\frac{2\pi}{3} + 2k\pi \leq x \leq \frac{2\pi}{3} + 2k\pi, k \in \mathbf{Z}.$$



3)  $|\cos(\pi x)| > \frac{1}{2}$ ;

$$\cos \frac{\pi}{3} = \frac{1}{2} \implies \left| \cos \frac{\pi}{3} \right| = \frac{1}{2};$$

$$\frac{2\pi}{3} + k\pi < \pi x < \frac{4\pi}{3}, k \in \mathbf{Z};$$

$$\frac{2}{3} + k < x < \frac{4}{3} + k, k \in \mathbf{Z}.$$

