

Rješenja zadataka 5.2

Zadatak 1. Riješi nejednadžbe:

1) $\sin x < -\frac{\sqrt{3}}{2}$;

2) $\cos x \geq \frac{1}{2}$;

3) $\operatorname{tg} x \leq -1$;

4) $\operatorname{ctg} x > \sqrt{3}$.

Rješenje.

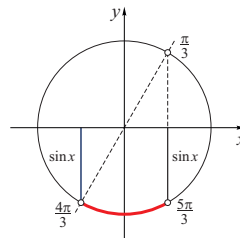
1) $\sin x < -\frac{\sqrt{3}}{2}$;

$$\sin \frac{\pi}{3} = \frac{\sqrt{3}}{2},$$

$$\sin \frac{4\pi}{3} = -\frac{\sqrt{3}}{2},$$

$$\sin \frac{5\pi}{3} = -\frac{\sqrt{3}}{2};$$

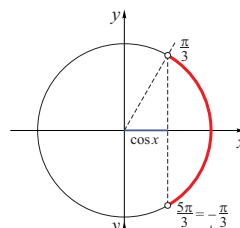
$$\frac{4\pi}{3} + 2k\pi < x < \frac{5\pi}{3} + 2k\pi, k \in \mathbf{Z}.$$



2) $\cos x \geq \frac{1}{2}$;

$$\cos \frac{\pi}{3} = \frac{1}{2};$$

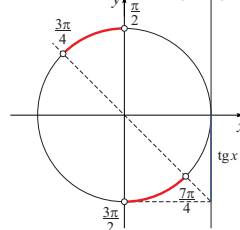
$$-\frac{\pi}{3} + 2k\pi < x < \frac{\pi}{3} + 2k\pi, k \in \mathbf{Z}.$$



3) $\operatorname{tg} x \leq -1$;

$$\operatorname{tg} \frac{3\pi}{4} \leq -1;$$

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



4) $\operatorname{ctg} x > \sqrt{3}$.

$$\operatorname{ctg} \frac{\pi}{6} = \sqrt{3}.$$

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

