

DISEQUAZIONI GONOMETRICHE

Risolvi in $[0, 2\pi]$:

- 1) $2 \operatorname{sen} x > \sqrt{2}$ $[\frac{\pi}{4} < x < \frac{3\pi}{4}]$
- 2) $3 \operatorname{tg} x > \sqrt{3}$ $[\frac{\pi}{6} < x < \frac{\pi}{2} \vee \frac{7\pi}{6} < x < \frac{3\pi}{2}]$
- 3) $\cos x > \frac{1}{2}$ $[0 \leq x < \frac{\pi}{3} \vee \frac{5\pi}{3} < x \leq 2\pi]$
- 4) $2 \cos x < \sqrt{2}$ $[\frac{\pi}{4} < x < \frac{7\pi}{4}]$
- 5) $2 \operatorname{sen} x + 1 < 0$ $[\frac{7\pi}{6} < x < \frac{11\pi}{6}]$
- 6) $\sqrt{3} \operatorname{tg} x - 3 \geq 0$ $[\frac{\pi}{3} \leq x < \frac{\pi}{2} \vee \frac{4\pi}{3} \leq x < \frac{3\pi}{2}]$
- 7) $\operatorname{tg} x \leq -\sqrt{3}$ $[\frac{\pi}{2} < x \leq \frac{2\pi}{3} \vee \frac{3\pi}{2} < x \leq \frac{5\pi}{3}]$
- 8) $\operatorname{tg} \frac{x}{2} + 1 > 0$ $[0 < x < \pi \vee \frac{3\pi}{2} < x \leq 2\pi]$
- 9) $2 \cos 2x - 1 \leq 0$ $[\frac{\pi}{6} \leq x \leq \frac{5\pi}{6} \vee \frac{7\pi}{6} \leq x \leq \frac{11\pi}{6}]$
- 10) $\operatorname{sen}(x - \frac{\pi}{3}) \geq 0$ $[\frac{\pi}{3} \leq x \leq \frac{4\pi}{3}]$
- 11) $\operatorname{sen} x + 3 > 2(\operatorname{sen} x + 2)$ $[\text{impossibile}]$
- 12) $2(\operatorname{sen} x + 3) - 1 < 3(1 - \operatorname{sen} x) + 2$
 $[\pi + 2k\pi < x < 2\pi + 2k\pi]$