Goniometria 3 – Equazioni goniometriche

Simulazione - Soluzioni
III Triennio
Nome: _____

Risolvere le seguenti equazioni goniometriche:

1) $2cos\,x + \sqrt{3} = 0$ ➔ $x = \pm\dfrac{5}{6}\pi + 2k\pi$

2) $sen\left(\dfrac{x}{3} + \dfrac{\pi}{8}\right) = \dfrac{1}{2}$ ➔ $x = \dfrac{\pi}{8} + 6k\pi \vee x = \dfrac{17}{8}\pi + 6k\pi$

3) $\sqrt{3}\,tg\,\dfrac{4}{3}x = -1$ ➔ $x = \dfrac{5}{8}\pi + \dfrac{3}{4}k\pi$

4) $cos\left(2x - \dfrac{\pi}{8}\right) + cos\left(x + \dfrac{\pi}{4}\right) = 0$ ➔ $x = \dfrac{7}{24}\pi + k\dfrac{2}{3}\pi \vee x = -\dfrac{5}{8}\pi + 2k\pi$

5) $sen\left(2x + \dfrac{\pi}{3}\right) - cos\left(x + \dfrac{\pi}{5}\right) = 0$ ➔ $x = -\dfrac{1}{90}\pi + k\dfrac{2}{3}\pi \vee x = \dfrac{11}{30}\pi + 2k\pi$

6) $2\,cos^2 x + cos\,x = 1$ ➔ $x = \pm\dfrac{\pi}{3} + 2k\pi \vee \pi + 2k\pi$

7) $sen\,x + cos\,x = 1$ ➔ $x = \dfrac{\pi}{2} + 2k\pi \vee x = 2k\pi$

8) $sen\,x + cos\,x - 3 = 0$ ➔ nessuna soluzione

9) $4sen^2 x - 2sen\,x\,cos\,x + 6cos^2 x - 6 = 0$ ➔ $x = k\pi \vee x = \dfrac{3}{4}\pi + k\pi$

10) $\sqrt{3}tg\,x + tg^2 x = 0$ ➔ $x = k\pi \vee x = \dfrac{2}{3}\pi + k\pi$