ECUACIONES TRIGONOMÉTRICAS

Resuelve las siguientes ecuaciones trigonométricas, indicando todas sus posibles soluciones:

1. $\operatorname{sen} x = \frac{1}{2}$
2. $4\cos^2 x = 3$
3. $tgx = 1$
4. $\operatorname{sen} 2x = \cos 30^\circ$
5. $\operatorname{sen}(x+45^\circ) = \frac{+\sqrt{3}}{2}$
6. $\operatorname{sen} 2x \cdot \cos 2x = 0$
7. $2\cos x = 3tgx$
8. $\operatorname{sen}^2 x - \cos^2 x = \frac{1}{2}$
9. $tgx \cdot \sec x = \sqrt{2}$
10. $tg2x = -tgx$
11. $4tgx \cdot \cos^2 x = \sqrt{3}$
12. $3\cos x = 2\sec x - 5$
13. $tg^2 x \cdot \cos x = \frac{3}{2}$
14. $\operatorname{sen}(x+30^\circ) = \cos(x+60^\circ)$
15. $\cos 2x + 5\cos x + 3 = 0$
16. $\operatorname{sen} 2x - \cos x + \frac{1}{2} = \operatorname{sen} x$
17. $\operatorname{sen} 2x \cdot \cos x = 6\operatorname{sen}^3 x$
18. $\cos 2x + \operatorname{sen} x = 4\operatorname{sen}^2 x$
19. $\cos x(1+tg^2 x) = 2tgx$
20. $\operatorname{sen} x + \cos x = \frac{1}{\operatorname{sen} x}$
21. $\operatorname{sen} x + \cos x = 1$
22. $\operatorname{sen} 2x = \cos x$
23. $\cos 2x + 3\operatorname{sen} x = 2$
24. $\cos x \cdot \cos 2x + 2\cos^2 x = 0$
25. $ctgx - tgx = \sqrt{12}$
26. $\operatorname{sen} x + \cos 2x = 1$
27. $\cos 5x + \cos 3x = \sqrt{2}\cos 4x$
28. $4\cos 2x + 3\cos x = 4$
29. $\cos 2x + \operatorname{sen} x = 4\operatorname{sen}^2 x$
30. $\cos x + \operatorname{sen}^2 \frac{x}{2} = 1$
31. $\cos x - \operatorname{sen} x = \operatorname{sen} 3x$
32. $\cos 2x + 6\cos^2 x = 1$
33. $\operatorname{sen}(45^\circ + 2x) = \frac{\sqrt{3}}{2}$
34. $\cos 5x - \cos x = 0$
35. $\cos 2x - \cos 6x = \operatorname{sen} 5x + \operatorname{sen} 3x$
36. $\operatorname{sen} 5x = \operatorname{sen} 3x - \operatorname{sen} x$
37. $\operatorname{sen} x + \sqrt{3}\cos x = 2$