
In problems 22-23, find all solutions of the equation in the interval $[0, 2\pi)$.

22. $\sin(x + \pi) - \sin x + 1 = 0$

$$x = \frac{\pi}{6}, \frac{5\pi}{6}$$

23. $\cos\left(x + \frac{\pi}{4}\right) - \cos\left(x - \frac{\pi}{4}\right) = 1$

$$x = \frac{5\pi}{4}, \frac{7\pi}{4}$$

In problems 24-25, find all solutions of the equation.

24. $\tan(x + \pi) + 2\sin(x + \pi) = 0$

$$x = \pi n, \\ \frac{\pi}{3} + 2\pi n, \\ \frac{5\pi}{3} + 2\pi n$$

25. $\cos\left(x - \frac{\pi}{2}\right) + \sin^2 x = 0$

$$x = \pi n, \\ \frac{3\pi}{2} + 2\pi n$$