

Solve the equation in the indicated domain: $0 \leq x \leq 2\pi$

1. $\tan x + \sqrt{3} = 0$

2. $4 \cos^2 x = 1$

3. $2 \sin x \cos x = \sqrt{2} \cos x$

4. $\tan x \sec x = \tan x$

5. $\cos x + 2 = 3 \cos x$

6. $2 \sin^2 x + \sin x = 0$

7. $2 \cos^2 x - 5 \cos x + 2 = 0$

8. $\sin^2 x + 5 \sin x + 6 = 0$

9. $4 \csc^2 x + 4 \csc x + 1 = 0$

10. $3 \sin^2 x - \sin x = 0$

Answers: 1. $\frac{2\pi}{3}, \frac{5\pi}{3}$

2. $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$

3. $\frac{\pi}{2}, \frac{3\pi}{2}, \frac{\pi}{4}, \frac{3\pi}{4}$

4. $0, \pi$ 5. 0

6. $0, \pi, \frac{7\pi}{6}, \frac{11\pi}{6}$

7. $\frac{\pi}{3}, \frac{5\pi}{3}$

8. no solution

9. no solution

10. $0, \pi, 0.3398, 2.8018$