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Solve on the interval  $[0, 2\pi)$ .

1)  $4\cos^2 x = 5 - 4\sin x$

2)  $\tan^2 \theta \cos \theta = \tan^2 \theta$

3)  $5\sin x + 1 = 3\sin x$

4)  $9\cot^2 x - 3 = 0$

5)  $2\sin^4 x - \sin^2 x = 0$

6)  $\sec x \csc x - 2\csc x = 0$

Find the general solutions.

7)  $\cos x \csc^2 x + 3 \cos x = 7 \cos x$

8)  $\sqrt{2} \cos x \sin x = \cos x$

9)  $2 \cot^4 x - \cot^2 x = 15$

10)  $\sqrt{3} \tan \theta - 2 \sin \theta \tan \theta = 0$

11)  $2 \cos x + 4 \cos x \sin x = 0$

12)  $\csc^2 x - \cot^2 x = 2 \cos x$