

Solve the following equations over  $[0, 2\pi)$ .

1.  $\sin x \tan x = -\tan x$

2.  $\cos x - \cot x = 0$

3.  $(\cos^2 x - 1)(\cot x + 1) = 0$

4.  $\cos x(\sec x - 2) = 0$

5.  $\sin^2 x \tan x = \tan x$

6.  $\tan^2 x - 2 \tan x + 1 = 0$

7.  $\cos x \tan x = \sqrt{3} \cos x$

8.  $\cos x \sec x + 2 \cos x = 0$

9.  $\sec x \csc x = \csc x$

10.  $(\sin x + 1)(\sec x - 2) = 0$

11.  $\cot x \tan x = -\sqrt{3} \cot x$

12.  $3 \cot x \cos x - \sqrt{3} \cos x = 0$