

Solve each of the following:

1. $\tan x - 3\cot x = 0$

2. $2\sin^2 x - \cos x = 1$

3. $3\sec^2 x + 4\cos^2 x = 7$

4. $\sin^2 x = 4 - 2\cos^2 x$

5. $2\cos^2 x + \sin x = 1$

6. $\sec x - \tan x = \cos x$

7. $\sin^2 x = 4 - 2\cos^2 x$

8. $\sin^2 x = 2\cos x + 2$

9. $1 + \sin \theta = 2\cos^2 \theta$

10. $\sec^2 x + \tan x = 0$