

## Solving Trig Equations

Find all angles  $\theta$  in the interval  $[0, 2\pi)$  that satisfy the expression:

1.  $2\sin\theta + 1 = 2$

2.  $\sin x + \sqrt{2} = -\sin x$

3.  $\cos\theta = -\frac{1}{2}$

4.  $3\tan^2 x - 1 = 0$

5.  $2\sin^2 x - \sin x - 1 = 0$

6.  $2\cos^2\theta + \cos\theta = 0$

7.  $\tan\theta = \text{undefined}$

8.  $2\cos x + 5 = 4$

9.  $2\sin x \tan x - 2\sin x = 0$

10.  $2\sin^2 x - 5\sin x + 2 = 0$

11.  $2\cos^2 x + \cos x = 0$

12.  $2\cos^2 x = \cos x + 1$