

Section 5.3 – I.C.E – Solving Trig Equations

Solve the following trig equations and give all possible solutions in the interval $[0, 2\pi)$.

1. $2\sin\theta + 1 = 0$

2. $\tan\theta + \sqrt{3} = 0$

3. $2\sin^2\theta + 3\sin\theta + 1 = 0$

4. $2\sin^2\theta = 1$

5. $2\cos\theta\sin\theta - \cos\theta = 0$

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6. $\sin^2 \theta = 3\cos^2 \theta$

7. $\sec \theta \csc \theta = 2 \csc \theta$

8. $\sec^2 x - 1 = 0$

9. $(3\tan^2 x - 1)(\tan^2 x - 3) = 0$

10. $2\sin^2 x = 2 + \cos x$