

Math 124 Homework §6.3

Find all real solutions. Give exact values in radians.

1. $\sin 2x = 1/2$

2. $\cos 3x = -1/2$

3. $\sin 3x = -\sqrt{2}/2$

4. $\cos 2x = -\sqrt{3}/2$

First solve for the trig function. Then give all exact solutions in the interval $[0, 2\pi)$.

5. $2 \sin x + 3 = 4$

6. $\sin x + 2 = 3$

7. $\tan^2 x + 3 = 0$

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

9. $-2 \cos^2 x = 3 \cos x + 1$

10. $\sin 2x = \cos x$. (Hint: Use $\sin 2x = 2 \sin x \cos x$)

11. $\sin 2x = \sin x$ (Hint: Use $\sin 2x = 2 \sin x \cos x$)