ACMAT118 Spring 2024
Professor Manguba-Glover
Section 7.3 Classwork (CW 10)   Name: _____

Complete as many of the following problems as you can with your table. You do not have to go in order. If **your entire group** finishes early, and your answers have been checked, you may leave early.

1. Find all solutions:

   (a) $\cos x = \frac{1}{2}$

   (b) $\tan x = \frac{1}{\sqrt{3}}$

   (c) $2\cos^2\theta + \cos\theta = 0$

2. Find all solutions:

(a) $\sin^2\theta - 3\cos^2\theta = 0$

(b) $2\sin^2 x + \cos x - 1 = 0$

(c) $\cos^2 t \sin t - \sin t = 0$

Key:

1. (a) $x = \frac{\pi}{3} + 2\pi n, \frac{5\pi}{3} + 2\pi n$

   (b) $x = \frac{\pi}{6} + \pi n$

   (c) $x = \frac{\pi}{2} + 2\pi n, \frac{3\pi}{2} + 2\pi n, \frac{2\pi}{3} + 2\pi n, \frac{4\pi}{3} + 2\pi n$

2. (a) $\frac{\pi}{3} + 2\pi n, \frac{5\pi}{3} + 2\pi n, \frac{2\pi}{3} + 2\pi n, \frac{4\pi}{3} + 2\pi n$

   (b) $x = \frac{2\pi}{3} + 2\pi n, \frac{4\pi}{3} + 2\pi n, 2\pi n$

   (c) $x = \pi n$