**6.5, # 43,45:** Solve the following equations on $[0, 2\pi)$.

(a). $6\cos^2 x - 7\sin x - 1 = 0$.

(b). $2\cos x - 5 = 3\sec x$.

**6.5, #54:** Solve the equation $\sec x + 1 = \tan x$ on $[0, 2\pi)$.

**6.5, #61:** Solve the equation $(\sin x - 1)(4\sin x - 3) = 0$ on $[0, 2\pi)$. Give the exact solution in radians and give approximations in degrees rounded to 1 decimal place.

**6.5, # 69,72,81,83,87:** Solve the following equations over $[0, 2\pi)$.

(a). $\sin 2x = 2\sin x$.

(b). $\cos 4x - 3\cos 2x - 1 = 0$

(c). $15\cos^2 x - 7\cos x = 2$.

(d). $16\cos^2 x - 8\cos x - 1 = 0$.

(e). $\sin(\cos x) = 0$.