Precalculus
Homework
Trigonometric equations and inequalities

1. Find all values of x in the interval $[0, 2\pi]$ that satisfy the equation.

   (a) $2\cos x - 1 = 0$.

   (b) $\sin(2x) = \cos x$.

   (c) $\sqrt{3}\sin x = \sin(2x)$. .

   (d) $2\sin^2 x = 1$.

   (e) $2 + \cos(2x) = 3\cos x$.

   (f) $2\cos x + \sin(2x) = 0$.

   (g) $2\cos^2 x - (1 + \sqrt{2})\cos x + \dfrac{\sqrt{2}}{2} = 0$.

   (h) $|\tan x| = 1$.

   (i) $3\cot^2 x = 1$.

   (j) $\sin x = \tan x$.