Math 1060 ~ Trigonometry
14 Solving Trigonometric Equations with Multiple Trigonometric Functions

In this section, we will solve more complicated trigonometric equations:

- those having different powers of the same function.
- those having multiple trigonometric functions.
- those containing multiple trigonometric functions and/or arguments.

Some identities from previous sections will come in handy for these.

EX 1

Solve the equation $2\cos^2 x - \cos x = 0$ and list the solutions which lie in the interval $[0,2\pi)$.

EX 2

Solve the equation $\sec^2 x - 2\tan x = 4$.

EX 3

State the solutions for these equations.

3a)

$\tan(2x) + \tan x = 0$

3b)

$\sin(2x)\sin x + \cos(2x)\cos x = 1$