Classs Discussion

Unit 5 Topic 5 Part 1 Double angle Formulas

Objectives: students need to memorize these formulas and use these formula to manipulate trigonometric expressions

Double angle formulas

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

2. $\cos 2x = 1 - 2\sin^2 x = 2\cos^2 x - 1 = \cos^2 x - \sin^2 x$

3. $\tan 2x = \dfrac{\sin 2x}{\cos 2x} = \dfrac{2\tan x}{1 - \tan^2 x}$

Ex1

Solve $2\sin^2 x = \cos 2x$ if $x \in [0, 2\pi)$

Ex 2

Rewrite the following expression to the first degree of cosine functions

$\cos^6 x$