1. Prove that \( \sin 2\theta = 2\sin \theta \) is NOT an identity.

2. Verify the identity:
\[
\frac{(\cos x)(\cos x) - (\sin x)(-\sin x)}{(\cos x)^2} = \sec^2 x
\]

3. Draw the graph of \( f(x) = \cos^2 x + \sin^2 x \)

4. Solve the equation for \( \cos x \):
\[
\frac{(2 - \cos x)(\cos x) - \sin x(\sin x)}{(2 - \cos x)^2} = 0
\]