Trigo 4

Prove that the identities are correct:

$\frac{1}{sin^2\propto} - \frac{1}{cos^2\propto} = \frac{cos2\alpha}{(1-\cos\alpha)(1+\cos\alpha)cos^2\propto}$

$1 - \cos^4\alpha = sin^2\alpha(1 + cos^2\propto)$

$\frac{3}{4} - \cos^2\alpha = (\sin\alpha - \sin30^0)(\sin\alpha + \frac{1}{2})$

$\cos^4\alpha + \sin^4\alpha = 1 + 2\sin^2\alpha.\cos^2\alpha$

$\frac{1}{sin^2\propto} = 1 + ct_{g\propto}^2$

$\frac{1}{cos^2\propto} = t_{g\propto}^2 + 1$

$(\sin\alpha + \cos\alpha)^2 = 1 + \sin2\alpha$

$\frac{\cos(90-\alpha)}{\sin(90-\alpha)} = \frac{1}{ct_{g\propto}}$

$\cos^4\frac{\propto}{2} - \sin^4\frac{\propto}{2} = \cos\alpha$