

## Inverse Trigonometric Functions Ex 4.2 Q1

$$= \cos^{-1} \left( \frac{a \cos \theta + b}{a + b \cos \theta} \right)$$

$$\begin{cases} \text{Since } \cos \theta = \frac{1 - \tan^2 \frac{\theta}{2}}{1 + \tan^2 \frac{\theta}{2}} \end{cases}$$

= RHS

Hence,

$$2 \tan^{-1} \left( \sqrt{\frac{a-b}{a+b}} \tan \frac{\theta}{2} \right) = \cos^{-1} \left( \frac{a \cos \theta + b}{a+b \cos \theta} \right)$$

\*\*\*\*\*\*\* END \*\*\*\*\*\*