

INTERNAL CONSISTENCY

$$\begin{aligned} LHS &= \frac{\csc(\theta) + \cot(\theta)}{\frac{1}{\cot(\theta)} + \frac{1}{\csc(\theta)}} \\ &= \frac{[\csc(\theta) + \cot(\theta)] \cdot \cot(\theta)\csc(\theta)}{\left[\frac{1}{\cot(\theta)} + \frac{1}{\csc(\theta)}\right] \cdot \cot(\theta)\csc(\theta)} \\ &= \frac{[\csc(\theta) + \cot(\theta)]\cot(\theta)\csc(\theta)}{\left[\frac{1}{\cot(\theta)} \cdot \cot(\theta)\csc(\theta) + \frac{1}{\csc(\theta)} \cdot \cot(\theta)\csc(\theta)\right]} \\ &= \frac{[\csc(\theta) + \cot(\theta)]\cot(\theta)\csc(\theta)}{[\csc(\theta) + \cot(\theta)]} \\ &= \frac{[\csc(\theta) + \cot(\theta)]\cot(\theta)\csc(\theta)}{[\csc(\theta) + \cot(\theta)]} \\ &= \cot(\theta)\csc(\theta) \end{aligned}$$