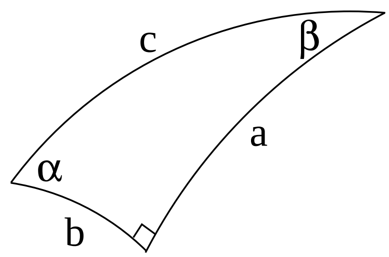
Question
Let T be a triangle with angles α, β, and $\frac{\pi}{2}$. Let a be the hyperbolic length of the side of T opposite the vertex with angle α. Prove that $\cosh(a)\sin(\beta) = \cos(\alpha)$.

Answer



use lcII:

$$\begin{aligned}\cos(\alpha) &= -\cos(\beta)\cos(\frac{\pi}{2}) + \sin(\beta)\sin(\frac{\pi}{2})\cosh(a) \\ &= \sin(\beta)\cosh(a)\end{aligned}$$

as desired.