

Solution of Quiz 04

من الواضح أن

$$x = \sinh y$$

إذن

$$\frac{dy}{dx} = \frac{1}{\frac{dx}{dy}} = \frac{1}{\cosh y} = \frac{1}{\sqrt{1 + \sinh^2 y}} = \frac{1}{\sqrt{1 + x^2}}$$

أي أن

$$\frac{d}{dx}(\sinh^{-1} x) = \frac{1}{\sqrt{1 + x^2}}, \quad \forall x \in \mathbb{R}$$

