

Derivatives of Inverse Functions

Problem 1

Find the derivative of the function $f(x) = \tan^{-1}\left(\frac{x}{2}\right)$.

Problem 2

Define the function $f = x^3 + x$. If $h(x) = f^{-1}(x)$ and $h(2) = 1$, find the value of $h'(2)$.