

Math 131 - Quiz 8

October 23, 2025

Name _____

Score _____

Show all work to receive credit. Supply explanations where necessary.

1. (2 points) Explain why $f(x) = x^2 - 1$ does not have an inverse.

2. (4 points) Let $g(x) = x^3 + 5x + 8$. Compute $(g^{-1})'(2)$.

3. (4 points) Determine the derivative of each function.

(a) $f(x) = \sin^{-1}(\sqrt{x})$

(b) $y = x \tan^{-1}(x^2)$