

4.2-Inverse Functions and Their Derivatives

Definitions:

f is a *one-to-one function* if and only if

If f is one-to-one, the *inverse* of f is a function f^{-1} such that

If (a, b) is on the graph of $y = f(x)$, then

If f is one-to-one and differentiable at $x = g(a)$ and $g = f^{-1}$, then

Examples:

Find the inverse of $f(x) = \frac{2x - 4}{x + 3}$

Given $g(x)$ is the inverse of $f(x) = x + 2\sqrt{x}$, find $g'(8)$

On Your Own: #3, 5, 7, 11, 13, 15, 19, 23, 25, 31, 35