

Chapter 1.3: More with Inverse Functions

Calculus I

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1. Let $g(x) = x + 3$ and $h(x) = x^5$. And let $f(x) = h(g(x))$.

(a) What is $f(1)$?

(b) What is $f(x)$?

(c) What is $f(2x)$?

(d) What is $f(x + 2)$?

(e) What is $g^{-1}(x)$?

(f) What is $h^{-1}(x)$?

2. Let $f(x) = 10^x$.

(a) What is $f(2)$?

(b) What is $f(3)$?

(c) What is $f(4)$?

(d) What is $f^{-1}(100)$?

(e) What is $f^{-1}(1000)$?

(f) What is $f^{-1}(10000)$?

(g) Sketch $f(x)$.

(h) Sketch $f^{-1}(x)$.

(i) What is $f^{-1}(5000)$?