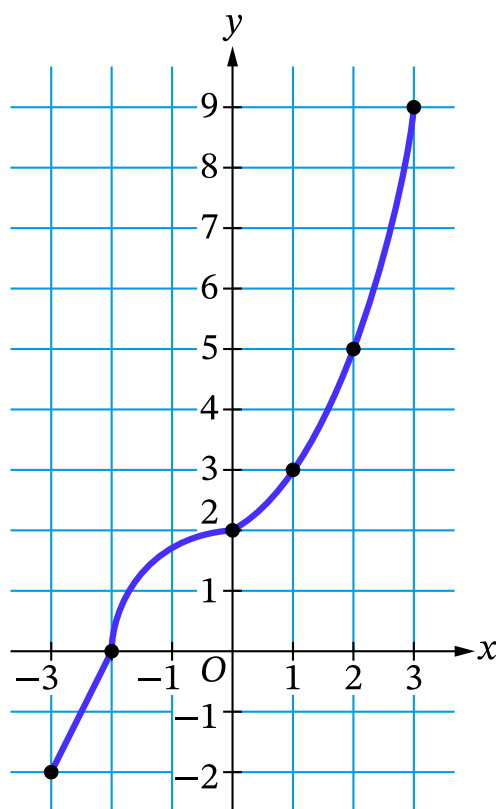


1. The figure shows the graph of the increasing function f on its domain of $-3 \leq x \leq 3$.



Graph of f

The function g is given by $g(x) = -4.792 + \ln(6x - 6)$.

A.

- The function h is defined by $h(x) = (g \circ f)(x) = g(f(x))$. Find the value of $h(2)$ as a decimal approximation, or indicate that it is not defined. Show the work that leads to your answer.
- Find all values of x for which $f(x) = 3$, or indicate that there are no such values.

B.

- Find all values of x , as decimal approximations, for which $g(x) = -1.5$, or indicate that there are no such values.
- Determine the behavior of g as x -values decrease and get arbitrarily close to 1. Express your answer using the mathematical notation of a limit.

C.

- Is the function f invertible?
- Give a reason for your answer in part C (i) based on properties of the function f . Refer to points on the graph of f in your reasoning.