

Exercise 30

For the following exercises, use the graph of the one-to-one function shown in Figure 12.

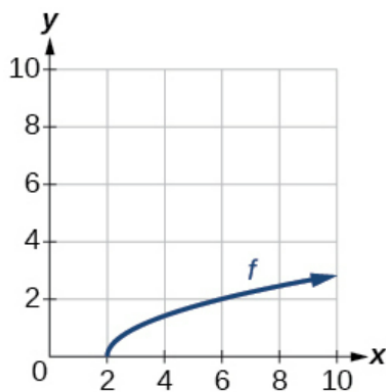
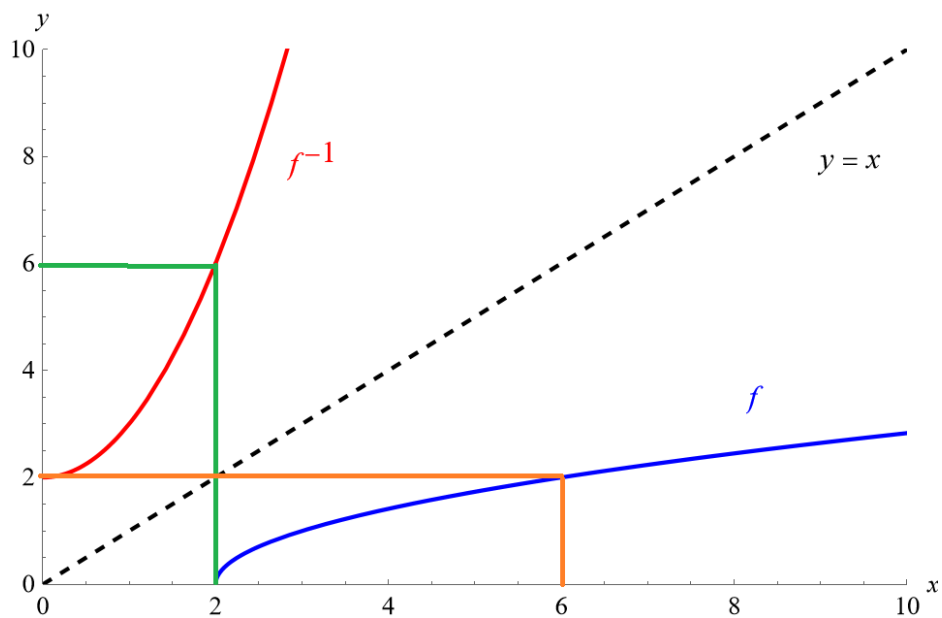


Figure 12

Find $f(6)$ and $f^{-1}(2)$.

Solution

To draw the graph of f^{-1} , reflect the graph of f over that of the line $y = x$.



The y -value associated with $x = 6$ on the blue curve is 2, and the y -value associated with $x = 2$ on the red curve is 6. Therefore,

$$f(6) = 2 \quad \text{and} \quad f^{-1}(2) = 6.$$