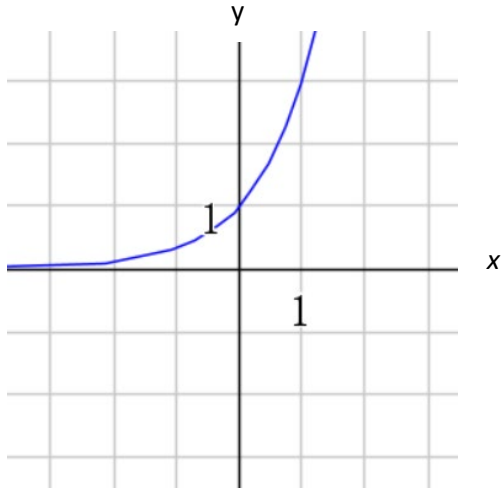


Practice Problem 1

Given the following graph of the function f :



Which is the inverse of f ?

(a)

x	3	5
f^{-1}	27	243

(b)

x	3	5
f^{-1}	9	243

(c)

x	27	243
f^{-1}	3	5

(d)

x	9	243
f^{-1}	3	5

Practice Problem 2

The function f is given by $f(x) = 7 \log_3 x$. Which best describes f ?

- (a) f is a decreasing function that decreases at an increasing rate.
- (b) f is an increasing function that increases at a decreasing rate.
- (c) f is a decreasing function that decreases at a decreasing rate.
- (d) f is an increasing function that increases at an increasing rate.

Practice Problem 1 Solution:

(c)

x	27	243
f^{-1}	3	5

These values are part of the table for the inverse of the exponential function $f(x) = 3^x$. Remember to find the inverse you need to switch the input and output values.

Practice Problem 2 Solution:

(b) f is an increasing function that increases at a decreasing rate.

This is true because as the logarithmic function increase from left to right, it is also concave down making it increase at a decreasing rate.

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