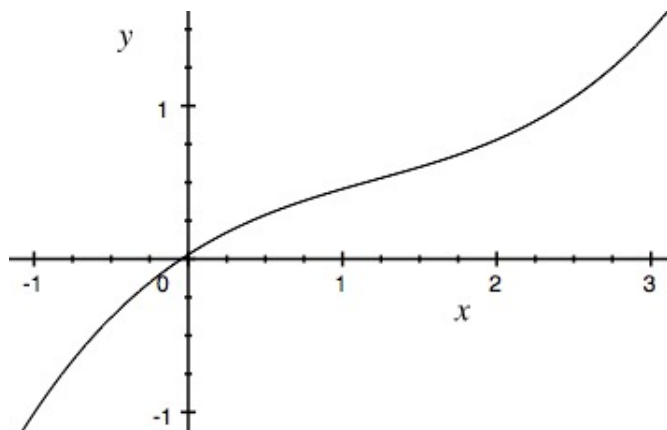


1. The graph of  $f$  is given below.



- Is  $f$  one-to-one? Why or why not?
- What is the domain and range of  $f$ ?
- What is the domain and range of  $f^{-1}$ ?
- What is the value of  $f^{-1}(.75)$ ?
- Estimate the value of  $f^{-1}(1)$

- Sketch the graph of  $y = \ln(x + 2)$
- Sketch the graph of  $y = \ln|x - 3|$
- Given the function  $f(x) = \ln(|x| + 1)$ 
  - What is the domain of  $f$ ?
  - What is the range of  $f$ ?
  - What is the  $x$ -intercept of  $f$ ?
  - Sketch the graph of  $f$
- Given the function  $f(x) = \ln(e \sin x)$ 
  - What is the domain of  $f$ ?
  - What is the range of  $f$ ?
  - What is the  $x$ -intercept of  $f$ ?
- Simplify the expression  $f(x) = \tan(\sec^{-1}(x))$
- Simplify the expression  $f(x) = \cos(\tan^{-1}(x))$
- Find the domain and range of  $f(x) = \cos(4x + 3)$ .
- Find the domain and range of  $f(x) = \sin^{-1}(2x - 1)$
- Given  $f(x) = \frac{2 - x}{2x + 1}$ , find  $f^{-1}(x)$ .