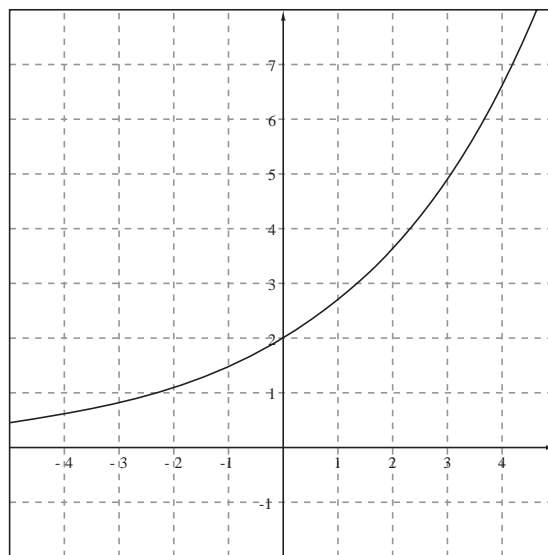


Show all relevant work!

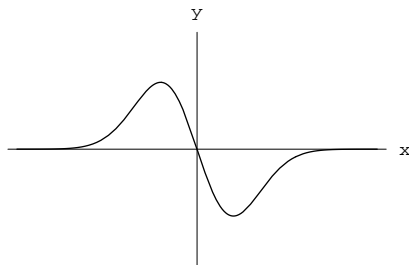
1. The following table shows values for the function f .

x	-6	-3	-1	0	1	4	7
$f(x)$	-6	-5	0	2	4	7	9

- (a) Find $f(4)$.
- (b) Solve $f(x) = 4$.
- (c) Solve $f(x) = x$.
- (d) Find $f^{-1}(9)$.
- (e) Solve $f^{-1}(x) = 0$.
2. Use the exponential function, $g(x)$, graphed below to answer the given questions.



- (a) Estimate $g(0)$.
- (b) Estimate $g(2)$.
- (c) Estimate $g^{-1}(1)$.
- (d) Estimate $g^{-1}(5)$.
- (e) Estimate $g^{-1}(5.5)$.
3. On the same set of axes, sketch the inverse of the function shown below.



4. If $g(x) = 2^x + \sqrt{x} - 1$, find $g^{-1}(17)$.
5. Suppose $P = f(t)$ gives the population of a city in millions of people as a function of time in years since 1950.
- (a) Give the units and interpret the meaning of $f(30) = 9.2$.
- (b) Give the units and interpret the meaning of $f^{-1}(15) = 49$.