3.4 Inverse function (continued again)

Find the indicated values.

$f(x) = x+4 \quad g(x) = \sqrt{x} - 5 \quad h(x) = x^2, \; x \geq 0$

A function that passes the VLT and HLT is called a 1 to 1 function (1:1 function).

1 $f(3) = 7$

$f^{-1}(7) = 3$

y-coord for f(x)

$f(x) = x+4$

$7 = x+4$

$3 = x$

$f^{-1}(x) = x-4$

$f^{-1}(7) = 3$

Find the indicated values.

$f(x) = x + 4 \quad g(x) = \sqrt{x} - 5 \quad h(x) = x^2, \; x \geq 0$

A function that passes the VLT and HLT is called a 1 to 1 function (1:1 function).

$h(x) = x^2$

3 $\quad h^{-1}(25) = 5 \qquad 25 = x^2$

$5 = x$

Find the indicated values.

$f(x) = x + 4 \quad g(x) = \sqrt{x} - 5 \quad h(x) = x^2, \; x \geq 0$

A function that passes the VLT and HLT is called a 1 to 1 function (1:1 function).

2 $g^{-1}(1)$

36

$g(x) = \sqrt{x} - 5$

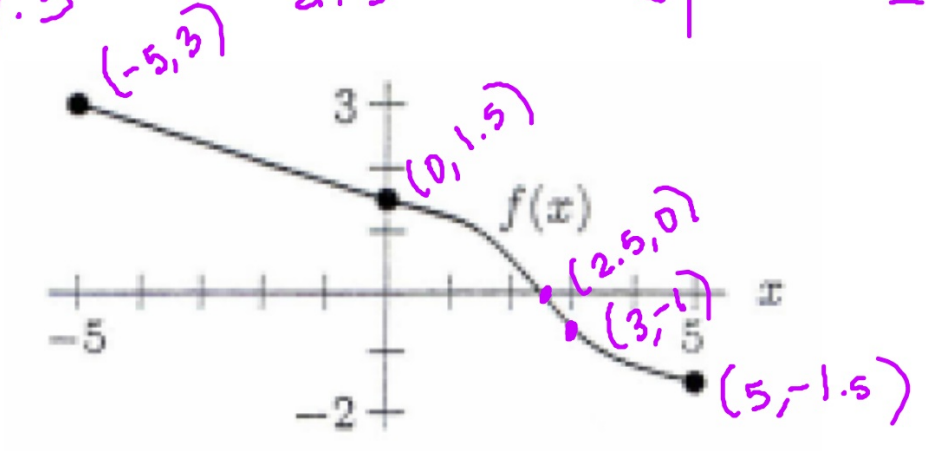
$1 = \sqrt{x} - 5$

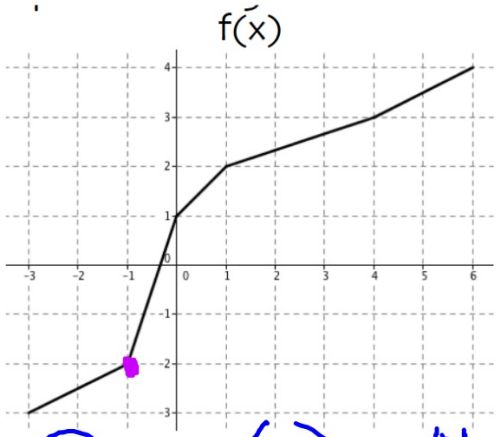
$6 = \sqrt{x}$

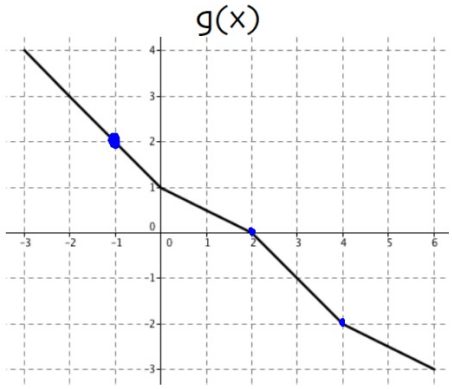
$36 = x$

$f(0)$, $f^{-1}(0)$, $f(3)$, $f^{-1}(3)$

1.5 2.5 -1 -5



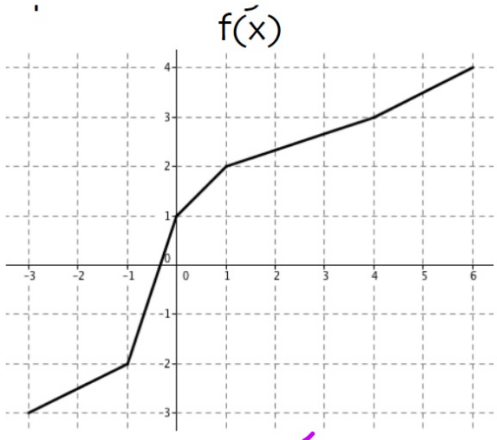


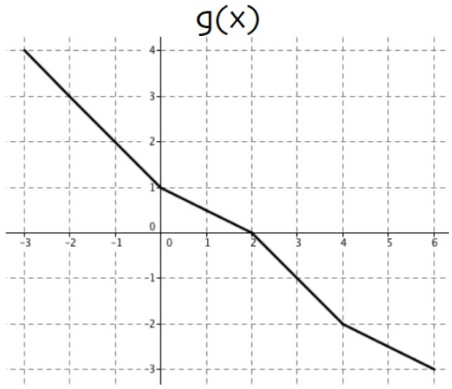


1. $f^{-1}(3) = 4$
2. $g^{-1}(-2) = 4$
3. $(f \circ g)(2) = 1$
4. $(f^{-1} \circ g)(-1) = 1$

$f^{-1}(2)$

5. $(g \circ f^{-1})(-2) = 2$





$$(g \circ g^{-1})(0) = 0$$

$$(f \circ f^{-1})(2) = 2$$

$$f(g(x)) = x$$