

5a) $\{(6,2)(6,-3)(9,4)(10,1)\}$

b) Inverse Not a function

9) 1 to 1 11.) Not 1 to 1 13) 1 to 1 15)

21.) $f(g(x)) = x$
 $g(f(x)) = x$

23.) $f(g(x)) = x$
 $g(f(x)) = x$

25.) $f(g(x)) = x$
 $g(f(x)) = x$

33.) $f^{-1}(x) = \frac{x}{4} - \frac{1}{2}$

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

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

$f(x) \begin{cases} (-\infty, \infty) \\ (-\infty, \infty) \end{cases}$

$f^{-1}(x) = \begin{cases} (-\infty, \infty) \\ (-\infty, \infty) \end{cases}$

35.) $f^{-1}(x) = \sqrt[3]{x+1}$

$f(f^{-1}(x)) = x \begin{cases} (-\infty, \infty) \mathbb{D} \\ (-\infty, \infty) \mathbb{R} \end{cases}$

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

43.) $f^{-1}(x) = \frac{2-3x}{x}$

$f(x) = \mathbb{D} \quad (-\infty, -3) \cup (-3, \infty)$
 $\mathbb{R} \quad (-\infty, 0) \cup (0, \infty)$

45.) $f^{-1}(x) = \sqrt{x} - 2$

$f(x) = \mathbb{D} \quad [-2, \infty)$
 $\mathbb{R} \quad [0, \infty)$

47.) $f^{-1}(x) = \frac{x}{x-2}$

$f(x) = \mathbb{D} \quad (-\infty, 1) \cup (1, \infty)$

$\mathbb{R} \quad (-\infty, 2) \cup (2, \infty)$

49.) $f^{-1}(x) = \frac{3x+4}{2x-3}$

$f(x) = \mathbb{D} \quad x \neq \frac{3}{2}$
 $\mathbb{R} \quad x \neq \frac{3}{2}$

51.) $f^{-1}(x) = \frac{-2x+3}{x-2}$

$f(x) = \mathbb{D} \quad x \neq -2$
 $\mathbb{R} \quad (-\infty, 2) \cup (2, \infty)$