

$$46. (a) \quad f(x) = \frac{x + 2}{x} = y, \quad x \neq 0$$

$$x + 2 = yx$$

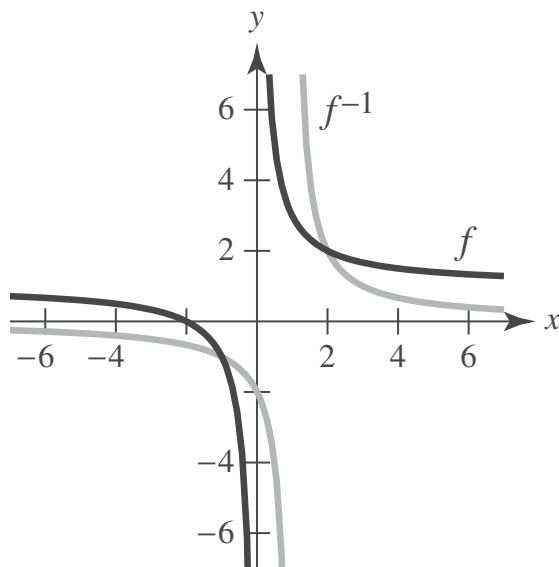
$$x(1 - y) = -2$$

$$x = \frac{2}{y - 1}$$

$$y = \frac{2}{x - 1}$$

$$f^{-1}(x) = \frac{2}{x - 1}, \quad x \neq 1$$

(b)



(c) The graphs of f and f^{-1} are reflections of each other in the line $y = x$

(d) Domain of f : all $x \neq 0$

Range of f : all $y \neq 1$

Domain of f^{-1} : all $x \neq 1$

Range of f^{-1} : all $y \neq 0$