

## Exercise 22

For the following exercises, find the inverse of the function.

$$f(x) = \frac{4}{x+7}$$

### Solution

To find the inverse, switch  $x$  with  $y$  in the given equation.

$$x = \frac{4}{y+7}$$

Solve for  $y$ .

$$x \times (y+7) = \frac{4}{y+7} \times (y+7)$$

$$xy + 7x = 4$$

$$xy = 4 - 7x$$

$$y = \frac{4-7x}{x}$$

Therefore, the inverse of  $f(x)$  is

$$f^{-1}(x) = \frac{4-7x}{x}$$

