

1-7 Inverse Functions

Find the inverse of each function. Write the domain of the function and its inverse.

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

2) $g(x) = -\frac{2}{x}$

3) $f(n) = -\frac{3}{n+1} + 2$

4) $h(n) = \frac{4}{n-1} - 2$

5) $g(x) = \frac{1}{x} - 2$

State if the given functions are inverses and write the domain of each.

$$6) \begin{aligned} f(x) &= \sqrt[3]{x} - 1 \\ g(x) &= (x + 1)^3 \end{aligned}$$

$$7) \begin{aligned} f(x) &= -2x^5 - 1 \\ g(x) &= \sqrt[5]{\frac{-x - 1}{2}} \end{aligned}$$

$$8) \begin{aligned} g(x) &= \frac{1}{x - 2} + 1 \\ f(x) &= -\frac{4}{x - 2} - 2 \end{aligned}$$

$$9) \begin{aligned} g(x) &= \frac{10 - 2x}{5} \\ f(x) &= 3x + 9 \end{aligned}$$

$$10) \begin{aligned} f(x) &= \frac{3}{x + 3} + 2 \\ g(x) &= \frac{3}{x - 2} - 3 \end{aligned}$$