

Supplementary problems for Chapter 11:

1. Find the inverse function of each of the following functions. Specify the domains of the inverse functions.

(a)  $f(x) = \frac{1}{5}x + 8$

(b)  $h(x) = \frac{5}{x+3}$

(c)  $g(x) = 4\sqrt{3-x} - 7$

(d)  $j(x) = \sqrt{x} + \sqrt{x-1}$

(e)  $k(x) = \sqrt{16-x^2}, 0 \leq x \leq 4$

2. Show that, for every value of  $a$ , the function

$$f(x) = a + \frac{1}{x-a}$$

is its own inverse.