

Number:  
Title:

Textbook Section:

1. Let  $f(x) = 2x + 3$  and  $g(x) = x^2 + 4x - 1$ . Find the following.

a)  $(f \cdot g)(2)$

b)  $(f \cdot g)(x)$

c)  $(f + g)(4)$

d)  $(f - g)(x)$

e)  $\left(\frac{g}{f}\right)(x)$  and its domain

2. Let  $f(x) = x^2 + 8x + 15$  and  $g(x) = x + 3$ . Find  $\left(\frac{f}{g}\right)(x)$  and its domain.

3. Let  $f(x) = \sqrt{x+5}$  and  $g(x) = \sqrt{3-x}$ .  
a) Find the domain of  $f + g$ .

b) Find the domain of  $\frac{f}{g}$ .