

1. Find the following values for the given functions.

$$f(x) = x + 3 \qquad g(x) = x^2$$

a)  $(f + g)(6)$

b)  $(f - g)(6)$

c)  $(fg)(6)$

d)  $(f/g)(6)$

e)  $(f \circ g)(6)$

f)  $(g \circ f)(6)$

2. Find the following functions and their domains, given,

$$f(x) = \sqrt{x-2} \qquad g(x) = \sqrt{x-2}$$

a)  $(f + g)(x)$

Domain:

b)  $(f - g)(x)$

Domain:

c)  $(fg)(x)$

Domain:

d)  $(f/g)(x)$

Domain:

e)  $(f \circ g)(x)$

Domain:

3. Two functions are defined by the tables,

$t$	9	0	3	8	4
$T(t)$	3	8	0	9	6

$x$	9	0	3	8	4
$G(x)$	0	9	8	3	6

Find the values, if possible (if not possible, say DNE):

a)  $(G \circ T)(0)$

b)  $(T \circ T)(0)$

c)  $(G \circ G)(0)$

d)  $(T \circ G)(4)$

4. If  $f(t) = t^2 - 3$  and  $g(x) = x + 8$ , solve the equation  $(f \circ g)(x) = 0$ .