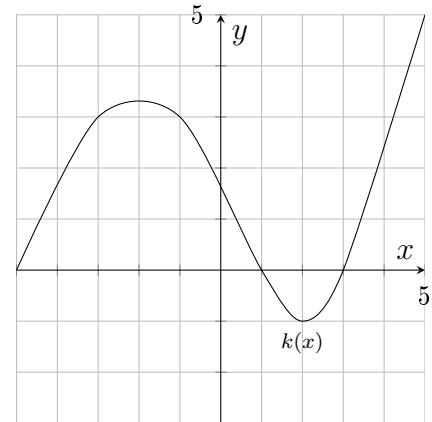


1. (2ea) Use the functions below to compute the following quantities. **Show some work!**

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

$$g(x) = \frac{2x}{x-3}$$

$x$	-2	-1	0	1	2	3
$h(x)$	-3	2	1	3	-4	5



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

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

c)  $(f + g)(1)$

d)  $(fh)(-2)$

e)  $(h + k)(-1)$

f)  $(f \circ f)(3)$

g)  $(h \circ h)(1)$

h)  $\left(\frac{g}{f}\right)(2)$

i)  $(k \circ k)(2)$

j)  $f(g(h(3)))$

2. (1) Suppose  $g(x)$  and  $h(x)$  are the functions given in the previous problem. What is the value of  $c$  if  $(g \circ h)(c) = -1$ ?