

### Compositions Using a Table or Graph

Use the following table to determine:

a)  $f(-1)$

b)  $f(f(3))$

c)  $g(g(0))$

d)  $f(g(3))$

e)  $g(f(-1))$

f)  $g(f(1))$

$x$	$f(x)$	$g(x)$
-2	0	5
-1	3	3
0	4	2
1	-1	1
2	6	-1
3	-2	0

g) find  $x$  if  $f(g(x)) = 6$

h) find  $x$  if  $g(g(x)) = 2$

Using the given graphs, find the following.

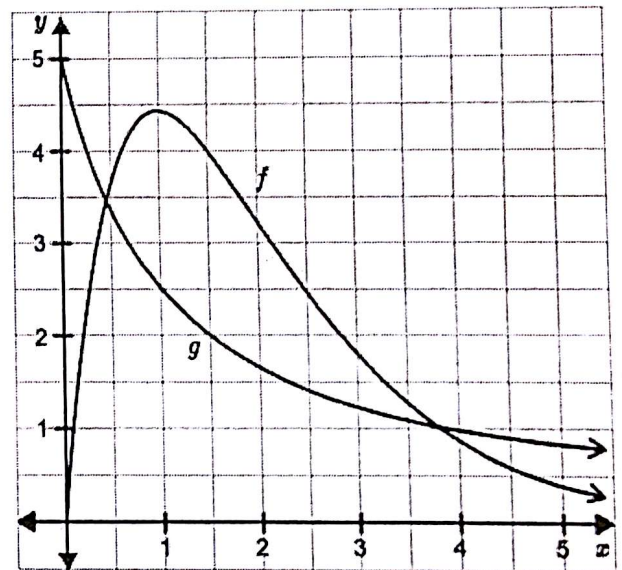
a)  $f(g(1))$

b)  $g(f(1.5))$

c)  $g(g(3))$

d)  $f(f(0.5))$

e)  $f(g(0))$



As  $x$  increases from 0 to 5, how does  $g(x)$  change?

As  $x$  increases from 0 to 5, how does  $f(g(x))$  change?

As  $x$  increases from 0 to 5, how does  $f(x)$  change?

As  $x$  increases from 0 to 5, how does  $g(f(x))$  change?

Use the given table to evaluate:

a)  $g^{-1}(3)$

b)  $g^{-1}(0)$

c)  $f^{-1}(-1)$

d)  $g^{-1}(f^{-1}(6))$

e)  $f^{-1}(g(2))$

f)  $f(g(0))$

$x$	$f(x)$	$g(x)$
-2	0	5
-1	3	3
0	4	2
1	-1	1
2	6	-1
3	-2	0

Summarize your understanding of inverse functions. Which cognitive verbs were utilized in evaluating these functions?