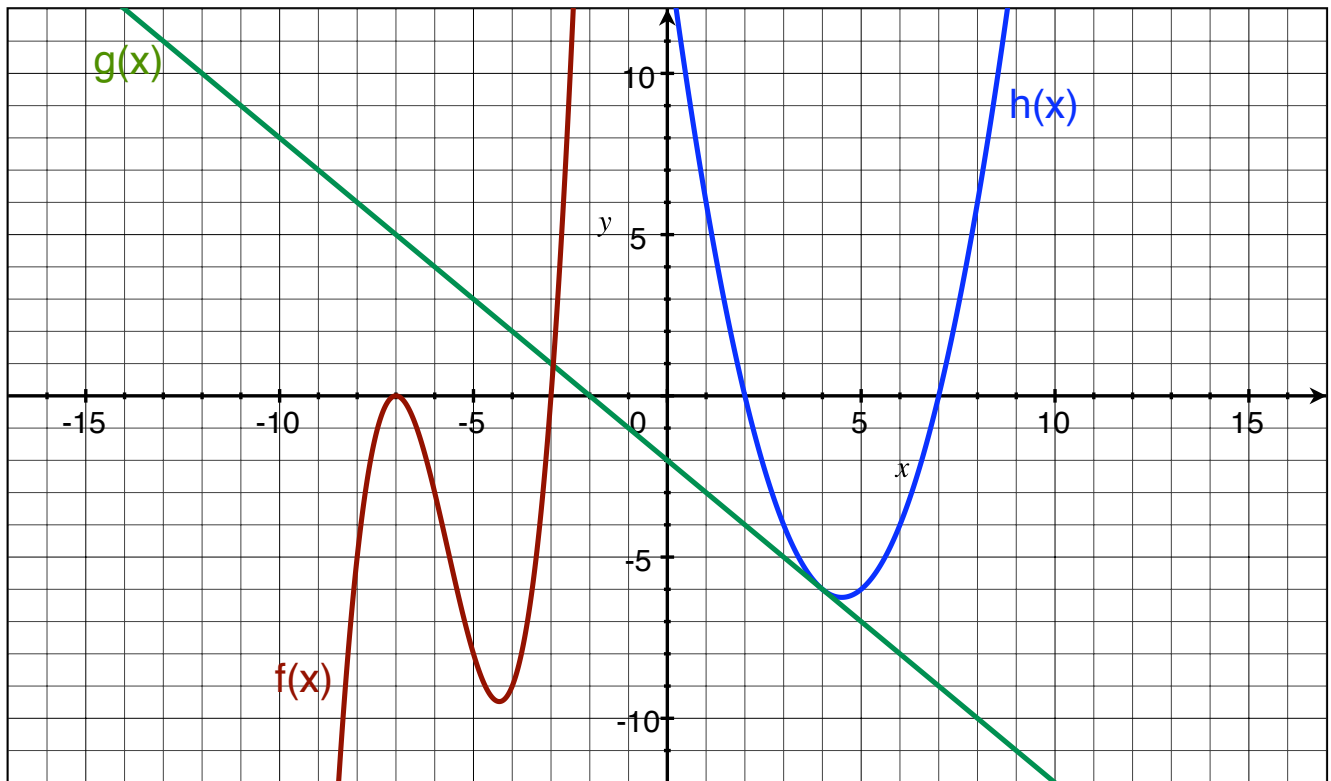


Name \_\_\_\_\_

## Composite Functions

Part I: Use the graphs below to answer the questions that follow.



- 1)  $g(2) =$
- 2)  $h(2) =$
- 3)  $h(5) =$
- 4)  $f(h(5)) =$
- 5)  $f(g(2)) =$
- 6)  $g(h(2)) =$
- 7)  $g \circ h(6) =$
- 8)  $h(x) = -4$  when  $x =$
- 9) For what value(s) of  $x$  does  $f(x) = g(x)$ ?
- 10) For what value(s) of  $x$  does  $g(x) = h(x)$ ?
- 11) Write three things you know about each of the functions in the graph above. Justify your answers.

**Part II: Use the table below to answer the questions that follow.**

$x$	$f(x)$	$g(x)$	$h(x)$	$j(x)$
-3	-25	undefined	15	-17
-2	-6	undefined	5	-12
-1	1	0	-1	-7
0	2	1	-3	-2
1	3	1.4142	-1	3
2	10	1.7321	5	8
3	29	2	15	13

12)  $f(h(0)) =$

13)  $g(f(1)) =$

14)  $h \circ j(1) =$

15)  $g(h(1)) =$

16)  $g(j(0)) =$

17)  $j(g(3)) =$

18) Identify the family of functions to which each function in the table above belongs. Justify your answers.