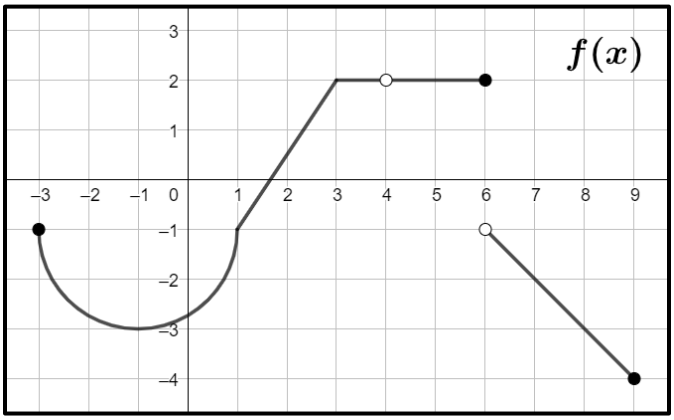
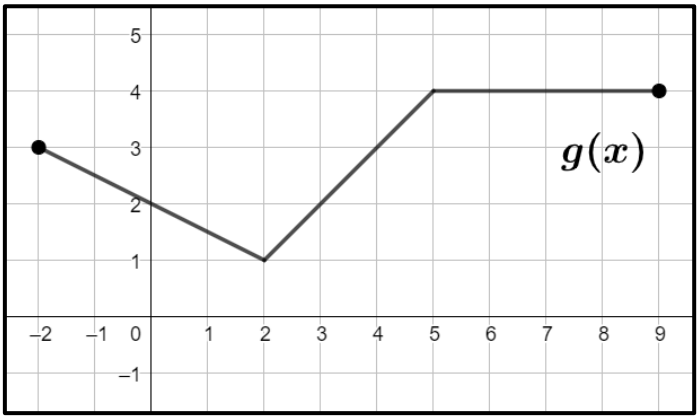
Directions: Use the given functions below to evaluate the following, if possible.

$f(x) = 4x - 5$ $g(x) = x^2 - 2x + 4$ $h(x) = 3(2)^x$ $k(x) = 3 - 2x$

1. $f\big(g(1)\big) =$
2. $g\big(f(0)\big) =$
3. $h\big(k(2)\big) =$
4. $f\big(f(-1)\big) =$
5. $h\big(h(0)\big) =$
6. $(g \circ k)(4) =$
7. $(h \circ f)(2) =$
8. $g\big(f(3c)\big) =$
9. $f\big(k(5a + 4)\big) =$
10. $f\big(g(x)\big) =$
11. $(g \circ f)(x) =$
12. $k\big(f(x)\big) =$
13. $(f \circ g \circ k)(1) =$
14. $f\big(h(x)\big) =$
15. $(h \circ k)(x) =$





x	-3	-1	2	6	9
$p(x)$	$f(6)$	e	-1	1	3

$$h(x) = \begin{cases} 8\left(\frac{1}{2}\right)^x, & x < 2 \\ 1 - x^2, & x = 2 \\ 4, & x > 3 \end{cases}$$

The function m is is the result of applying three transformations to the graph of g in this order: a vertical dilation by a factor of 2, a vertical translation by -3 units, and a horizontal translation by 1 unit.

Directions: Use the given information above to evaluate the following, if possible.

16. $f\big(g(4)\big)$

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

18. $(g \circ g)(-2)$

19. $p\big(f(\pi)\big)$

20. $(f \circ g)(8)$

21. $(g \circ h)(0)$

22. $h\big(f(6)\big)$

23. $(p \circ f)(-3)$

24. $(h \circ p)(6)$

25. $m\big(h(7)\big)$

26. $(m \circ m)(-1)$

27. $(p \circ f)(8)$

28. $f\big(m(1)\big)$

29. $(m \circ f \circ p)(9)$

30. $h\big(h(2)\big)$