Function Composition Worksheet

NAME _____

For problems 1–4, use $f(x) = 2x^2 - x$ and $g(x) = x + 6$ to find the indicated values.

1. $(f \circ g)(2)$
2. $(g \circ f)(2)$
3. $(f \circ g)(x)$
4. $(g \circ f)(x)$

For problems 5-8, use $f(x) = \dfrac{2x+1}{3x-2}$ and $g(x) = 5x - 1$ to find the indicated values.

5. $(f \circ g)(2)$
6. $(g \circ f)(2)$
7. $(f \circ g)(x)$
8. $(g \circ f)(x)$

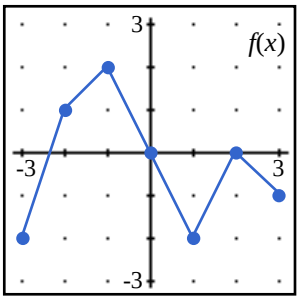
For problems 9–14, use the table definitions of $H(t)$ and $r(t)$ shown below to find the indicated value.

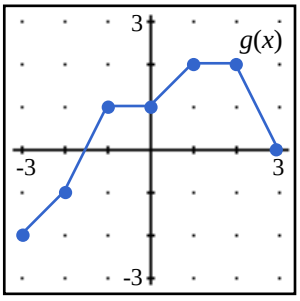
t	1.0	1.5	2.0	2.5	3.0	3.5
***H*(*t*)**	2.8	2.6	2.5	2.0	1.0	2.2

t	2.0	2.2	2.4	2.6	2.8	3.0
***r*(*t*)**	1.2	1.5	3.0	2.8	2.5	2.0

9. $(r \circ H)(2.5)$
10. $(r \circ H)(1.0)$
11. $(H \circ r)(2.2)$
12. $(H \circ r)(3.0)$
13. $(H \circ H)(2.0)$
14. $(r \circ r)(2.4)$

Problems 15-20 refer to the graphs of $f(x)$ and $g(x)$ shown. Find the indicated value.





15. $(f \circ g)(1)$
16. $(f \circ g)(-3)$
17. $(g \circ f)(1)$
18. $(g \circ f)(-1)$
19. $(f \circ f)(3)$
20. $(g \circ g)(0)$