Honors Math II

Chapter 7 day 2 compositions

Name_____

Period_____Date_____

Let $f(x) = 2x - 1$, $g(x) = 3x$, *and* $h(x) = x^2 + 1$. *Compute the following*:

1. $f(g(-3))$

2. $f(h(7))$

3. $g(f(h(-6)))$

4. *Let* $j(x) = h(f(x))$

   $j(2) =$

5. *Let* $k(x) = g(f(x))$

   $k\left(\frac{1}{2}\right) =$

6. *Let* $m(x) = h(g(x))$

   $m(-3) =$

7. *Let* $k(x) = g(h(x))$

   $k(-7) =$

8. *Let* $j(x) = f(h(x))$

   $j\left(\frac{1}{2}\right) =$

9. *Let* $n(x) = f(f(x))$

   $n(8) =$

Let $f(x) = 2x^2 - x$ *and* $g(x) = x + 6$. *Compute the following. State the domain.*

10. $(f \circ g)(2)$

11. $(g \circ f)(2)$

12. $(f \circ g)(x)$

13. $(g \circ f)(x)$

Let $f(x) = \dfrac{2x+1}{3x-2}$ *and* $g(x) = 5x - 6$. *Compute the following. State the domain.*

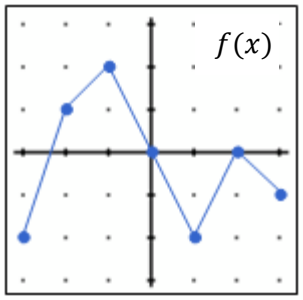
14. $(f \circ g)(-2)$

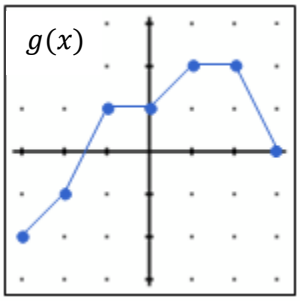
15. $(g \circ f)(-2)$

16. $(f \circ g)(x)$

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

Refer to the graphs of $f(x)$ *and* $g(x)$ shown . Find the indicated values.





18. $(f \circ g)(1)$

19. $(f \circ g)(-3)$

20. $(g \circ f)(1)$

21. $(g \circ f)(-1)$

22. $(f \circ f)(3)$

23. $(g \circ g)(0)$

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

24. $(r \circ H)(2.5)$

25. $(r \circ H)(1.0)$

26. $(H \circ r)(2.2)$

27. $(H \circ r)(3.0)$

28. $(H \circ H)(2.0)$

29. $(r \circ r)(2.4)$

Compute the following.

Let $f(x) = 9 - x\ and\ \ g(x) = x^2 + x\ and\ h(x) = x - 2.\ Compute\ the\ following.\ State\ the\ domain.$

30. $(f - h)(x)$

31. $(h \circ g)(x)$

32. $(f \circ g)(x)$

33. $(fg)(x)$

34. $f(x) + \ h(x)$

35. $(gh)(x)$

36. $\frac{h(x)}{f(x)}$

37. $\frac{f(x)}{g(x)}$

Evaluate without a calculator.

38. $16^{\frac{3}{2}}$

39. $25^{\frac{3}{2}}$

40. $64^{\frac{-2}{3}}$

Rewrite the expression using radical notation.

41. $x^{\frac{1}{4}}$

42. $x^{\frac{2}{5}}$

43. $y^{\frac{9}{4}}$