

Practice and Problem Solving

Extra Practice is on page R5.

Examples 1-2 Find $(f + g)(x)$, $(f - g)(x)$, $(f \cdot g)(x)$, and $\left(\frac{f}{g}\right)(x)$ for each $f(x)$ and $g(x)$. Indicate any restrictions in the domain.

4. $f(x) = 2x$
 $g(x) = -4x + 5$

6. $f(x) = x^2$
 $g(x) = -x + 1$

8. $f(x) = x - 2$
 $g(x) = 2x - 7$

10. $f(x) = -x^2 + 6$
 $g(x) = 2x^2 + 3x - 5$

5. $f(x) = x - 1$
 $g(x) = 5x - 2$

7. $f(x) = 3x$
 $g(x) = -2x + 6$

9. $f(x) = x^2$
 $g(x) = x - 5$

11. $f(x) = 3x^2 - 4$
 $g(x) = x^2 - 8x + 4$

Use the table to find each value.

18. $(f + g)(-5)$

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

20. $(f \cdot g)(3)$

21. $(h \cdot f)(0)$

22. $\left(\frac{f}{g}\right)(-1)$

23. $\left(\frac{h}{g}\right)(0)$

24. $\left(\frac{g}{f}\right)(4)$

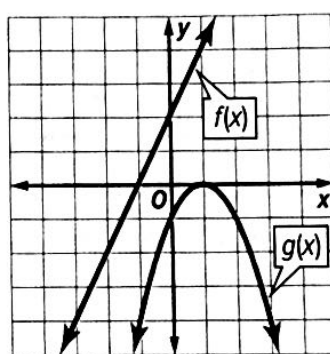
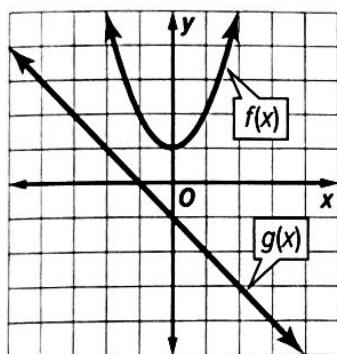
25. $\left(\frac{g}{h}\right)(-5)$

x	$f(x)$	$g(x)$	$h(x)$
-5	-8	8	2
-2	4	5	-10
-1	-2	-4	0
0	3	-5	-5
3	2	0	8
4	0	-1	7

Use the graph of $f(x)$ and $g(x)$ to find each value.

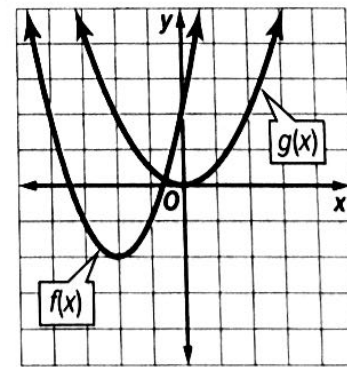
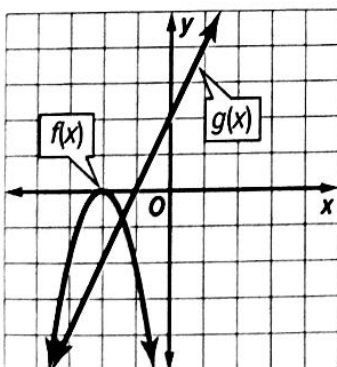
26. $(f - g)(1)$

27. $(f \cdot g)(0)$



28. $\left(\frac{g}{f}\right)(-3)$

29. $\left(\frac{f}{g}\right)(-2)$



If $f(x) = -x + 1$, $g(x) = 4x + 2$, and $h(x) = x^2 - 1$, find each value.

30. $(2f + g)(1)$

31. $(3f + 2h)(0)$

32. $(-f + 2g)(3)$

33. $(5f \cdot h)(-1)$

34. $\left(\frac{3f}{g}\right)(2)$

35. $\left(\frac{g}{2h}\right)(0)$

36. $(h - 2f)(5)$

37. $(-f - h)(1)$

38. $(5h - 0.1g)(2)$