

Operations with Functions

Perform the indicated operation.

1) $f(n) = n - 3$
 $g(n) = 4n - 4$
Find $(f + g)(n)$

2) $f(x) = 2x - 4$
 $g(x) = x^2 - 5$
Find $f(x) - g(x)$

3) $h(n) = 4n + 1$
 $g(n) = n^2 + 1$
Find $h(n) \div g(n)$

4) $h(a) = -2a + 2$
 $g(a) = a - 4$
Find $\left(\frac{h}{g}\right)(a)$

5) $g(a) = 2a^3 - 4a^2$
 $h(a) = 3a - 1$
Find $(g \cdot h)(a)$

6) $g(x) = x - 5$
 $f(x) = x^3 - 5x$
Find $g(x) \cdot f(x)$

Perform the indicated operation and then evaluate at the given input value.

7) $g(x) = -2x + 3$
 $h(x) = 4x + 2$
Find $\left(\frac{g}{h}\right)(5)$

8) $g(t) = 3t + 1$
 $f(t) = t^2 - 4$
Find $g(2) - f(2)$

9) $g(x) = 2x - 4$
 $h(x) = 4x - 4$
Find $(g + h)(-6)$

10) $g(x) = -4x - 4$
 $h(x) = x^2 + 3x$
Find $(g - h)(2)$

11) $g(x) = x - 3$
 $f(x) = 2x - 2$
Find $(g \cdot f)(4)$

12) $f(a) = 4a + 1$
 $g(a) = 2a + 1$
Find $f(0) - g(0)$