

Function Operations

Perform the indicated operation.

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

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

3) $h(x) = 3x + 3$
 $g(x) = -4x + 1$
 Find $(h + g)(10)$

4) $g(a) = 3a + 2$
 $f(a) = 2a - 4$
 Find $\left(\frac{g}{f}\right)(3)$

5) $g(x) = 2x - 5$
 $h(x) = 4x + 5$
 Find $g(3) - h(3)$

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

7) $g(t) = t^2 + 3$
 $h(t) = 4t - 3$
 Find $(g \cdot h)(-1)$

8) $g(n) = 3n + 2$
 $f(n) = 2n^2 + 5$
 Find $g(f(2))$

9) $g(x) = -x^2 - 1 - 2x$
 $f(x) = x + 5$
 Find $(g - f)(x)$

10) $f(x) = 3x - 1$
 $g(x) = x^2 - x$
 Find $\left(\frac{f}{g}\right)(x)$

11) $g(a) = -3a - 3$
 $f(a) = a^2 + 5$
 Find $(g - f)(a)$

12) $h(t) = 2t + 1$
 $g(t) = 2t + 2$
 Find $(h - g)(t)$

$$13) \quad f(x) = 2x^3 - 5x^2$$
$$g(x) = 2x - 1$$

Find $(f \cdot g)(x)$

$$14) \quad h(n) = 4n + 5$$
$$g(n) = 3n + 4$$

Find $(h - g)(n)$

$$15) \quad g(a) = -3a^2 - a$$
$$h(a) = -2a - 4$$

Find $\left(\frac{g}{h}\right)(a)$

$$16) \quad f(n) = 2n$$
$$g(n) = -n - 4$$

Find $(f \circ g)(n)$

$$17) \quad h(a) = 3a$$
$$g(a) = -a^3 - 3$$

Find $\left(\frac{h}{g}\right)(a)$

$$18) \quad g(n) = 2n + 3$$
$$h(n) = n - 1$$

Find $(g \circ h)(n)$

$$19) \quad h(x) = x^2 - 2$$
$$g(x) = 4x + 1$$

Find $(h \circ g)(x)$

$$20) \quad g(t) = 2t + 5$$
$$f(t) = -t^2 + 5$$

Find $(g + f)(t)$

$$21) \quad g(x) = 2x - 2$$
$$f(x) = x^2 + 3x$$

Find $(g \circ f)(-2 + x)$

$$22) \quad g(a) = 2a + 2$$
$$h(a) = -2a - 5$$

Find $(g \circ h)(-4 + a)$