

Practice Quiz 6.7-6.8 Functions Operations

Period _____

Perform the indicated operation.

$$1) \begin{aligned} f(n) &= 4n - 4 \\ g(n) &= 2n + 1 \\ \text{Find } (f + g)(-3) \end{aligned}$$

$$2) \begin{aligned} g(t) &= t^2 + 4 - t \\ h(t) &= 4t - 3 \\ \text{Find } g(-8) \div h(-8) \end{aligned}$$

$$3) \begin{aligned} g(n) &= 3n + 2 \\ h(n) &= 3n^2 - 4 \\ \text{Find } \left(\frac{g}{h}\right)(n) \end{aligned}$$

$$4) \begin{aligned} g(t) &= 4t + 1 \\ h(t) &= t^2 + 7t \\ \text{Find } g(t) - h(t) \end{aligned}$$

$$5) \begin{aligned} h(x) &= 3x - 1 \\ g(x) &= 2x - 4 \\ \text{Find } \left(\frac{h}{g}\right)(-4x) \end{aligned}$$

$$6) \begin{aligned} g(x) &= 3x + 3 \\ h(x) &= -4x - 2 \\ \text{Find } (g \cdot h)(x - 1) \end{aligned}$$

$$7) \begin{aligned} g(n) &= n - 4 \\ f(n) &= n - 3 \\ \text{Find } 4g(2) + 2f(2) \end{aligned}$$

$$8) \begin{aligned} g(x) &= x + 2 \\ f(x) &= -x - 3 \\ \text{Find } (g - 4f)(6) \end{aligned}$$

$$9) \begin{aligned} f(a) &= 3a - 3 \\ g(a) &= a^2 - 5 \\ \text{Find } (f \circ g)(a) \end{aligned}$$

$$10) \begin{aligned} f(x) &= -4x + 1 \\ \text{Find } f(f(x)) \end{aligned}$$

$$11) \begin{aligned} f(x) &= 2x \\ g(x) &= x^2 + 2x \\ \text{Find } (f + 2g)(x^2) \end{aligned}$$

$$12) \begin{aligned} g(x) &= x + 4 \\ h(x) &= -x^2 - 5 \\ \text{Find } g(x^2) - 5h(x^2) \end{aligned}$$

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Perform the indicated operation.

$$1) \begin{aligned} f(n) &= 4n - 4 \\ g(n) &= 2n + 1 \\ \text{Find } (f + g)(-3) \end{aligned}$$

$$-21$$

$$2) \begin{aligned} g(t) &= t^2 + 4 - t \\ h(t) &= 4t - 3 \\ \text{Find } g(-8) \div h(-8) \end{aligned}$$

$$-\frac{76}{35}$$

$$3) \begin{aligned} g(n) &= 3n + 2 \\ h(n) &= 3n^2 - 4 \\ \text{Find } \left(\frac{g}{h}\right)(n) \end{aligned}$$

$$\frac{3n + 2}{3n^2 - 4}$$

$$4) \begin{aligned} g(t) &= 4t + 1 \\ h(t) &= t^2 + 7t \\ \text{Find } g(t) - h(t) \end{aligned}$$

$$-t^2 - 3t + 1$$

$$5) \begin{aligned} h(x) &= 3x - 1 \\ g(x) &= 2x - 4 \\ \text{Find } \left(\frac{h}{g}\right)(-4x) \end{aligned}$$

$$\frac{-12x - 1}{-8x - 4}$$

$$6) \begin{aligned} g(x) &= 3x + 3 \\ h(x) &= -4x - 2 \\ \text{Find } (g \cdot h)(x - 1) \end{aligned}$$

$$-12x^2 + 6x$$

$$7) \begin{aligned} g(n) &= n - 4 \\ f(n) &= n - 3 \\ \text{Find } 4g(2) + 2f(2) \end{aligned}$$

$$-10$$

$$8) \begin{aligned} g(x) &= x + 2 \\ f(x) &= -x - 3 \\ \text{Find } (g - 4f)(6) \end{aligned}$$

$$44$$

$$9) \begin{aligned} f(a) &= 3a - 3 \\ g(a) &= a^2 - 5 \\ \text{Find } (f \circ g)(a) \end{aligned}$$

$$3a^2 - 18$$

$$10) \begin{aligned} f(x) &= -4x + 1 \\ \text{Find } f(f(x)) \end{aligned}$$

$$16x - 3$$

$$11) \begin{aligned} f(x) &= 2x \\ g(x) &= x^2 + 2x \\ \text{Find } (f + 2g)(x^2) \end{aligned}$$

$$2x^4 + 6x^2$$

$$12) \begin{aligned} g(x) &= x + 4 \\ h(x) &= -x^2 - 5 \\ \text{Find } g(x^2) - 5h(x^2) \end{aligned}$$

$$5x^4 + x^2 + 29$$