

Function Notation & Operations

Date _____ Period _____

Evaluate each function.

1) $h(t) = -t + 2$; Find $h(-2)$

2) $h(t) = 2|-3t|$; Find $h(4)$

3) $h(n) = n^2 - 1$; Find $h(-2)$

4) $g(x) = 3x - 1$; Find $g(7)$

5) $h(x) = |2x|$; Find $h(-6)$

6) $g(n) = n - 2$; Find $g(-8)$

7) $h(x) = x^2 + 2x$; Find $h(x - 3)$

8) $p(x) = 3x - 4$; Find $p(x^2)$

9) $f(t) = 3t - 5$; Find $f(4t)$

10) $f(x) = 4x - 2$; Find $f(x^2)$

11) $g(x) = 4x + 5$; Find $g\left(\frac{x}{2}\right)$

12) $k(n) = -2n - 5$; Find $k(-n)$

13) $h(x) = 2x + 3$; Find $h(x - 2)$

14) $g(x) = 3x - 3$; Find $g(-2 - x)$

Perform the indicated operation.

15) $f(x) = 2x - 2$
 $g(x) = -3x^2 - 5x$
Find $f(x) + g(x)$

16) $h(n) = -2n - 1$
 $g(n) = n^2 + 2n$
Find $h(n) + g(n)$

17) $g(x) = x^3 + 5x$
 $f(x) = 4x + 5$
Find $g(x) + f(x)$

18) $f(t) = 3t$
 $g(t) = 4t - 4$
Find $f(t) + g(t)$

19) $g(t) = t^2 + 5$
 $h(t) = 2t - 4$
 Find $g(t) - h(t)$

20) $g(x) = x^2 - 4$
 $h(x) = -2x - 2$
 Find $g(x) - h(x)$

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

22) $g(t) = 4t - 5$
 $f(t) = t^2 + 5$
 Find $g(t) - f(t)$

23) $f(t) = 2t + 5$
 $g(t) = t + 5$
 Find $f(t) \cdot g(t)$

24) $g(t) = 4t - 2$
 $f(t) = t^3 - 4t^2$
 Find $g(t) \cdot f(t)$

25) $f(t) = 4t + 5$
 $g(t) = 3t - 2$
 Find $f(t) \cdot g(t)$

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

27) $g(n) = n^3 - 4n^2$
 $h(n) = 2n$
 Find $g(h(n))$

28) $g(n) = -2n^2 - 5n$
 $f(n) = 2n - 5$
 Find $g(f(n))$

29) $g(x) = 3x + 1$
 $f(x) = x^3 - 4x$
 Find $g(f(x))$

30) $g(n) = n + 2$
 $h(n) = n^3 + 5$
 Find $(g \circ h)(n)$

31) $h(x) = 3x + 2$
 $g(x) = 3x + 3$
 Find $(h \circ g)(x)$

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

33) $h(t) = t^2 - 5$
 $g(t) = 4t + 4$
 Find $(h \circ g)(t)$

34) $f(n) = n - 1$
 $g(n) = n^2 + 4n$
 Find $(f \circ g)(n)$

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Date _____ Period _____

Evaluate each function.

1) $h(t) = -t + 2$; Find $h(-2)$

4

2) $h(t) = 2|-3t|$; Find $h(4)$

24

3) $h(n) = n^2 - 1$; Find $h(-2)$

3

4) $g(x) = 3x - 1$; Find $g(7)$

20

5) $h(x) = |2x|$; Find $h(-6)$

12

6) $g(n) = n - 2$; Find $g(-8)$

-10

7) $h(x) = x^2 + 2x$; Find $h(x - 3)$

 $x^2 - 4x + 3$

8) $p(x) = 3x - 4$; Find $p(x^2)$

 $3x^2 - 4$

9) $f(t) = 3t - 5$; Find $f(4t)$

 $12t - 5$

10) $f(x) = 4x - 2$; Find $f(x^2)$

 $4x^2 - 2$

11) $g(x) = 4x + 5$; Find $g\left(\frac{x}{2}\right)$

 $2x + 5$

12) $k(n) = -2n - 5$; Find $k(-n)$

 $2n - 5$

13) $h(x) = 2x + 3$; Find $h(x - 2)$

 $2x - 1$

14) $g(x) = 3x - 3$; Find $g(-2 - x)$

 $-9 - 3x$ **Perform the indicated operation.**

15) $f(x) = 2x - 2$
 $g(x) = -3x^2 - 5x$
Find $f(x) + g(x)$

 $-3x^2 - 3x - 2$

16) $h(n) = -2n - 1$
 $g(n) = n^2 + 2n$
Find $h(n) + g(n)$

 $n^2 - 1$

17) $g(x) = x^3 + 5x$
 $f(x) = 4x + 5$
Find $g(x) + f(x)$

 $x^3 + 9x + 5$

18) $f(t) = 3t$
 $g(t) = 4t - 4$
Find $f(t) + g(t)$

 $7t - 4$

19) $g(t) = t^2 + 5$
 $h(t) = 2t - 4$
Find $g(t) - h(t)$
 $t^2 - 2t + 9$

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

21) $f(x) = x + 2$
 $g(x) = -2x^2 + 3$
Find $f(x) - g(x)$
 $2x^2 + x - 1$

22) $g(t) = 4t - 5$
 $f(t) = t^2 + 5$
Find $g(t) - f(t)$
 $-t^2 + 4t - 10$

23) $f(t) = 2t + 5$
 $g(t) = t + 5$
Find $f(t) \cdot g(t)$
 $2t^2 + 15t + 25$

24) $g(t) = 4t - 2$
 $f(t) = t^3 - 4t^2$
Find $g(t) \cdot f(t)$
 $4t^4 - 18t^3 + 8t^2$

25) $f(t) = 4t + 5$
 $g(t) = 3t - 2$
Find $f(t) \cdot g(t)$
 $12t^2 + 7t - 10$

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

27) $g(n) = n^3 - 4n^2$
 $h(n) = 2n$
Find $g(h(n))$
 $8n^3 - 16n^2$

28) $g(n) = -2n^2 - 5n$
 $f(n) = 2n - 5$
Find $g(f(n))$
 $-8n^2 + 30n - 25$

29) $g(x) = 3x + 1$
 $f(x) = x^3 - 4x$
Find $g(f(x))$
 $3x^3 - 12x + 1$

30) $g(n) = n + 2$
 $h(n) = n^3 + 5$
Find $(g \circ h)(n)$
 $n^3 + 7$

31) $h(x) = 3x + 2$
 $g(x) = 3x + 3$
Find $(h \circ g)(x)$
 $9x + 11$

32) $g(a) = a^2 - 5a$
 $f(a) = -2a + 5$
Find $g(f(a))$
 $4a^2 - 10a$

33) $h(t) = t^2 - 5$
 $g(t) = 4t + 4$
Find $(h \circ g)(t)$
 $16t^2 + 32t + 11$

34) $f(n) = n - 1$
 $g(n) = n^2 + 4n$
Find $(f \circ g)(n)$
 $n^2 + 4n - 1$