

Functions

© 2012 Kuta Software LLC. All rights reserved.

Perform the indicated operation.

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

2) $f(x) = x^3 + 3x$
Find $(f \circ f)(x)$

3) $g(n) = 4n - 4$
 $h(n) = n - 5$
Find $(g \circ h)(n)$

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

5) $h(x) = x - 5$
 $g(x) = x^3 - 5$
Find $(h \circ g)(x)$

6) $g(x) = x - 4$
 $h(x) = x^3 - 5x^2$
Find $(g \circ h)(x)$

7) $f(x) = 4x$
Find $(f \circ f)(x)$

8) $f(a) = -4a + 2$
 $g(a) = -a^2 - 1$
Find $(f \circ g)(a)$

9) $g(t) = t + 2$
 $f(t) = t^3 - t^2$
Find $(g \circ f)(t)$

10) $f(t) = 4t - 5$
 $g(t) = 3t^2 - 5$
Find $(f \circ g)(t)$

11) $g(t) = 2t^2 - 5t$
 $f(t) = 3t - 3$
Find $(g \circ f)(t)$

12) $g(x) = 2x - 4$
 $h(x) = x - 5$
Find $(g \circ h)(x)$

13) $h(n) = 4n + 1$
 $g(n) = n^3 - 5n^2$
Find $(h \circ g)(n)$

14) $h(a) = a^2 + 3a$
 $g(a) = a - 4$
Find $(h \circ g)(a)$

15) $g(x) = 2x - 1$
 $h(x) = x^2 + 3x$
Find $(g \circ h)(x)$

16) $g(x) = -3x + 1$
 $h(x) = x^2 + 2$
Find $(g \circ h)(2)$

17) $f(x) = -2x - 1$
 $g(x) = x^2 + 2x$
Find $(f \circ g)(8)$

18) $g(a) = 2a$
 $f(a) = a^3 + 1$
Find $(g \circ f)(-1)$

19) $f(x) = -4x - 2$
Find $(f \circ f)(-1)$

20) $g(t) = t - 4$
Find $(g \circ g)(10)$

21) $g(a) = 2a - 4$
 $f(a) = 2a + 4$
Find $(g - 2f)(a)$

22) $f(n) = n^2 - 4n$
 $g(n) = -n - 4$
Find $(4f - 4g)(n)$

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

24) $h(n) = 2n - 4$
 $g(n) = 3n + 3$
Find $(4h - 3g)(n)$

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

26) $g(x) = 2x + 1$
 $h(x) = -4x - 4$
Find $(5g + 3h)(-10)$

27) $g(n) = n - 5$
 $h(n) = 3n - 3$
Find $(g + 4h)(10)$

28) $g(x) = 2x + 4$
 $f(x) = x + 1$
Find $(3g + 4f)(5)$

29) $g(n) = n^2 - 4n$
 $h(n) = 2n - 4$
Find $(5g + 5h)(-2)$

30) $f(n) = -4n$
 $g(n) = n^3 - 4n$
Find $(2f - 3g)(2)$

Answers to Functions (ID: 1)

- | | | | |
|------------------------------|--------------------------------------|------------------------|-----------------------|
| 1) $3a^2 - 12a - 1$ | 2) $x^9 + 9x^7 + 27x^5 + 30x^3 + 9x$ | 3) $4n - 24$ | |
| 4) $64n^3 + 48n^2 + 16n + 1$ | 5) $x^3 - 10$ | 6) $x^3 - 5x^2 - 4$ | |
| 7) $16x$ | 8) $4a^2 + 6$ | 9) $t^3 - t^2 + 2$ | 10) $12t^2 - 25$ |
| 11) $18t^2 - 51t + 33$ | 12) $2x - 14$ | 13) $4n^3 - 20n^2 + 1$ | 14) $a^2 - 5a + 4$ |
| 15) $2x^2 + 6x - 1$ | 16) -17 | 17) -161 | 18) 0 |
| 19) -10 | 20) 2 | 21) $-2a - 12$ | 22) $4n^2 - 12n + 16$ |
| 23) $-x^2 + 9x - 20$ | 24) $-n - 25$ | 25) $18x - 18$ | 26) 13 |
| 27) 113 | 28) 66 | 29) 20 | 30) -16 |