

Functional Notation

1. $f(x) = 3x + 7$. Find the value of (i) $f(3)$ (ii) $f(-2)$
(iii) $f(1) + f(-1)$
2. $g(x) = 4x - 5$. Find the value of (i) $g(8)$ (ii) $g(-1)$
(iii) $3g(4)$
3. $h(x) = 3x^2 + 2$. Find the value of (i) $h(4)$ (ii) $h(-5)$
(iii) $h(2.7)$
4. $f(x) = x^3 + 3x^2 - 5$. Find the value of $f(3)$.
5. $f(x) = 4x^2 - 2x + 5$. Find the value of $f(-2) + f(1)$.
6. $f(x) = \frac{2x^2 + 3x}{10}$. Find the value of $f(5)$
7. $g(x) = 3x^2 - \frac{x}{4}$. Find the value of $g(-4)$.
8. $h(x) = \sin x$. Find the value of $h(30)$.
9. $k(x) = 3\cos x$. Find the value of $k(120)$.
10. $f(x) = \frac{1}{2}x^3 + 3x - 4$. Find the value of $f(-2)$.
11. $f(x) = 5x - 4$.
 - (a) Find the value of $f(3)$.
 - (b) Given $f(a) = 21$, find the value of a .
12. $f(x) = 4x + 3$.
 - (a) Find the value of $f(4) + f(-2)$
 - (b) Given $f(c) = 5$, find the value of c .
13. $g(x) = 4x^2$.
 - (a) Find the value of $g(-6)$
 - (b) Given $g(a) = 64$, find **two** values for a .
14. $h(x) = 3x^3 - 4$.
 - (a) Find $h(1) - h(-1)$
 - (b) Given $h(a) = 20$, find a .
15. $f(x) = 2x^2 - 7$.
 - (a) Find $f(-5)$.
 - (b) Given $f(c) = 193$, find **two** values for c .
16. $f(x) = 3 + 2\sin x$.
 - (a) Find $f(60)$.

(b) Given $f(a) = 4$, find **two** values for a , $0 \leq a \leq 360$.

17. $f(x) = 4\tan x + 5$.

(a) Find the value of $f(45)$.

(b) Given $f(a) = 0$, find **two** values of a , for $0 \leq a \leq 360$.

18. $f(x) = 2.3 + 3.5\cos x$.

(a) Find the value of $f(75)$.

(b) Given $f(a) = 0$, find **two** values of a , for $0 \leq a \leq 360$.

19. $f(x) = 5x + 3$ and $g(x) = 7x - 11$.

Given that $f(x) = g(x)$, find x .

20. $h(x) = 5(x - 3)$ and $k(x) = 3x - 5$.

Given that $h(x) = k(x)$, find x .

21. $f(x) = 4x + 5$ and $g(x) = 2x - 3$.

Given that $f(x) = 3g(x)$, find x .

22. $g(x) = x^2 + 5x - 3$ and $h(x) = 5x + 6$.

Given $g(x) = h(x)$, find **two** values for x .