



Lesmahagow High School
Mathematics Department

S3

Functional Notation

FUNCTIONAL NOTATION

1. A function is given as $f(x) = 6x - 5$.

Find: (a) $f(3)$ (b) $f(-1)$ (c) $f(\frac{1}{2})$ (d) $f(a)$

2. A function is given as $f(x) = x^2 + 4$.

Find: (a) $f(2)$ (b) $f(4)$ (c) $f(-3)$ (d) $f(p)$

3. A function is given as $h(a) = 12 - 2a$.

Find: (a) $h(4)$ (b) $h(6)$ (c) $h(-2)$ (d) $h(m)$

4. A function is defined as $g(x) = x^2 + 3x$.

Find: (a) $g(a)$ (b) $g(2p)$ (c) $g(m+1)$ (d) $g(2-e)$

5. A function is defined as $f(x) = x^2 - 4x$.

Find: (a) $f(4)$ (b) $f(3a)$ (c) $f(a-2)$ (d) $f(2p+1)$

6. A function is given as $f(x) = 5x + 3$. For what value of x is :

(a) $f(x) = 23$ (b) $f(x) = -2$ (c) $f(x) = 5$?

7. A function is given as $h(t) = 20 - 6t$. For what value of t is :

(a) $h(t) = 2$ (b) $h(t) = -16$ (c) $h(t) = 32$?

8. A function is given as $g(a) = a^2 - 16$. For what value(s) of a is :

(a) $g(a) = 9$ (b) $g(a) = -15$ (c) $g(a) = 0$?

9. A function is defined as $f(x) = x^2 + 2x$.

(a) Evaluate: (i) $f(3)$ (ii) $f(-2)$.

(b) Find $f(a+3)$ in its simplest form.

10. A function is defined as $h(a) = 33 - 6a$.

(a) Evaluate: (i) $h(4)$ (ii) $h(-1)$.

(b) Given that $h(t) = 0$, find the value of t .

(c) Express $h(p-2)$ in its simplest form.

1.1 FUNCTIONAL NOTATION

1. (a) 13 (b) -11 (c) -2 (d) $6a-5$
2. (a) 8 (b) 20 (c) 13 (d) p^2+4
3. (a) 4 (b) 0 (c) 16 (d) $12-2m$
4. (a) a^2+3a (b) $4p^2+6p$ (c) m^2+5m+4 (d) $e^2-7e+10$
5. (a) 0 (b) $9a^2-12a$ (c) $a^2-8a+12$ (d) $4p^2-4p-3$
6. (a) 4 (b) -1 (c) $\frac{2}{5}$
7. (a) 3 (b) 6 (c) -2
8. (a) ± 5 (b) ± 1 (c) ± 4
9. (a) (i) 15 (ii) 0 (b) $a^2+8a+15$
10. (a) (i) 9 (ii) 39 (b) $5 \cdot 5$ (c) $45-6p$