1) Find the value of the function f(x) = 7x + 4 when x = 2.

2) Find the value of f(3) if the function f(x) = $2x^2$ + 3x + 1.

3) Find the value of the function f(x) = $\dfrac{2}{3 + 2x}$ when x = 2.

4) The following table shows the different outputs against different inputs. Given that the input variable and the output variable have a linear relation.

x	0	1	2	3	4
y	3	5	7	9	11

(a) Find the function f(x) describing the input and the output.
(b) Using this function, find the value of f(10).

5) Write a function f(x) whose output is the sum of the square of the input and the square root of the input. Also, find the value of f(9).

6) Given the length of the rectangle is 4 units. Find the area function A(b) of the rectangle in terms of breadth (b). Find the area of the rectangle for b = 5 units.

7) Find the volume function V(x) of the cube if the length of the cube is x units. Also, find the value of V(3).

8) A object is travelling from point A to point B for time **t**. If the distance travelled by the object is given by the function s(t) = t² + 3t + 2 where s(t) is the distance travelled after time **t** and its units are in km. Find the distance travelled by the object for t = 4 secs.

9) Identify whether the following function is linear or non-linear from the table.

x	1	2	3	4	5
y	4	5	5	2	1

10) The functions g(x) and h(x) are shown in the table below against input values (x).

x	1	3	4	7	10
g(x)	3	1	4	9	-3
h(x)	-2	1	-5	8	-3

Are there any solutions (outputs) common to both g(x) and h(x) as per this table? If yes, then find all x for which the solutions are common.

11) Given that f(x) = 7x + 28. Find the value of x for which f(x) = 0.

12) f(x) is a quadratic function whose roots are 2 and 4. Find f(x) and also find the value of f(1).

13) Given the fibonacci function f(x) = f(x - 1) + f(x - 2) for x > 2. Given that f(1) = f(2) = 1. Find the value of f(4).

14) Given that y = 2x + 3. Find x in terms of y. Then, find the value of x for y = 5.

15) Given functions g(x) = 9x + 5 and h(x) = 3. If f(x) = g(h(x)), find the function f(x).

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1) f(2) = 18	2) f(3) = 28	3) f(2) = $\frac{2}{7}$
4) f(x) = 2x + 3 f(10) = 23	5) f(x) = x^2 + $\sqrt{x}$, f(9) = 84	6) A(b) = 4b, A(5) = 20 units^2
7) V(x) = x^3, V(3) = 27 units^3	8) s(4) = 30 km	9) f(x) is not linear.
10) Yes, x = 3 and x = 5	11) x = -4	12) f(x) = (x - 2)(x - 4), f(1) = 3
13) f(4) = 3	14) x = $\frac{y-3}{2}$, for y=5, x = 1	15) f(x) = 32, f(10) - f(2) = 0

FUN FACT

- An easy trick to remember the order of PEMDAS is "Please Excuse My Dear Aunt Sally".

- Many mnemonics following order of operations are used along with PEMDAS worldwide, like BODMAS, BEDMAS, and BIDMAS.