

Open Mind Guruji

Function: Lecture 01

Q.1.

$$f(x) = x^2 - 4x$$

find $f(2)$.

→ given

$$f(x) = x^2 - 4x \quad \text{--- ①}$$

Put $x=2$ in eq ①

$$f(2) = (2)^2 - 4(2)$$
$$= 4 - 8$$
$$f(2) = -4$$


Q.6.

$$f(x) = x^2 + 6x + 10$$

find $f(2) + f(-2)$

→ given

$$f(x) = x^2 + 6x + 10 \quad \text{--- ①}$$

• Put $x=2$ in eq ①

$$f(2) = (2)^2 + 6(2) + 10$$
$$= 4 + 12 + 10$$
$$f(2) = 26 \quad \text{--- ②}$$

• Put $x=-2$ in eq ①

$$f(-2) = (-2)^2 + 6(-2) + 10$$
$$= 4 - 12 + 10$$
$$f(-2) = 2 \quad \text{--- ③}$$

Adding eq ② & ③

$$f(2) + f(-2) = 26 + 2$$
$$f(2) + f(-2) = 28$$

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Function: Lecture 01

Q.8.

$$f(x) = x^3 - 3x + \sin x$$

Show $f(x) + f(-x) = 0$

→ given

$$f(x) = x^3 - 3x + \sin x \quad \text{--- (1)}$$

• Put $x = -x$ in eq (1)

$$f(-x) = (-x)^3 - 3(-x) + \sin(-x)$$

$$\sin(-x) = -\sin x$$

$$f(-x) = -x^3 + 3x - \sin x \quad \text{--- (2)}$$

Adding eq (1) & (2)

$$f(x) + f(-x) = x^3 - 3x + \sin x - x^3 + 3x - \sin x$$

$$f(x) + f(-x) = 0$$

