Answer on Question #61886 – Math – Calculus

Question

Determine if the following function is even, odd, or neither.

f(x) = -9x4 + 5x + 3

Solution

If

$$f(x) = -9x^4 + 5x + 3, \qquad \textbf{(1)}$$

then

$f(-x) = -9(-x)^4 + 5 \cdot (-x) + 3 = -9x^4 - 5x + 3 \neq f(x)$,
so the function (1) is not even;

$-f(x) = -(-9x^4 + 5x + 3) = 9x^4 - 5x - 3 \neq f(-x)$,
so the function (1) is not odd.

Thus, the function is neither even, nor odd.

Answer: the function is neither.