Answer on Question #45798 – Math –Algebra

Question. Determine algebraically whether the function is even, odd, or neither even nor odd:

$$f(x) = x + \frac{4}{x}.$$

Solution. Recall that a function f is called

- *even* if $f(-x) = f(x)$ for all x from the domain of f;
- *odd* if $f(-x) = -f(x)$ for all x from the domain of f.

In our case

$$f(-x) = -x + \frac{4}{-x} = -\left(x + \frac{4}{x}\right) = -f(x).$$

Hence f is odd, is not even.

Answer. The function $f(x) = x + \frac{4}{x}$ is odd.