Exercise 52

In Exercises 47–62, say whether the function is even, odd, or neither. Give reasons for your answer.

$$g(x) = x^4 + 3x^2 - 1$$

Solution

The function is even because

$$\begin{aligned} g(-x) &= (-x)^4 + 3(-x)^2 - 1 \\ &= x^4 + 3x^2 - 1 \\ &= g(x). \end{aligned}$$

This is reflected in the graph by the symmetry about the y-axis.