Exercise 53

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

$$g(x) = \frac{1}{x^2 - 1}$$

Solution

The function is even because

$$g(-x) = \frac{1}{(-x)^2 - 1}$$

$$= \frac{1}{x^2 - 1}$$

$$= g(x).$$

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