

Exercise 57

For the following exercises, determine whether each function below is even, odd, or neither.

$$f(x) = 3x^4$$

Solution

Replace x with $-x$ in the given formula.

$$\begin{aligned} f(-x) &= 3(-x)^4 \\ &= 3(-1)^4 x^4 \\ &= 3(1)x^4 \\ &= 3x^4 \\ &= f(x) \end{aligned}$$

Since $f(-x) = f(x)$, the function is even.