

**Exercise 59**

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

$$h(x) = \frac{1}{x} + 3x$$

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**Solution**

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

$$\begin{aligned}h(-x) &= \frac{1}{-x} + 3(-x) \\&= -\frac{1}{x} - 3x \\&= -\left(\frac{1}{x} + 3x\right) \\&= -h(x)\end{aligned}$$

Since  $h(-x) = -h(x)$ , the function is odd.