Exercise 3

In general, explain the end behavior of a power function with odd degree if the leading coefficient is positive.

Solution

For a power function with odd degree and positive leading coefficient, $f(x) \to -\infty$ as $x \to -\infty$ and $f(x) \to \infty$ as $x \to \infty$. See, for example, the graph of $f(x) = x^3$.