

Exercise 49

Sketch the graph of a function f that satisfies all of the following conditions: The domain of f is all real numbers except 0, $\lim_{x \rightarrow 0^-} f(x) = 1$, $\lim_{x \rightarrow 0^+} f(x) = 0$, $f'(x) > 0$ for all x in the domain of f , $\lim_{x \rightarrow -\infty} f'(x) = 0$, $\lim_{x \rightarrow \infty} f'(x) = 1$.

Solution

Below is one example of a function that satisfies these conditions.

