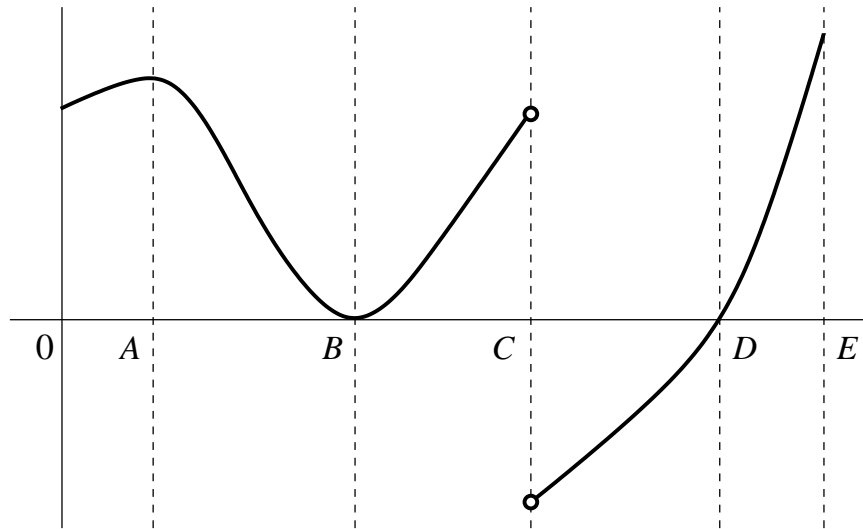**Problem statement** Suppose that $y = f(x)$ is a continuous function defined on the interval from $x = 0$ to $x = E$. Below is a graph of $f'(x)$, the derivative of $f(x)$, which is defined at all points of $[0, E]$ except at $x = C$.

A graph of $f'(x)$, where it is defined

a) Where is $f(x)$ increasing? Where is $f(x)$ decreasing? Where does $f(x)$ have local extreme values (for $0 < x < E$)?

b) Where is $f(x)$ concave up? Where is $f(x)$ concave down? Where does $f(x)$ have inflection points?

c) Draw a possible graph of $f(x)$ which uses all information given and deduced about $f(x)$.