True. Example:

$$y = x^2 + \frac{16}{x} - 16, \; [1; \; 4]$$

1) We are looking for a derivative of the given function:

$$y' = 2x - \frac{16}{x^2}.$$

2) Find the critical points of the function:

$$2x - \frac{16}{x^2} = 0 \Longrightarrow \begin{cases} x = 2, \\ x \neq 0, \notin [1; \; 4]. \end{cases}$$

Compute the value of the function at the critical points in the segment $[1; \; 4]$ and the values of the endpoints:

$$y(1) = 1;$$

$$y(2) = -4;$$

$$y(4) = 4.$$

$$f_{max} = y(4) = 4;$$

$$f_{min} = y(2) = -4.$$