

Exercises

E16.2 [1CV] Let $I = (a, b) \subset \mathbb{R}$ be an open interval. Let $f : I \rightarrow \mathbb{R}$ be differentiable: show that f' is continuous, if and only if for every x

$$f'(x) = \lim_{(s,t) \rightarrow (x,x), s \neq t} \frac{f(t) - f(s)}{t - s}.$$

Solution 1. [1CW]