

Question #15304 is it possible to have a function whose derivative exists at all the points in domain and there exists a point in the domain at which the derivative of function is discontinuous? if possible give the example of that function in the form of graph.

Solution.. Yes, such function does exist. $f(x) = x^2 \sin(\frac{1}{x})$ as $x \neq 0$ and $f(0) = 0$. The graph is available in this url <http://alturl.com/d9p4v>.