

**Math 280 3<sup>rd</sup> semester 1444**  
**Quiz #2**

Compute  $f'(x)$  if

$$f(x) = \begin{cases} x^3 \sin \frac{1}{x}, & \text{if } x \neq 0 \\ 0, & \text{if } x = 0. \end{cases} \quad (1)$$

Where  $f'(x)$  is continuous.