



Definition

Let $A \subset \mathbf{R}$ open. Let $f : A \rightarrow \mathbf{R}$ be differentiable with derivative $f' : \mathbf{R} \rightarrow \mathbf{R}$. We call f *twice differentiable* (or *two times differentiable*) if its derivative f' is differentiable. In this case, we call the derivative of f' the *second derivative* of f .

Notation

Let $A \subset \mathbf{R}$. The second derivative of the twice-differentiable function $f : A \rightarrow \mathbf{R}$ is sometimes denoted $f''(x) : A \rightarrow \mathbf{R}$

