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On the differentiability of mappings and convex functionals: A correction

# ON THE DIFFERENTIABILITY OF MAPPINGS AND CONVEX FUNCTIONALS:

## A CORRECTION

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In my paper with the same title (this Journal 8,4(1967), 735-752) there are the following inaccuracies. In Theorem 5 the sentence: "Then the set ..." should be read as follows: "Then the set $Z$ of all $x \in X$ where the Gâteaux differential $VF(x,h)$ exists is a $F_{\sigma \sigma}$-set for any (but fixed) $h \in X$ ." Similarly for Theorem 7, Corr.2,3. In Theorem 7 read "the Gâteaux differential $D\varphi(x,h)$ " for "the Gâteaux derivative". In Theorem 6 we must add the assumption that $X$ is complete. Thus Theorem 6 reads as follows: "Let $X$ be a separable Banach space, $\varphi: X \longrightarrow E_1$ a convex Lipschitzian functional on $X$ .Then the set $Z$ of all $x \in X$ where the Gâteaux derivative $\varphi'(x)$ of $\varphi$ exists is a $G_{\delta}$-set of the second category and hence it contains a $G_{\delta}$-set which is dense in $X$ . Page $746^{10}$: read " $X - Z_n$ are the first category" for " $X - Z$ are nondense." P.$746_6$: read "Since $X$ is complete" for "If $X$ is complete".