ՀԱՅԿԱԿԱՆ ՍՍՀ ԳԻՏՈՒԹՅՈՒՆՆԵՐԻ ԱԿԱԴԵՄԻԱՅԻ ՏԵՂԵԿԱԳԻՐ
ИЗВЕСТИЯ АКАДЕМИИ НАУК АРМЯНСКОЙ ССР
Մաթեմատիկա XIX, № 4, 1984 Математика

THE LATER TO THE EDITOR

In my paper "On the equivalence of classes of infinitely differentiable functions" (cf. Izv. Akad. Nauk Armenian SSR, Ser. Mat. 19 (1984) 19—30) the text beginning with the line 16 from the top on page 28 and ending with the line 6 from the top on page 29 should be replaced by the following:

Let

$$f(x)=\delta\frac{T_{[r]}(l_1^{-1}x)}{U_{L^f}(r)}\qquad x\in I,\quad r\geqslant 1.$$

Since

$$f^{(n)}(x)=\frac{\delta l_1^{-n}T_{[r]}^{(n)}(l_1^{-1}x)}{U_{L^f}(r)},\qquad \text{for}\quad n\leqslant r,$$

$$=0\qquad\qquad \text{for}\quad n>r$$

and $|T_{[r]}^{(n)}(x)|\leqslant r^r e^{|x|}$ for all $x\in\mathbf{R}$, we have

$$|f^{(n)}(x)|\leqslant\delta r^r e^{l_1^{-1}l}L_n^f,\quad \text{for}\quad x\in A_l\quad\text{and}\quad n\leqslant r.$$

Thus $f\in F$. Also

$$p_{l_1}(f)=\sup_{n<r}\left\{\max_{x\in A_{l_1}}|f^{(n)}(x)|\right\}(L_n^f)^{-1}=$$

$$=\frac{\delta}{U_{L^f}(r)}\sup_{n<r}\frac{l_1^{-n}|T_{[r]}^{(n)}(1)|}{L_n^f}=$$

$$=\frac{\delta}{U_{L^f}(r)}\sup_{n<r}\left(\frac{e}{2}\right)^n l_1^{-n}\frac{r^{2n}}{n^n L_n^f}$$

$$<\frac{\delta}{U_{L^f}(r)}\sup_{n<r_0}\frac{r^{2n}}{n^n L_n^f}=\delta.$$

Therefore, $f\in V_{j_0,l_0}$ where we can suppose $l_0>l_1$. Thus for $n\leqslant r$

$$\frac{\delta l_1^{-n}|T_{[r]}^{(n)}(1)|}{U_{L^f}(r)}\leqslant j_0^{n+1}M_n^f$$

or

$$\delta\left(\frac{2}{en}\right)^n\left(\frac{r}{2}\right)^{2n}\frac{1}{U_{L^f}(r)}\leqslant j_0^{n+1}M_n^f.$$

Since for fixed n, this inequality holds for each $r\geqslant n$, we get

$$\delta\left(\frac{1}{4e}\right)^n\frac{1}{n^n}\sup_{n<r}\frac{r^{2n}}{U_{L^f}(r)}\leqslant j_0^{n+1}M_n^f$$

or

$$L_n^f\leqslant\delta^{-1}(4e)^n j_0^{n+1}M_n^f.$$

J. A. Siddiqi