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CORRECTION

Correction to: On the convergence of Mickens' type nonstandard finite difference schemes on Lane–Emden type equations

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Correction to: J Math Chem (2018) 56:1667–1706 https://doi.org/10.1007/s10910-018-0880-y

In the original article, the analytical solution

$$w(t) = \ln\left(\frac{B+1}{Bx^2+1}\right),$$

where B $= 3 - 2\sqrt{2}$, of Problem 9 (Thermal distribution in the human head [1]) is published incorrectly. That was a typo graphical error. To the best of our knowledge, exact solution of Problem 9 is not known. We replace the term analytical by Table 7 [2] in column 6 of Table 17 and Fig. 25 in the paper. All the data in table and figure were correct in the paper. We just replace the word analytical by Table 7 [2] here.

t	NSFD ($W1$)	NSFD ($W2$)	NSFD ($W3$)	NSFD ($W4$)	Table 7 [2]	FD
0	0.266263465	0.268451865	0.269316716	0.269692931	–	0.269195827
0.1	0.266263465	0.267495248	0.268122301	0.268439455	0.268756903	0.267966449
0.2	0.262417516	0.263660205	0.264292812	0.264612699	0.26493282	0.264131907
0.3	0.255974454	0.257242592	0.257887677	0.25821368	0.258539792	0.257734361
0.4	0.246894301	0.248207425	0.24887461	0.249211433	0.249548183	0.248743821
0.5	0.235122416	0.236506816	0.237208719	0.237562447	0.237915891	0.237099948
0.6	0.220590786	0.222079284	0.222831647	0.223209958	0.22358771	0.22275
0.7	0.203215373	0.20484866	0.205670897	0.206083078	0.206494486	0.205625033
0.8	0.182895848	0.184722875	0.185638095	0.186095721	0.186552018	0.185664293
0.9	0.159513476	0.161592358	0.162628197	0.163145114	0.163659686	0.162760884
1	0.132927843	0.135328001	0.13651715	0.137110278	0.137698751	0.136787351

Note: Comparison of FD, NSFD and Table 7 [2] solutions of Problem 9 [3]

The original article can be found online at https://doi.org/10.1007/s10910-018-0880-y.

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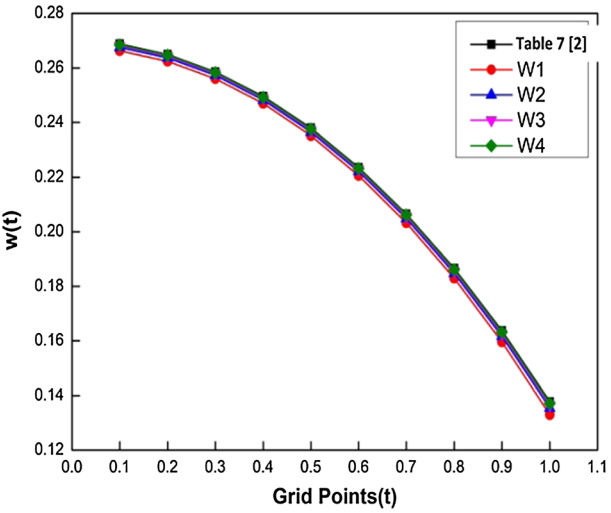

Note: Comparison of NSFD solutions as $h \to 0$ with solution given in Table 7 [2] for Problem 9 [3]

References

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