ERRATA IN THEOREMS BY TOMLINSON FORT

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In the April 1958 issue of these Proceedings, Tomlinson Fort presents two theorems on difference and differential equations [1]. The proof of Theorem I is incorrect; the argument went wrong on page 290, line 19. The hypotheses of the theorem do not assure the solution of

$$y_{p_2+1}(k_1), \cdots, y_n(k_1)$$

in terms of

$$y_{p_2+1}(k_2), \cdots, y_n(k_2).$$

This is readily seen for the system

$$y_\nu(i+1) = \sum_{\mu=1}^{3} a_{\nu\mu}(i)y_\mu(i), \qquad \nu = 1, 2, 3,$$

$$y_1(0) = G_1, \qquad y_2(1) = G_2, \qquad y_3(2) = G_3.$$

The proof of Theorem II depends on Theorem I. Even if Theorem I were valid, the hypotheses

(i) $g_{\nu\mu}(x)$ are continuous,

(ii) $D_{n-p_j}(x, \alpha, \beta) > 0$, $k_{j-1} \leqq x < k$,

of Theorem II are contradictory whenever there are more than two distinct k_i. For example, (ii) requires $g_{13}(x)$ and $g_{31}(x)$ to be discontinuous at $x = k_1$ for the system

$$\frac{dy_\nu}{dx} = \sum_{\mu=1}^{3} g_{\nu\mu}(x)y_\nu,$$

$$y_\nu(k_{\nu-1}) = G_\nu, \qquad \nu = 1, 2, 3,$$

when $k_0 < k_1 < k_2$.

REFERENCE

1. Tomlinson Fort, *Linear difference and differential equations satisfying conditions at more than one point*, Proc. Amer. Math. Soc. vol. 9 (1958) pp. 287–292.

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