Letter to the Editor

In my paper [1], the study of convergence of the process

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Abstract

Full Text

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In my paper [1], the study of convergence of the process

$$x_{n+1} = x_n - \Delta(x_n) \tag{1}$$

for the approximate solution of the real equation

$$\varphi(x) = 0 \tag{2}$$

is reduced to the study of the convergence of Newton' s method.

As N. A. Khalitova correctly noted in [2], the conditions of the theorem formulated in [1] ensure the convergence of process (1) only to a root of the equation

$$\Delta(x) = 0. \tag{3}$$

It is necessary to require an additional condition: in the domain used, all solutions of equation (3) are solutions of equation (2). However, unless additional assumptions are made about the form of the function $\Delta(x)$ (the relation of $\Delta(x)$ to $\varphi(x)$), this condition cannot be formulated in analytic form.

Therefore, in the theorem of paper [1], all references to equation (1) should be replaced by references to equation (3).

Cited Literature

1. M. I. Nechepurenko, DAN, **109**, No. 4, 704 (1956).

2. N. A. Khalitova, Uch. zap. Kazan Univ., **117**, book 2, 79 (1957).

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Note: Figure translations are in progress. See original paper for figures.