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Correction of a statement of the paper "On some primitive classes of universal algebras"

T h e o r e m 3 of my paper [1] is not correct, as it can be seen from the following simple

E x a m p l e. Let A be a set with at least three different elements a, b, c and J a set of positive integers, such that the minimal element $n \in J$ is not a divisor of all the elements of J, and denote by m the minimal element of J which is not divisible by n, i.e. $m = qn + r$, where $0 < r < n$. For every $k \in J$, define a $k+1$—ary operation ω_k in the following way:

$$\omega_m cc \dots c = b, \quad \text{and} \quad \omega_k x_0 x_1 \dots x_k = a,$$

if $k \neq m$, or $k = m$ and $x_i \neq c$, for some i.

It can be easily seen that the algebra $A(\Omega)$, where $\Omega = \{\omega_k;\ k \in J\}$, satisfies the conditions (i) and (ii) of the mentioned Theorem 3, but there is not a semigroup S such that

$$A \subseteq S, \quad \text{and} \quad \omega_k x_0 x_1 \dots x_k = x_0 \cdot x_1 \dots x_k, \quad \text{for all} \quad x_i \in A, \quad k \in J.$$

Because, if such a semigroup existed, then we should have:

$$\begin{aligned} b &= \omega_m c \dots c = c \cdot c \cdots c = (\underbrace{\omega_n \dots \omega_n}_{q} \underbrace{c \dots c}_{qn+1})\, \underbrace{c \cdots c}_{r} \\ &= a\, \underbrace{c \cdots c}_{r} = (\underbrace{\omega_n \dots \omega_n}_{q} \underbrace{b \dots b}_{qn+1})\, \underbrace{c \cdots c}_{r} \\ &= b \cdots b\, c \cdots c = \omega_m b \dots b\, c \dots c \\ &= a. \end{aligned}$$

REFERENCE

[1] Č u p o n a, G., *On some primitive classes of universal algebras*, Matematički Vesnik, 3 (18) 1966, 105 – 108.