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ERRATUM TO THE PAPER:
ON ORDERS OF SKEW ELEMENTS IN FINITE n-GROUPS

We want to correct a few misprints in the quoted paper [1] (see also RŽMat.80:2A176). The definition of n-group on page 247 is incorrect. It should be the following:

A non-empty set G with an n-ary operation f $(n \geqslant 2)$ is said to be an n-group if the following conditions (i) and (ii) are satisfied:

(i) for all $a_1, \ldots, a_{2n-1} \in G$ and for $1 \leqslant i \leqslant n-1$ we have

(1) $f(f(a_1, \ldots, a_n), a_{n+1}, \ldots, a_{2n-1}) =$

$$= f(a_1, \ldots, a_i, f(a_{i+1}, \ldots, a_{i+n}), a_{i+n+1}, \ldots, a_{2n-1}),$$

(ii) for all $b, a_1, \ldots, a_{i-1}, a_{i+1}, \ldots, a_n \in G$ and for every $1 \leqslant i \leqslant n$ (where a_{1-1} and a_{n+1} denote the empty symbols) there exists an element $a_i \in G$ such that

(2) $f(a_1, \ldots, a_{i-1}, a_i, a_{i+1}, \ldots, a_n) = b.$

In the formula on p.248[1] parentheses are missing. It should be

$$\underbrace{f\Big(f(\ldots f}_{s \text{ times}}(a_1^n), \ldots), a_{(s-1)(n-1)+2}^{s(n-1)+1}\Big) = f_{(s)}(a_1^{s(n-1)+1}).$$

Instead of the false computation on pages 248_{1-3} and 249^{1-4} we shall give a new proof of the following theorem.

T h e o r e m   1.   If $(G; f)$ is an finite n-group of order g and $(n-2,g) = 1$, then G satisfies the condition

(3) $(\forall a \in G)(r(a) = r(\bar{a}))$.

P r o o f .   Let $a \in G$, $r(a) = k$ and $r(\bar{a}) = k'$. Then by Lagrange's theorem for n-groups we get $k'|k|g$ and $(k,n-2) = 1$. Taking into account $\bar{a}^{<k>} = \bar{a}$, $a^{<k-1>} = \bar{a}$ we obtain $a = a^{<k>} = f\left(\overset{(n-1)}{a}, a^{<k-1>}\right) = f\left(\overset{(n-1)}{a}, \left(a^{<k-1>}\right)^{<k'>} \cdot \right) = a^{<k+k'+k'(k-1)(n-1)>}$. Therefore $k|k+k'+k'(k-1)(n-1) = k(k'(n-1)+1) - k'(n-2)$, and so $k|k'$, which completes the proof of Theorem 1.

Observe that the same proof is valid for an arbitrary n-group if the element a is of order k with $(k,n-2) = 1$.

The correct form of (4) on $p.250^{14}$ is

(4) $\bar{\bar{a}} = a$

(if a is an element of a 3-group).

The index 2 on $p.251_6$ should be in parentheses. On $p.251_3$ instead of $\bar{b} = a$ it should be $\bar{b} = b$. On $p.253^2$ the equality "$a^5 = a$" should take the form "$a^{<5>} = \bar{a}$".

REFERENCES

[1] M.B. W a n k e - J a k u b o w s k a ,   M.E. W a n -
    k e - J e r i e :   On orders of skew elements in finite
    n-groups, Demonstratio Math., 12 (1979) 247-253.