Czechoslovak Mathematical Journal

Štefan Porubský

Correction to my paper: “Commutative semi-primary x-semigroups”

Czechoslovak Mathematical Journal, Vol. 28 (1978), No. 3, 505

Persistent URL: http://dml.cz/dmlcz/101555

Czechoslovak Mathematical Journal, 28 (103) 1978, Praha

CORRECTION TO MY PAPER COMMUTATIVE SEMI-PRIMARY x-SEMIGROUPS*)

ŠTEFAN PORUBSKÝ, Bratislava

As pointed out by my colleague J. KOSTRA, Lemma 2 is stated incompletely in the quoted paper. It should read:

Lemma 2. (Aubert [1]). *Let a given x-system be of finite character. Then the radical of an x-ideal* A_x *is the intersection of all prime x-ideals containing* A_x.

Since the conclusion of Lemma 2 is not true in general, in some places our reasoning must be corrected. Nevertheless, it remains true if S is semi-primary, that is in the case which is the subject of study of our paper. However, the following corrections should be made:

(i) The sentence beginning in the line 15 on page 468 should read: The radical of Ω_x is the set of all nilpotent elements in S and according to Lemma 2 it equals the intersection of all prime x-ideals in S provided its x-system is of finite character.
(ii) Theorems 3 and 5 should read:

Theorem 3. *Let S be an x-semigroup. Let us assume*:

(1) *S is a semi-primary x-semigroup.*
(2) *Every principal x-ideal of S is semi-primary.*
(3) *Prime x-ideals of S form a chain.*
(4) *The radials of all x-ideals in S form a chain.*

Then the following implications hold: (1) $\Rightarrow$ (2) $\Rightarrow$ (3), (1) $\Rightarrow$ (4), (1) $\Rightarrow$ (3), (4) $\Rightarrow$ $\Rightarrow$ (3). *If, moreover, S is equipped with an x-system of finite character, then statements* (1), (2), (3) *and* (4) *are mutually equivalent.*

Theorem 5. *A sufficient condition for an x-semigroup equipped with an x-system of finite character to be semi-primary is that for any two x-idelas* A_x *and* B_x *there is an integer n* (*depending on* A_x *and* B_x) *with* $A_x^n \subseteq B_x$ *or* $B_x^n \subseteq A_x$.

*) Czechoslovak Math. J. *27* (*102*), (1977), 467—472.