

**CORRIGENDUM : "ON SPECIAL TYPES OF
SEMIGROUP COMPACTIFICATIONS"**
by K. S. Kripalini [Indian J. pure appl. Math.
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The purpose of this note is to correct an error in a paper by the author² regarding a definition which is wrongly stated.

For a semigroup S , we give $S \times S$ the coordinate multiplication and let Δ denote the diagonal of $S \times S$.

In Carruth *et al.*¹ (p. 33) is introduced the concept of a Δ -ideal.

Definition 1.0 — If S is a semigroup and \mathcal{U} is a non-empty subset of $S \times S$, then \mathcal{U} is said to be a Δ -ideal provided

$$\Delta \mathcal{U} \cup \mathcal{U} \Delta \subset \mathcal{U}.$$

We now consider the concept of a weak Δ -ideal.

Definition 1.1 — If S is a semigroup and \mathcal{U} is a non-empty subset of $S \times S$, then \mathcal{U} is said to be a weak Δ -ideal provided

$$\Delta \mathcal{U} \cup \mathcal{U} \Delta \subset \mathcal{U} \cup \Delta.$$

In our earlier paper (Kripalini²) we introduced weak ideals, joint weak ideals and complementary joint ideals of a semigroup S and described special types of congruences on S .

The definition of weak ideal (Kripalini², Definition 2.1) was wrong since $(\omega \times \omega) \cup \Delta$ is not an ideal of $S \times S$.

We correct the definition of weak ideals, joint weak ideals and complementary joint ideals of a semigroup using weak Δ -ideals of $S \times S$.

Definition 1.2 — We say that a non-empty subset $\omega \subseteq S$ is a weak ideal of S provided that $(\omega \times \omega)$ is a weak Δ -ideal of $S \times S$.

Definition 1.3 — A family Ω of disjoint non-empty subset of a semigroup S is said to be a family of joint [weak] ideals provided that

$$\bigcup_{\omega \in \Omega} (\omega \times \omega) \text{ is a [weak] } \Delta\text{-ideal of } S \times S.$$

Definition 1.4 — A family Ω of joint (weak) ideals of a semigroup S is said to be a family of complementary joint [weak] ideals provided that $S = \bigcup_{\omega \in \Omega} \omega$.

REFERENCES

1. J. H. Carruth, J. A. Hildebrandt and R. J. Koch, *The Theory of Topological Semigroup—I*, Marcel Dekker Inc., New York, 1983.
2. K. S. Kripalini, *Indian J. pure appl. Math.* **26** (1995), 259-69.