Corrigendum to "On Irresolute-Topological Vector Spaces"

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Abstract In this note, we disprove two results in reference [1].

Keywords: *semi-open sets, irresolute-topological vector spaces*

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Theorem 5 and part (a) of Theorem 6 in the published paper [1] are not correct. Indeed, in the proof of Theorem 5 in [1], it is not necessary that the set V_1 contains any interval of the form $(-\epsilon, \epsilon)$. To assert this, it suffices to give a semi-open set V_1 in $\mathbb{R}$ which does not contain $(-\epsilon, \epsilon)$, for any $\epsilon > 0$. E.g. consider the set $V_1 = [0, 1)$. Then $V_1 \in N_0(\mathbb{R})$ which does not include any set of the form $(-\epsilon, \epsilon)$.

Alternatively, consider the example [[1], Example 1] of irresolute topological vector spaces. Let $U = [0, 1) \subseteq X = \mathbb{R}$. Then $U \in N_0(X)$ but U is not absorbing.

Next, on review of [[1], Theorem 6], it is figured out that part (a) of Theorem 6 in [1] is incorrect. The flaws are observed from the proof of this theorem. Here the author believes that the set $V_1 \in N_0(\mathbb{R})$ contains an interval of the form $(-\epsilon, \epsilon)$ which is not always true as we have seen above.

Acknowledgements

References

[1]   T. Al-Hawary and A. Al-Nayef, On Irresolute-Topological Vector Spaces, Math. Sci. Res. Hot-Line, 5 (2001), 49-53.