Corrigendum to "Continuous solutions of a homogenous functional equation"

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This note is to fill a gap in our paper [2]. Specifically, the proof of Lemma 2 is incomplete. This situation can be remedied as follows.

All notation is as in [2]. The difficulty stems from the fact that $w = t^m$, on page 51, does not uniquely define t and so $\phi_m(t)$ is not well defined. We avoid this difficulty by not making the substitution $w = e^c$ that occurs on the bottom of page 49. Lemma 2 would then read: If $\sum_{k=1}^n e^{\alpha_k z}$ has a root with real part less than zero, it also has a root with real part greater than zero. That this is true follows from the fact that the zeroes of such functions form an almost periodic point set, (1, p. 449) and a theorem of J. F. Ritt (3, p. 684). In all other such instances of uniformization one may simply carry through the proofs with $\sum_{k=1}^n e^{\alpha_k z}$ or specify t as the principal root of $w = t^d$.

REFERENCES

- [1] LEVIN, B. JA., *Distribution of zeroes of entire functions*. Translations of Mathematical Monographs, Vol. 5, American Mathematical Society, Providence, 1964.
- [2] NEWMAN, M. and SHEINGORN, M., *Continuous solutions of a homogeneous functional equation*. Aequationes Math. 13 (1975), 47–59.
- [3] RITT, J. F., *On the zeroes of exponential polynomials*. Trans. Amer. Math. Soc. 31 (1929), 680–686.

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