CORRECTION

Correction to: Geometric Properties of the Products of Modified Bessel Functions of the First Kind

Khaled Mehrez^{1,2} · Sourav Das³ · Anish Kumar³

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In the initial online publication there was an error in Lemma 2.8. The original article has been corrected.

The changes below were made to the original article.

- Lemma 2.8 was removed from the article.
- Theorem 4.3 now is written as follows:

Theorem 4.3 *Assume that the hypotheses (H_1) of Theorem 3.1 are satisfied; in addition, assume that*

$$(H_3) : 2uv \geq (m + 3) + \sqrt{(m + 1)(19m + 49)}.$$

Or, we suppose that the following conditions holds true:

$$(H_3^1) : u, v > 0; \quad uv > 2(e - 1)(u + v) + (4e - 3).$$

The original article can be found online at <https://doi.org/10.1007/s40840-021-01082-2>.

✉ Khaled Mehrez
k.mehrez@yahoo.fr

Sourav Das
souravdasmath@gmail.com; souravdas.math@nitjsr.ac.in

Anish Kumar
ak8107690@gmail.com

¹ Department of Mathematics, Faculty of Sciences of Tunis, University of Tunis El Manar, 1060 Tunis, Tunisia

² Department of Mathematics, Kairouan Preparatory Institute For Engineering Studies, University of Kairouan, 3100 Kairouan, Tunisia

³ Department of Mathematics, National Institute of Technology Jamshedpur, Jamshedpur, Jharkhand 831014, India

Then the function $\mathcal{I}_{u,v}(z)$ is starlike in $\mathcal{D}$.

- In the proof of Theorem 4.3, the following sentence was removed:

Next, we suppose that the second assumptions hold true, the proof of this result goes along the lines introduced in Theorem 4.1 when we used Lemma 2.8, and we omit the details.

- Next, Corollary 4.4 was changed to:

Corollary 4.4 *If $u \geq 7.88$, then the function $\mathcal{J}_u(z)$ defined in (1.4) is starlike in $\mathcal{D}$.*

- In the proof of this corollary, the following lines were removed:

On setting $u = v$ in Theorem 4.3, second assumptions, we obtain that the function $\mathcal{J}_u(z)$ defined in (1.4) is starlike in $\mathcal{D}$ under the conditions

$$2u^3 + (8 - 2\sqrt{5})u^2 + (10 - 4\sqrt{5} - 2e\sqrt{5})u + 4 - \sqrt{5}(1 + 3e) > 0,$$

which holds true for all $u \geq 2.28$.

References

1. Mehrez, K., Das, S., Kumar, A.: Geometric properties of the products of modified Bessel functions of the first kind. Bull. Malays. Math. Sci. Soc. (2021). <https://doi.org/10.1007/s40840-021-01082-2>

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