Correction

Correction to: An Investigation on the Conjecture of Chen and Yi

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Correction to: Results Math (2019) 74:122

<https://doi.org/10.1007/s00025-019-1045-4>

In the original publication, Examples 1.9 and 1.12 are exhibited inappropriately for infinite-order entire functions. Indeed, the author's main results have been proved for finite-order entire or meromorphic functions. The correct Examples 1.9 and 1.12 are provided in this correction.

Example 1. Let

$$f(z) = \frac{a_1 e^{2iz} + a_0 e^{-2iz}}{b_1 e^{2iz} + b_0}, \quad \text{where } a_1, a_0, b_1, b_0 \in \mathbb{C} \setminus \{0\}.$$

Clearly f is periodic, and also we see that $\mathcal{L}_\pi(f) = f$ when $c_1 + c_0 = 1$.

Example 2. Let $f(z) = \frac{e^z + d^2 e^{-z}}{2}$, d is a nonzero complex constant, and for $c \neq k\pi i, k \in \mathbb{Z}$, let

$$\mathcal{L}_c(f) = \frac{2e^c}{e^{2c} - 1} f(z + c) - \frac{2}{e^{2c} - 1} f(z).$$

Clearly, $\mathcal{L}_c(f) = e^z$. We see that f and $\mathcal{L}_c(f)$ share the values $a = d$ and $b = -d$ *IM* but f neither has the specific form nor satisfies $\mathcal{L}_c(f) \equiv f$.

The next examples show that sharing two values a, b *CM* cannot be replaced by one value a *CM* and another value b *IM* in our main result to get the conclusions.

The original article can be found online at <https://doi.org/10.1007/s00025-019-1045-4>.

Example 3. Let $f(z) = 1 + (e^z - 1)^2$ and $c \in \mathbb{C}$ be such that $e^c = -1$, let

$$\mathcal{L}_c(f) = \frac{1}{4}f(z+c) - \frac{1}{4}f(z).$$

Clearly $\mathcal{L}_c(f) = e^z$. We see that f and $\mathcal{L}_c(f)$ share the values $a = 2\ CM$ and $b = 1\ IM$, but note that f neither has the specific form nor satisfies $\mathcal{L}_c(f) \equiv f$.

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