ACTA ARITHMETICA
XVI (1969)

Errata to the paper "A new estimate for the sum $M(x) = \sum_{n\leqslant x} \mu(n)$"

(Acta Arithmetica 13 (1967), pp. 49–59)

by

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On page 49, statement (5) should read

$$|M(x)| < \frac{x+1}{80} + \frac{11}{2} \quad \text{for all } x.$$

In the several places where $x > 200$ occurs, this should be $x \geqslant 201$.

On page 52, in the definition of $U_s(x)$, the signs of $u_1\left(\frac{x}{105}\right)$ and $u_5\left(\frac{x}{42}\right)$ should be positive. In the definition of $u(x)$, the coefficients of $u_2\left(\frac{x}{10}\right)$ and $u_1\left(\frac{x}{30}\right)$ should be $+2$ and -1 respectively. In the definition of $e(x)$, the term $3u_4\left(\frac{x}{108}\right)$ should be $3u_4\left(\frac{x}{180}\right)$, and the terms $-2u_{11}\left(\frac{x}{100}\right)$, $-2u_{22}\left(\frac{x}{30}\right)$, $+2u_{40}\left(\frac{x}{20}\right)$ should be added, while the coefficient of $u_{68}\left(\frac{x}{5}\right)$ should be 2.

On page 53, the term 16002 in P should have been in Q. The term 66420 in P should be replaced by 132840. Also, the following should have been in Q: 600, 610, 610, 610, 630, 642, 648, 654, 660, 16380, 32800, 32800, so that Q has 230 terms.

The line before statement (16) on page 54 should read "Since there are 221 positive terms and 230 negative terms in e,

(16) $$|e(x)-1| \leqslant 231 \quad \text{for all } x\text{''}.$$

The table for k and n on page 54 is correct to $k = 15$ and $n = 5882$ after which it should be

k	16	17	18	19	20	21	22	23
n	16100	16103	26750	26752	26754	26759	31397	up to 135000

On page 55, statement (19) and the following two lines should read

$$(19) \qquad |M(x)+9| \leqslant Q\left(\frac{x}{219}\right) + \sum_{n \in N} Q\left(\frac{x}{n}\right) + (231-23)\, Q\left(\frac{x}{135000}\right).$$

Using (10) in (19) we obtain

$$|M(x)+9| \leqslant 0.01222x, \qquad \text{for } x > 10^6.$$

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Corrigendum to the papers "On two theorems of Gelfond and some of their applications" and "On primitive prime factors of Lehmer numbers III"

(Acta Arithmetica 13 (1967), pp. 177–236 and 15 (1968), pp. 49–70)

by

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vol. 13: p. 197. Lemma 8. The assumption should be added that η_2/η is real,

p. 216 line -5 for $\sigma \neq 0$ read $\sigma \geqslant 0$;

vol. 15: p. 56 line 7 for $\chi(1)$ read $\chi(-1)$,

p. 61 line -10 for $\Phi_n^{(-\varepsilon,\theta)}(\chi\chi_1, \sqrt{\alpha}, \sqrt{\beta})$ read $\Phi_n^{(-\varepsilon\theta)}(\chi\chi_1; \sqrt{\alpha}, -\sqrt{\beta})$,

line -9 for $(\sqrt{\alpha} \pm \zeta_n^r \sqrt{\beta})$ read $(\sqrt{\alpha} \pm \zeta_n^r \sqrt{\beta})^2$,

line -6 for $(\sqrt{\alpha} - \zeta_n^r \sqrt{\beta})$ read $(\sqrt{\alpha} - \zeta_{2n}^r \sqrt{\beta})^2$,

p. 63 line 4 for $\tau(\chi^i)$ read $\tau(\chi^i)^e$,

line 9 for $\tau(\chi_k^i)$ read $\tau(\chi_k^i)^e$,

line 13 for $\tau(\chi_0^i)$ read $\tau(\chi_0^i)^e$.