Multiplicative Number Theory I. Classical Theory

Hugh L. Montgomery & Robert C. Vaughan

Errata

page	line	item
6	15	The value given of $\mathrm{li}(10^{13})$ is incorrect; it should be 346065645809.01.
7	−10	For 'k' read 'K'.
17	−2	insert comma before 'then'.
41	−10	The typeface in the first line under the first sum is too small.
42	14	insert parentheses: $c = \big(2C_0 - 1 - \zeta'(2)\big)/\zeta(2)$
57	7	For '1/d' read '$1/d$'.
64	12	After 'Show that' insert 'if $q > 1$, then'.
67	−1	In summation replace $f \le x$ by $f > x$.
70	14	The right hand side of the inequality should read $\mathrm{li}(\log n) + O\big((\log n)\exp\big(-c\sqrt{\log\log n}\big)\big)$
70	16	The right hand side of the inequality should read $\mathrm{li}(\log n) + O\big((\log n)\exp\big(-c\sqrt{\log\log n}\big)\big)$
92	3	After 'Λ_1' insert '$= 1$'.
92	6	Replace '$g([d,e])$' by '$b([d,e])$'.
117	−9	Replace 'Lemma 4.2' by 'Lemma 4.3'.
122	8	For '$\frac{L'}{L}(s,\chi)$' read '$\frac{L'}{L}(s,\chi_0)$'.
126	1	The condition '$n \equiv a \pmod q$' should be '$p \equiv a \pmod q$'.
126	2	The condition '$n \equiv a \pmod q$' should be '$p \equiv a \pmod q$'.
126	3	The condition '$n \equiv a \pmod q$' should be '$p \equiv a \pmod q$'.
131	13	For $\Big(1 - \frac{1}{N(\mathfrak{p})}\Big)^{-1}$ read $\Big(1 - \frac{1}{N(\mathfrak{p})^s}\Big)^{-1}$
133	3	For 'be written' read 'may be written'.
133	−5	For '$L(1,\chi)$' read '$L(1,\chi) \ne 0$'.
138	−3	For 'x_0^σ' read 'x^{σ_0}'.
139	12, 13	'si' should be 'si'.
139	13	'$4^{\sigma_0} + x^{\sigma_0}$' should be '$(4x)^{\sigma_0}$'.
140	-7	'$4^{\sigma_0} + x^{\sigma_0}$' should be '$(4x)^{\sigma_0}$'.
147	5	Replace '$+\frac{1}{2}$' by '$+\frac{1}{4}$', '$-\frac{1}{2}$' by '$-\frac{1}{4}$', '$+\frac{i}{2}$' by '$+\frac{i}{4}$', and '$-\frac{i}{2}$' by '$-\frac{i}{4}$'.
158	−5	Replace $\sum_{s\to 0^+}$ by $\lim_{s\to 0^+}$.
193	3	For '$\cos\theta$' read '$\cos\theta$'.

Montgomery & Vaughan

Errata, continued

page	line	item
258	4	For ‘contraction’ read ‘contradiction’.
258	8	For ‘arithemtic’ read ‘arithmetic’.
284	7	For ‘for some integer k.’ read ‘for some integer k, when $(n,p)=1$.’
286	-7	Replace ‘$e(a/q)$’ by ‘$e(-a/q)$’.
310	-5	Replace $\chi(2)$ by $\overline{\chi}(2)$.
311	4, 6, 8	Replace N/q by q/N in three places.
318	3	For ‘l’ read ‘ℓ’.
346	-9	For ‘$M_h(R)$’ read $M_h(R)=\max_{\lvert z\rvert\le R}\lvert h(z)\rvert$’.
347	3	For ‘K_2’ read ‘$\mathcal{K}_2$’.
348	-13	For ‘Exercise 10.1’ read ‘Exercise 10.2.1’.
348	-12	For ‘Exercise 10.4’ read ‘Exercise 10.2.4’.
369	-9	For ‘(5.23)’ read ‘(5.25)’.
369	-8	For ‘$e^{n/x}$’ read ‘$e^{-n/x}$’.
374	3	Replace ‘(10)’ by ‘(11.10)’.
377	8	Delete ‘(a)’.
377	12, 13	Delete all of part (b) of the exercise.
386	-5	Replace ‘x’ by ‘n’ in two places.
386	-7	Replace ‘x’ by ‘n’.
389	7	Replace ‘e^{C_0}’ by ‘e^{-C_0}’.
409	-10	close the space between $\left(\frac{\zeta'}{\zeta}\right)'$ and (0).
409	-2	Replace $+(-1+\cosh 1/z)\log z$ by $-(-1+\cosh 1/z)\log z$.
411	11	For ‘$\phi(s)$’ read ‘$\Phi(s)$’.
423	-4	For ‘$\gamma_2<-\gamma_1$’ read ‘$\gamma_2<-\gamma_1/2$’.
423	-3	Replace ‘$\gamma_2<-\gamma_1$’ by ‘$\gamma_2<-\gamma_1/2$’ in two places.
430	Ex. 2	Replace $F(x)$ by $\psi_1(x)$ throughout.
435	-2	Replace ‘Corollary 13.13’ by ‘Theorem 13.13’.
438	6	In the second sum, replace ‘$\frac{\Lambda(n)}{n\log n}$’ by ‘$\frac{1}{kp^k}$’.
442	-9	Between ‘Put’ and ‘σ_1' insert ‘$\sigma_0=1+1/\log x$,’.

Montgomery & Vaughan

Errata, continued

page	line	item
442	−5	For ‘Theorem 13.22’ read ‘Theorem 13.23’.
442	−4	For ‘$\int_{\sigma_1} \sigma_0$’ read ‘$\int_{\sigma_1}^{\sigma_0}$’.
442	−2	For ‘Theorem 13.22’ read ‘Theorem 13.23’.
444	−1	Replace $\lvert L(s,\chi)\rvert$ by $\lvert \log L(s,\chi)\rvert$.
445	4	The displayed formula should read $\lvert \log L(s,\chi)\rvert \le \log\log\log q\tau + O(1)$.
445	7	Replace $\lvert L(s,\chi)\rvert$ by $\lvert \log L(s,\chi)\rvert$.
446	−5	For ‘$B_1(x/d^2)$’ read ‘$B_1(\{x/d^2\})$’.
461	2	For ‘$2\pi S(t) \le c\log\log T$’ read ‘$S(t) \le \frac{c}{\pi}\sqrt{\frac{1}{2}\log\log T}$’, and for ‘$\int_\infty^c$’ read ‘$\int_{-\infty}^c$’.
464	4	Replace ‘and’ by ‘and if $\Theta > 1/2$, then’
465	−6	Replace ‘since $\Theta \ge 1/2$, it follows that’ by ‘if $\Theta > 1/2$, then’.
465	−11	For ‘Lemma 1’ read ‘Lemma 15.1’.
492	11	For ‘$\xi \le x \le b$’ read $a \le x \le \xi$’.
500	12	For ‘$\zeta(2) = \pi/6$’ read ‘$\zeta(2) = \pi^2/6$’.
501	6	For ‘(1)’ read ‘(B.1)’.
503	−8	For ‘N’ read ‘N’.
508	7	Replace ‘$B_1(x)$’ by ‘$B_1(\{x\})$’.
508	−5	For ‘c’ read ‘C’.
smallskip		
508	−2	Replace ‘$B_1(x)$’ by ‘$B_1(\{x\})$’.
508	−1	Replace ‘$B_2(x)$’ by ‘$B_2(\{x\})$’.
520	5	For ‘constatnt’ read ‘constant’.
530	−8	For ‘$\int_0^\infty$’ read ‘$\int_0^1$’.
535	−7	Replace ‘$f(k)$’ by ‘$\widehat{f}(k)$’.
536	−2	For ‘Z’ read ‘$\mathbb{Z}$’.
539	2	For ‘$\widehat{f}(k)$’ read ‘$\widehat{F}(k)$’.
551	−22	For ‘powe series’ read ‘power series’.

Last updated 28 January, 2016