Corrections to Complex Analysis

Joaquim Bruna and Julià Cufí Departament de Matemàtiques Universitat Autònoma de Barcelona

Edited by the European Mathematical Society, 2013

Page	Line	Change
4	1	should be "sin $\pi = 0$ "
4	-10	"equation (1.1)" should be "equality $1_t \cdot 1_s = 1_{t+s}$ "
7	1 - 2	should be "This coincides with $(z^n)^{1/m}$ if $\frac{n}{m}$ is the reduced form of q . If $z = r 1_{\phi} \dots$ "
21	-14	should be "Given a regular path γ , denoting"
118	9	We can add "Theorem 3.22 is also valid assuming only that div $\vec{X} \in \mathcal{L}^1(U)$, cf. V. L. Shapiro, On Green's theorem, J. London Math. Soc. (1957), 261–269."
126	-6	should be " $B(x, y) = -\int_0^y X_3(x, t, 0) dt$."
162	3	The last sentence of Exercise 10 should be "find the best bound for the function $ f'(z) e^{-c' z ^{\alpha}}$, where $c' > c$ is a given constant."
195	-8	The last two lines of Example 5.40 should be "Actually, here $f(z)e^{iz} = \frac{z}{z^{z+1}}e^{iz}$ has a pole at the point $z = i$ with residue $\frac{1}{2e}$, and it turns out that
		$\lim_{r \to \infty} \int_0^r \frac{x \sin x}{1 + x^2} dx = \operatorname{Im}\left(\frac{\pi i}{e}\right) = \frac{\pi}{e}. \Box$
197	7	should be " $2\pi i \sum_{\text{Im } \alpha > 0} \text{Res}(f, \alpha) + \cdots$ "
199	-1	There is a dx missing in the integral
211	14	At the beginning of Lemma 6.6 "domain" should be "open set"
220	-8	In equation (6.4) "Ind (γ, a_j) ; Ind (γ, b_j) " should be "Ind (Γ, a_j) ; Ind (Γ, b_j) "
263	17	In Theorem 7.19 it is not necessary to assume that the constant M is ≥ 0

290	13	In the statement of Weyl's lemma one has to make a remark in the conclusion "then (up to redefinition on a set of measure zero) u is harmonic"
337	10	(8.3) should be " $ z ^2 - \overline{\alpha}z - \alpha \overline{z} + m = 0$ "
337	19–20	At the end of the proof of Proposition 8.11 the equation of the circle should be " $ z ^2 - \frac{\alpha}{m}z - \frac{\overline{\alpha}}{\overline{m}}\overline{z} + \frac{1}{\overline{m}} = 0$ " and the equation of the line " $-\alpha\overline{z} - \overline{\alpha}\overline{z} + 1 = 0$ "
338	3	The second equation should be " $Tz = \frac{a}{d}z + \frac{b}{d}$ "
353	1 - 2	should be " the family of circles of the z-plane passing through points -1 and 1."
359	1	The axes of the ellipse are " $r + \frac{1}{r}$ and $\frac{1}{r} - r$ "
359	4	The paragraph "Observe that the image falls outside (Figure 8.20)" should say "Observe that the image of a radius $w = re^{i0}$, $0 \le r < 1$ is half a branch of this hyperbola (Figure 8.20)."
370	8	After quoting Theorem 5.5 add "with $f(0)$ in the boundary of the annulus and the conformal mapping would not be an open mapping."
380	3	In Exercise 4 one has to assume that f is continuous on $\overline{D} \setminus \{b_1, b_2, \dots, b_m\}$
380	14	The statement of Exercise 6 should be "If a homographic transformation maps a pair of concentric circles into another pair of concentric circles show that the ratio of the radii, highest to lowest, remains constant."
381	2	In Exercise 12 one should require that " $f(0) = 0$ "
421	-1	In the definition of K_n " $ z \le n$ " should be " $ x \le n$ "
487	7	should be " $B(z) = z^k \prod_{z_n \neq 0} \left(\frac{\overline{z_n}}{ z_n } \frac{z_n - z}{1 - \overline{z_n} z} \right)^{m_n}$ "