Errata for Basic Complex Analysis, Third Edition

This file contains the errata known to us as of the above date for the current printing of the 3rd edition (November, 1998). You can tell if you have this printing by looking at the Library of Congress page (overleaf from the title page). At the very bottom, it should say: First Printing, November 1998.

If you have earlier printings of the second edition, please ask for the corresponding errata list.

We are grateful to readers who point out errors—we are making every effort to eliminate them! We are especially grateful to Dave Perkinson, Greg Kuperberg, and David Ebin.

In these errata, "line 3↑" means "line 3 from the bottom of the page".

Preface

Page viii, line 10↑ a new sentence should start as, "It contains additional information . . . ".

Chapter 1

Page 2, line 5↑ the a in the exponent should be α.

Page 14, line 5↑ $\arg z_1 z_2$ should be $\arg(z_1 z_2)$.

Page 16, line 8 should read "We can use it to obatin a formula for the nth power of a complex number. This formula can then be used to find the nth roots of any complex number."

Page 17, line 3 should read "This procedure for finding roots is summarized as follows."

Page 20, line 10↑ should be displayed with commas, as

$$v = \sum_{k=1}^{n} |z_k|^2, \ t = \sum_{k+1}^{n} |w_k^2|, \ s = \sum_{k+1}^{n} z_k w_k, \text{ and } c = s/t.$$

Page 25, line 4↑ the sentence should end with a parenthesis.

Page 28, line 9 should read ". . . of the form ti, for some $t \in \mathbb{R}$."

Chapter 2

Page 123, line 2↑ note 5 should read "*Acta Mathematica*, **4** (1884), 197-200 and. . . ".

Chapter 3

Page 228, line 9↑ K should be k.

Page 231, Theorem 3.3.7 $z_n \to z$ should be $z_n \to z_0$.

Page 240, Exercise 32 the equation should read

$$f(z) = \sum_{n=0}^{\infty} \frac{f^{(n)}(z_0)}{n!} (z - z_0)^n$$

Chapter 4

Page 256, §4.2, line 7 should read "that only use the material...".

Page 260, line 8 "Recall from Proposition 3.3.2 that..." should be "By Proposition 3.3.2 and Exercise 15 of §3.3,...".

Page 282, line 8↑ instead of $z \to 0$, it should be $z \to \infty$.

Page 313, Exercise 7 the last summation should be

$$\sum_{n=1}^{\infty} \frac{2z}{z^2 - n^2\pi^2}.$$

Page 316, Exercise 29 the bullet should be after (a).

Chapter 5

Page 326, line 3↑ in the last term, the $\frac{1}{2}$ should be outside of the parentheses.

Page 349, line 5 an "and" should be omitted.

Page 353, 5 and 6↑ these lines should be deleted, as they are repeated.

Pages 361, 363 the label in the top margin should be changed from §5.1 to §5.R.

Chapter 7

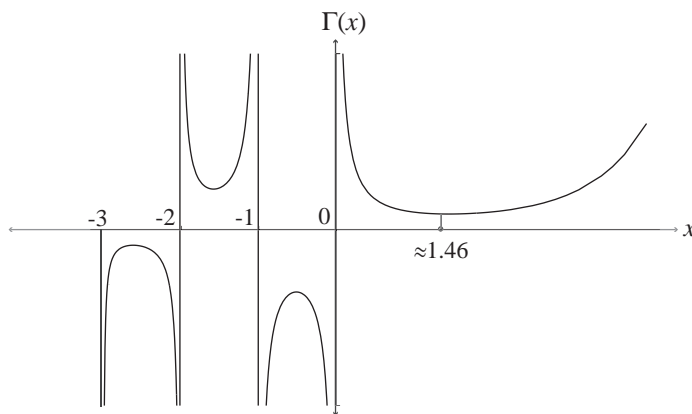**Page 415, Figure 7.1.1** the correct graph of the gamma function should be

Figure 7.1.1: The graph of $\Gamma(x)$ for x real.

Page 427, Exercise 20(c) the hint should read "The procedure used is analogous to that used in proving...".

Page 437, line 10↑ the $\mathbb{R}$ should be R.

Page 446, Exercise 14 y should be replaced by γ (twice).

Page 451, line 1↑ "equation" should be "relation".

Chapter 8

Page 457, line 1↑ the word "to" should be omitted.

Page 470, Exercise 20 Convolution Thereom should be capitalized and the parentheses around 8.1.7 should be omitted.

Page 470, Exercise 21 this exercise should have a bullet.

Page 470, Exercise 22 Convergence Thereom should be capitalized and the parentheses around 8.1.1 should be omitted.