## Errata: Eisenberg, The Mathematical Method April 29, 2007

Negative line numbers refer to locations counting from the bottom of the page upwards.

- Page 8, line 4. Replace "Multiply the inductive assumption" by "Multiply both sides of the assumed inequality".
- Page 27, line -15. Replace "some  $d \in \mathbb{N}$ " by "some  $d \in \mathbb{N}^*$ ".
- Page 35, line 11. Replace " $(s_n)_n$ " by " $(s_n)_{n \in \mathbb{N}}$ ".
- Page 37, line 9. Change "(n = 0, 1, 2, ...)" to "(n = 1, 2, 3, ...)".
- Page 62, line 22. Replace "1842" by "1844".
- Page 62, lines 23–24. replace "However, as of 1995 the problem remained open—the answer is still unknown." by "The problem remained open—its answer unknown—for 160 years, until in 2004 Preda Mihăilescu was able to prove Catalan's Conjecture."
- Page 62, lines 24–26. Replace "Also unknown is whether there are any three consecutive positive integers whatsoever each of which is a power of a positive integer." by "Earlier, Hyyrö and Mąkowski had proved that there cannot be any three consecutive positive integers whatsoever each of which is a power of a positive integer."
- Page 113, line 11. Replace "Let p is a prime" by "Let p be a prime".
- Page 138, lines 19–21. Replace "The set F consisting of all integers together with the reciprocals of all nonzero integers and" with: "The set F that is the union of the set of all integers and the set of reciprocals of all nonzero integers, and".
- Page 150, line -1. Replace " $x \neq 0$  and  $y \neq 0$ " with "either x > 0 and y > 0 or else x < 0 and y < 0".
- Page 154, line -5. Replace " $(m, n \in F)$ " by " $(m, n \in \mathbb{N})$ ".

Page 162, lines 7–9. Replace the entire second paragraph of the proof by the following:

"Now suppose x < 0. Apply what was just proved in the preceding paragraph to the positive real number -x: there is an integer m with  $m \le -x < m + 1$ . Then  $-m - 1 < x \le -m$ . If x < -m, take n = -m - 1; if, however, x = -m, take n = -m. In either case,  $n \le x < n + 1$ ."

- Page 164, line 10. Replace "|c m/n| < 1/n" by " $|c m/n| \le 1/n$ ".
- Pate 236, line -8. At the end of the proof of Corollary 4.1.20, the reference should be to Corollary 4.1.19.
- Page 243, line -1. Replace " $c(A) \in \mathcal{A}$ " by " $c(A) \in \mathcal{A}$ ".
- Page 252, line 12. Replace "If, to the contrary,  $2^{\mathbb{N}}$  is uncountable" by "If, to the contrary,  $2^{\mathbb{N}}$  is countable".
- Page A6, line 7. Replace "exclusive" by "inclusive".

- Page A14, line 9. Replace "{  $x^2 + y^2 = 1 : x, y \in \mathbb{R}$  }" by "{  $(x, y) : x, y \in \mathbb{R}$  and  $x^2 + y^2 = 1$  }".
- Page A21, line -5. Replace "X = Y, A = B" by "X = A, Y = B".
- Page A30, line 4. Replace " $f: x \to Y$ " by " $f: X \to Y$ ".
- Page A30, line -12. Replace " $f \colon \mathbb{R}^+ \to \mathbb{R}$ " by " $g \colon \mathbb{R}^+ \to \mathbb{R}$ ".
- Page A50, line 8. Replace " $\mathbb{R} \times \mathbb{R}$ " by " $\mathbb{R}$ ".
- Page A57, line -13. Replace " $\mathcal{A} = \{0, 1\} \cup \{\{t\} : 0 < t < 1\}$ " by " $\mathcal{A} = \{\{0, 1\}\} \cup \{\{t\} : 0 < t < 1\}$ "
- Page A58, line –1. Replace by: " $X/\sim_{\mathcal{A}} = \mathcal{A}$ .".
- Index. Insert the new entry: "binary operation, A25".
- Index. Change the entry "operations" to "operations, A25"