

Errata for  
*Experimental Mathematics in Action*  
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Updated: 2008-10-17

Since the publication of this book in May 2007, a number of colleagues have graciously provided reports of various errors and glitches:

1. Page 4. In the footnote, the word “not” should be inserted before “nonnegative.”
2. Page 46. In formula (2.2.7), “32” in the denominator of the right-hand side should be replaced by “8.”
3. Page 49. At the bottom of the page,  $k_{210}$  should be given as:

$$k_{210} = (\sqrt{2} - 1)^2(2 - \sqrt{3})(\sqrt{7} - \sqrt{6})^2(8 - 3\sqrt{7}) \\ \times (\sqrt{10} - 3)^2(4 - \sqrt{15})^2(\sqrt{15} - \sqrt{14})(6 - \sqrt{35})$$

4. Page 61. We subsequently learned that the log-tan integral identity at the bottom of the page, indicated here with a question mark, has been proven (in an equivalent form). See Don Zagier, “Hyperbolic Manifolds and Special Values of Dedekind Zeta-functions, *Inventiones Mathematicae*, vol. 83 (1986), pg. 285-301.
5. Page 62. The tex here should read:

$$C_4 = \frac{7}{12}\zeta(3) \\ \lim_{n \rightarrow \infty} C_n = 2e^{-2\gamma}$$

6. Page 147. “Merten’s Theorem” should read “Mertens’ Theorem”.
7. Page 162. In the line below (7.8), this should be  $z = 1/2$  rather than  $z = 1$ .
8. Page 223. The formula for  $E_n$  should read

$$E_n = 2 \int_0^1 \cdots \int_0^1 \left( \prod_{1 \leq j < k \leq n} \frac{u_k - u_j}{u_k + u_j} \right)^2 dt_2 dt_3 \cdots dt_n,$$

where  $u_k = \prod_{i=1}^k t_i$ .

9. Page 232, Problem 5. This should say "... is a uniform pseudorandom number generator in the interval  $[0, 1)$ " and the closed interval  $[15/16, 1]$  should be changed to a half-open interval  $[15/16, 1)$ .
10. Page 239. The expression  $k_2'^2 = 2(\sqrt{2} - 1)^2$  should be  $k_2'^2 = 2(\sqrt{2} - 1)$ .
11. Page 240. There is an extraneous right parenthesis in the formula for  $k_5'^2$ .
12. Page 280, Problem 1. The second command of the Maple code should be changed to the following:
 

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sn:=N->sum((N*x)^n/n!,n=0..N):draw(sn,50);
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13. Page 281, top: This should read "Pritsker" instead of "Pritzger."
14. Page 282, Problem 2(b). In the formula for  $V/\sqrt{3}$ , the second term is missing a "F". Also, the ? is not needed in this part.
15. Page 283, Problem 3. This "identity" should be listed with ? over the = sign, since it remains unproven.
16. Page 283, Problem 4. The first formula is incorrect. It should say  $\text{Li}_2(1/2) = (1/2)\zeta(2) - (1/2)\log^2 2$  (and not  $1/12\log^2 2$ ).
17. Page 295, Problem 19. "Merten's conjecture" should read "Mertens' Conjecture".
18. Page 305, Item 78. The reference is vol. 306, no. 5699, pg. 1136–1137, November 12, 2004.
19. Page 308, top line. Tornheim is misspelled.
20. Page 308, Item 148. The reference is vol. 111 (2004), no. 10, pg. 841–852.
21. page 311, Item 207. *Monthly* is misspelled.
22. Page 312, Item 221. The title is missing = 0 at the end.