Errata for
Mathematics by Experiment: Plausible Reasoning in the 21st Century
Second Edition 2008 Copyright 2008
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Since the release of the second edition of *Mathematics by Experiment* in November 2008, a number of colleagues have graciously provided reports of various errors and glitches. We list here those errors that we regard as serious enough to possibly impede the understanding and/or usage of this book.

1. Page 122: Equation 3.32 should read

$$\pi \;=\; 4 \cdot {}_2F_1 \left(\begin{matrix} 1, \frac{1}{4} \\ \frac{5}{4} \end{matrix} \middle| -\frac{1}{4} \right) + 2 \arctan \left(\frac{1}{2} \right) - \log 5, \tag{1}$$

2. Page 190: In the proof of Theorem 5.8 $z = x/\|x\|_p^p$ and $w = y/\|y\|_q^q$ should be $z = x/\|x\|_p$ and $w = y/\|y\|_q$.

3. Page 193, equation (5.35): $x \log(x + 1/n)$ should be replaced by $x \log(1 + 1/n)$.

4. Page 195, twice just above and once in equation (5.43): P_{2m} should be replaced by P_{2k}.

5. Page 204, first displayed formula: This should read $a_{n+1} = (a_n + b_n)/2$.

6. Page 207, item 4 (a). The expression here should read: $\Psi(n) = \sum_{k=1}^{n-1} 1/k - \gamma$. In part (b), the LHS should read: $\Psi(-z) - \Psi(z)$.

7. Page 210: The expression $- \log(x) \log(1 - x)$ should be $+ \log(x) \log(1 - x)$. Also $3\sqrt{5}/2$ should be $\frac{3-\sqrt{5}}{2}$.

8. Page 249: There is an 8 missing in the second-to-last displayed list of integers.

9. Page 260: The first C_n should red $C_{n,k}$.

10. Page 284: In equation 7.67, the lower limit of the summation should be $i = 1$ instead of $i - 1$.

11. Page 320: The Parry-Tarry-Escott identity should read: $[-5, -1, 2, 6] = 3[-4, -3, 4, 5]$.

12. Page 331: Broadhurst's name is missing a "t".

13. Page 351, reference 42: The title should read "Fun with Fourier Series". It is available at: http://arXiv.org/abs/0806.0150.