| Alfred S. Posamentier & Ingmar Lehmann: **The (Fabulous) Fibonacci Numbers**  
Afterword by Herbert Hauptman, Nobel Laureate |
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| ![Book Cover](image1)  
ISBN 978-1-59102-475-0 |

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| ![Book Cover](image2)  
*Language: Japanese  
Translation by Nikkei Business Publications, Inc.  
arranged through Tuttle-Mori Agency, Inc., Tokyo, 2010*  
ISBN 978-4-8222-8434-3 |

| ![Book Cover](image3)  
*I (favolosi) numeri di Fibonacci  
Postfazione di Herbert A. Hauptman. Premio Nobel  
Language: Italian*  
Edited by V. B. Sala,  
Gruppo Editoriale Muzzio, 2010  
Edited by Maria Margherita Bulgarini,  
Scienza, 2013  

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*Language: Korean  
Yu Ri Jang Literary Agency  
ISBN 13: 978-89-88151-99-0 93410* |
Publisher’s notes (On Book Jacket)

The most ubiquitous, and perhaps most intriguing, number pattern in all of mathematics is the Fibonacci sequence. In this strikingly simple pattern, beginning with two ones, each succeeding number is the sum of the two numbers immediately preceding it (1, 1, 2, 3, 5, 8, 13, 21, ad infinitum). Far from being just a mathematical curiosity, however, this sequence recurs throughout nature—from the regeneration patterns of bees and rabbits to the arrangement of spirals on pinecones and pineapples. All of which is astounding evidence for the deep mathematical basis of the natural world.

With admirable insight and clarity, math educators Alfred Posamentier and Ingmar Lehmann take us on an utterly fascinating tour of the many ramifications of the Fibonacci numbers. The authors begin with a brief history of their distinguished thirteenth-century Italian mathematician Leonardo of Pisa (more commonly known as Fibonacci), whose other accomplishments including popularizing the use of Arabic numerals in the West. Turning to the field of botany, the authors demonstrate through illustrative diagrams, the many amazing connections between the Fibonacci numbers and natural forms (including pinecones, pineapples, sunflowers, and daisies). In art, architecture, the stock market, and others areas of society and culture, Posamentier and Lehmann find an almost endless array of instances where the Fibonacci sequence, as well as its derivative, the “golden ratio, ” makes an appearance. And, of course, as the authors amply demonstrate, there are almost boundless applications in probability, algebra, and Pascal’s triangle, to name but a few.

Thoroughly accessible and appealing to even the math-phobic individual, this fun-filled and enlightening book allows the reader to appreciate the true elegance of mathematics and its amazing applications in the world around us.
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Page 34, Figure 1-9: Some exponents are not written as exponents: e.g. $n = 6$: $2^3$ instead of $2^3$.

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\]

\[
= 1156 = 34^2 = F_9^2
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Page 117: Move footnote 10 to page 113, line 7 after the word “formula”.

Page 121, Line 4 after the parentheses “)”) add the following: “, where $BC = \frac{1}{2} AB.$”

Page 133, Footnote 18, Line 3: Change “formula” to “formulas”.

Page 133, Footnote 18, Line 4: Interchange the “a” and “b”.

Page 133, Footnote 18, Line 7: Change $\frac{a}{b}$ to $\frac{b}{a}$.

Page 138, Line 15: “point $S$ divides the diagonal in the golden ratio” should read: “point $S$ divides the diagonal in the square of the golden ratio”.

Page 142, Line 12: Change from $5 \cdot 3$ to $5 \cdot 13$

Page 150, Line 4: Delete “therefore”.

7
Page 151, Line 7 from bottom: Change last triangle from “CEA” to “CEB”.

Page 157, Line 3: Change “it’s” to “its”.

Page 163, Line 4: “Fourth convergent” make the “c” in convergent as a lower case.

Page 170: The third continued fraction should show $n$ times the end part:

$$\phi_n = 1 + \cfrac{1}{\phi_{n-1}} = 1 + \cfrac{1}{1 + \cfrac{1}{\phi_{n-2}}} = \cdots = 1 + \cfrac{1}{1 + \cfrac{1}{1 + \cfrac{1}{1 + \cdots}}} = \frac{F_n}{F_{n+1}}$$

Page 171, Line 6: Change “$\Phi < \mu < \sqrt{2}$” to “$\mu < 2 < 2$”.

Page 194, third Line from bottom: Delete last two terms “$F_{k+2}^2 + F_{k+1}^2$”

Page 209, Line 5: Change “number” to “numbers”.

Page, 210, Line 13: Delete “can enhance this by staying” and replace it with “recall”.

Page 216, Line 8: Should read “$10^3 = 89 \cdot 10 + 89 + 10 + 1 + 10$”, where an additional 10 is added on.

Page 218, Line 4: “hour markers or minute markers”

Page 230, Line 5 from bottom: Change “$F_{n+2}$” to “$F_n$”

Page 232, Line 6 from bottom: Change “ΦΙΔΙΑΣ” to “Φειδίας”.

Page 235, first line: Change to Herodot or Herodotus (ca. 484 – ca. 424 BCE).

Page 261, Line 5: Change “ration” to “ratio”.

Page 295: Last line period missing at end.

Page 298: Replace the last three lines with the following: $\phi^n - (\phi^n - (\phi)^n = (\phi^n - (\phi)^n).$

Page 307, Line 6 from bottom: Remove the period after the word “Their”.

Page 312, Footnote 2: Replace “Waclaw” with “Wacław”.
Page 340, Line 3: Change “usthe” to “us the”

Page 351, Line 3 from bottom: Replace “induction” with “proof by contradiction”; last line: delete “induction”.

Page 352, Line 8: Replace “induction” with “proof by contradiction”.

Page 352, Footnote 1: Insert “that” to read: “A subsidiary proposition that is used to prove…”

Page 353, Line 4: Delete “or equal to” to read “… for n greater than 2, …”

Page 356, Lines 3 and 4 from bottom: Delete “the binomial theorem”.

Page 357, Last line: the exponent for (– 1) should be “k”, not “k + 1” to read “= (−1)^k”

Page 364: Delete the first sentence at the top of the page.
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Page 117, Line 7 from the bottom: Change the “1” for an “\(l\)” in the equation. To read: \(w(w+l) = l^2\).

Page 117: Move footnote 10 to page 113, line 7 after the word “formula”.

Page 121, Line 4: After the parentheses “\(\)’ add the following: “, where \(BC = \frac{1}{2} AB\).”

Page 122, Lines 1 and 2: To do the construction begin with a right triangle \(ABC\) where \(AB = a\) and \(AC = a/2\). Then draw a circle with center \(C\) and radius length \(CB\).

Page 133, Footnote 18, Line 3: Change “formula” to “formulas”.

Page 133, Footnote 18, Line 4: Interchange the “\(a\)” and “\(b\)”.

Page 133, Footnote 18, Line 7: Change \(\frac{a}{b}\) to \(\frac{b}{a}\).

Page 138, Line 15: “point \(S\) divides the diagonal in the golden ratio” should read: “point \(S\) divides the diagonal in the square of the golden ratio”. 
Page 142, Line 12: Change from 5·3 to 5·13

Page 150, Line 4: Delete “therefore”.

Page 151, Line 7 from bottom: Change last triangle from “CEA” to “CEB”.

Page 157, Line 3: Change “it’s” to “its”.

Page 163, Line 4: “Fourth convergent” make the “c” in convergent as a lower case.

Page 170: The third continued fraction should show \( n \) times the end part:

The \( n^{th} \) case is then:

\[
\phi_n = 1 + \frac{1}{1 + \frac{1}{\phi_{n-1}}} = 1 + \frac{1}{\frac{F_{n-1}}{F_n}} = \frac{F_{n+1}}{F_n}
\]

\( n \) times

Page 171, Line 6: Change “\( \Phi < \mu < \sqrt{2} \)” to “\( \mu < \sqrt{2} < \Phi \)”.

We see that the terms of this continued fraction are successive Fibonacci numbers.

For this constant \( \mu \) is \( \mu < \sqrt{2} < \phi \) a rough estimation (inequality).

Page 185: The next to last line should end with …761, the last line is to begin with:
\[ \approx 3.7 \times 10^{388} \]

Page 188, Line 18, right column: Replace “10 = \( F_2 + F_6 = 2 + 8 \)” with “10 = \( F_3 + F_6 = 2 + 8 \)”.

Page 194, third Line from bottom: delete last two terms ”\( F_{k+2}^2 + F_{k+1}^2 \)”.

Page 204: Figure 6-24 is missing, instead figure 6-25 appears twice. Figure 6-24 should be:

![Figure 6-24](image)

Page 209, Line 5: Change “number” to “numbers”.

Page, 210, Line 13: Delete “can enhance this by staying” and replace it with “recall”.
Page 216, Line 8: Should read “10^2 = 89 \cdot 10 + 89 + 10 + 1 + 10”, where an additional 10 is added on.
Page 218, Line 2: Replace the 155 with 115.
Page 218, Line 4: "hour markers or minute markers"
Page 230, Line 5 from bottom: Change “F_{n+2}” to “F_n”
Page 232, Line 6 from bottom: Change “ΦΙΔΙΑΣ” to “Φειδίας”.
Page 235, first line: Change to Herodot or Herodotus (ca. 484 – ca. 424 BCE).
Page 261, Line 5: Change “ration” to “ratio”
Page 293, last Line of first paragraph should be “offer” not “after”.
Page 295: Last line period missing at end.
Page 298: Replace the last three lines with the following: \( \phi^n - (-1) \frac{1}{\phi^n} = \phi^n - \left( -\frac{1}{\phi} \right)^n \).
Page 307, Line 6 from bottom: Remove the period after the word “Their”.
Page 298, last Line should say “ = \phi^n - (-1/\phi)^n” instead of “ = \phi^n - (1/\phi)^n”.
Page 312, Footnote 2: Replace “Waclaw” with “Waclaw”.
Page 333, Line 9: The “4” should be changed to “5”.
Page 340, Line 3: Change “usthe” to “us the”
Page 351, Line 3 from bottom: Replace “induction” with “proof by contradiction”;
last line: delete “induction”.
Page 352, Line 8: Replace “induction” with “proof by contradiction”.
Page 352, Footnote 1: Insert “that” to read: “A subsidiary proposition that is used to prove…”
Page 353, Line 4: Delete “or equal to” to read “… for \( n \) greater than 2, …”
Page 356, Lines 3 and 4 from bottom: Delete “the binomial theorem”.
Page 357: Last line: the exponent for \((-1)\) should be “\( k \)”, not “\( k + 1 \)” to read “= (-1)^{k}”
Page 358: Line 12: Delete the complete line: “= (-1)^{k}”
Page 359: Lines 3, 7, and 17 need a “+” sign before the \( L_k \) term.
Page 364: Delete the first sentence at the top of the page.
We appreciate any comments about the book as well as any typographical errors that have not yet been detected so that they can be incorporated in future printings of the book.

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