Yet, let us be egoists here to a degree that we mention explicitly the chapters in which various topics of mathematics are discussed: Ch. IV (The Once and Future Role for Approximate Calculations, by George A. Baker, Jr.), Ch. VIII (The Monte Carlo Method in Mathematical Finance, by Michael Hawrylycz), Ch. X (On the Future of Combinatorics, by Daniel J. Kleitman), Ch. XIII (The Future of Differential Equations, by Peter D. Lax), Ch. XVII (On Pure and Applied Mathematics, by R. D. Richtmyer) and Ch. XXII (Mathematical Sciences and The New Biology, by Michal S. Waterman).

We remark that there is a mistaken statement on the back cover: "Nick Metropolis was the last survivor of the World War II Manhattan Project...". Well, the most famous "counter-example" to this statement is nobody else than Edward Teller, who is living! (He is 93 now.) He contributed to the collection with two essays (Ch. XX, The Enjoyment of Surprises, and Ch. XXI, The Future of Western Civilization).

To close with, this book can be recommended to anybody who wants to avoid the danger which Felix Klein warns against (the last sentence of the citation at the beginning of Ch. V): "*...stagnation will set in, if the coming generation does not become familiar with the general content of science, so as to be in the position to seek autonomously his own field of research.*"

Gábor Gévay (Szeged)

WILLIAM FRUCHT (Ed.), **Imaginary numbers, An Anthology of Marvelous Mathematical Stories, Diversions, Poems, and Musings**, XV + 327 pages, John Wiley & Sons, Inc., 1999.,

This collection has nothing to do with the complex number field; instead, it is devoted to various and complex fields of literature, and the spirit of Lewis Carroll moves upon the face of the pages. It is all about how "the comforting light of familiar irrationality prevails over the darkness of reason". Pieces of high literature with a mathematical flavor alternate with articles by literary mathematicians. To demonstrate their level, it is enough to list a sample of the authors: Jorge Luis Borges, Italo Calvino, A. K. Dewdney, the Reverend Charles Lutwidge Dodgson himself, Martin Gardner, Piet Hein, Douglas Hofstadter, Stanislaw Lem, Rudy Rucker, Raymond Smullyan, Connie Willis, and Yevgeny Zamyatin.

Such a volume, no doubt, should have been edited by Martin Gardner, and just this was the plan of the actual editor, who pestered Martin with his idea until he eventually said: "Look, Bill, if you're so keen to get this book done, why don't you edit the damn thing yourself?" Frucht, a senior editor at Basic Books, did it, and the result is an extremely interesting anthology, which has a place on the bookshelf (or night table) of any mathematician.

As for my personal impressions, I enjoyed this book at least twice: first, of course, when I read it, and the second time, while I was musing about whose stories and poems should be selected for another book with similar intention. The first names that occurred to me were Edgar Allan Poe, Mark Twain, and Joseph Heller. The famous sonnet of Edna St. Vincent Millay on Euclid also might be chosen, although it lacks the elements of the grotesque, a palpable leitmotif throughout the recent collection. Incidentally, there is also a fine poem by Mihály Babits on Bolyai — in Hungarian. In Frucht's volume, Borges is represented, as a matter of course, by his best known masterpiece, "The Library of Babel". I was glad to read in the preface that "The Garden of Forking Paths" might also have been included—it is one of my favourites, not only for its mathematical aroma but also as an adequate modern counterpart of Prosper Mérimée's harrowing "Mateo Falcone".

The whole anthology may be considered as a modest but strong reaction against the 'Two Cultures' schism. However, I recommend it to you, first of all, as a delightful piece of reading for those hours when you become weary of finding the steps or plugging the gaps in the proof of your next theorem.

Béla Csákány (Szeged)

PAULO RIBENBOIM, **My Numbers, My Friends**, XI+375 pages, Springer – Verlag, New York – Berlin – Heidelberg – London – Paris – Tokyo – Hong Kong – Barcelona – Budapest, 2000.

The title of this book is a little misleading. One expects to find enjoyable, easily understandable problems but this is not so. The material is very enjoyable but it requires a considerable effort and enthusiasm. The author has several friendly numbers and he knows these numbers too, meaning that he presents many-many questions and conjectures about his "friends". Let's have a somewhat randomly chosen example. The Pythagorean triples are well-known for the interested readers. The following consideration was very thought-provoking for the reviewer.

Are there infinitely many Pythagorean triples (x, y, z) such that x and z are primes? This question is open in our days. Now here is an investigation from the book. An irreducible polynomial $f \in Z[x]$ is said to be strongly primitive when there does not exist prime p such that p divide $f(k)$ for every integer k. If $f \in Z[X]$ is any irreducible strongly primitive polynomial, then there exist infinitely many integers n such that $|f(n)|$ is a prime. This is Bouniakowsky's conjecture. Its special case is Dirichlet's famous theorem. Schinzel and Sierpinski showed the following: Assume that the conjecture of Bouniakowsky is true. Let a, b, c and d be integers with a and $d > 0$, $b^2 - 4ac \neq 0$. If there exist integers x_0, y_0 such that $ax_0^2 + bx_0 + c = dy_0$, then there exist infinitely many pairs (p, q) of prime numbers such that $ap^2 + bp + c = dq$. Assuming this statement we have: Every positive rational number $\frac{a}{b} \neq 1$, a and b positive integers $gcd(a, b) = 1$, may be written in infinitely many ways in the form $\frac{a}{b} = \frac{p^2-1}{q-1}$, where p and q are prime numbers. Here is a brief explanation: If $a > 0$, $b > 0$ then $4b(b-a) \neq 0$. The equation $bx^2 - (b-a) = ay$ has the solution $(x_0, y_0) = (1, 1)$. By the afore mentioned statement there exist infinitely many pairs (p, q) of prime numbers such that $bp^2 - (b-a) = aq$, hence $\frac{a}{b} = \frac{p^2-1}{q-1}$.

And now the culmination of this consideration: From this observation it follows that there exist infinitely many pairs (p, q) of prime numbers such that $2 = \frac{p^2-1}{q-1}$, that is