

“That is what I call young old age,” said Brooks, “which lasts until your transition to old old age. Vito made young old age last for about 20 years, going to the lab almost daily, writing papers, doing consulting work. He greatly enjoyed consulting with the Corps of Engineers after the Mount St. Helens eruption in the early 1980s about what to do with all that extra sediment.” In Vanoni’s old old age, Brooks would take him on short excursions and continued to bring him into the lab. “He’d go with his cane but we’d also bring a chair. When we’d get to the flume, I’d sit him down because if he got too interested he might not pay attention and lose his balance.”

The Vanonis had no children, but List noted that Vito had left a “legacy in his academic children and grandchildren and great-grandchildren all over the world. . . . Vito and Edith passed through life without a great deal of drama and fanfare and pomposity, and left us in much the same way,” he said. “We’ll do well to remember the example they set. Good memories will endure.” □



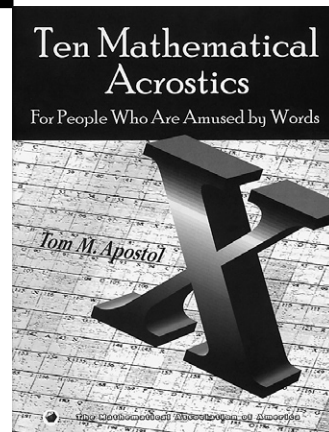
Vanoni with one of the products of his legendary garden in the fall of 1999.

Back in the early '70s, Double-Crostic fan Tom Apostol (also professor of mathematics, emeritus) constructed such a puzzle for his colleagues at the annual West Coast Number Theory Conference; it was unique in that all the words and all the clues, as well as the ultimate solution, related in some way to mathematics or mathematicians (sample clues: “Euler’s function”; “two of the creators of functional analysis”).

Apostol’s clever exercise was an instant hit, and he duly produced nine more for a decade’s worth of conferences. All have now been collected in a small booklet published by the Mathematical Association of America—*Ten Mathematical Acrostics: For People Who Are Amused by Words*.

Although the cover blurb claims that “most of these puzzles can be (and have been) solved by people who know little or no mathematics but have a good vocabulary,” an excellent memory of your college math courses and a handy volume on the history of mathematics will help. Even if your vocabulary can cope with “type of equation,” it might have a bit of trouble with “two over the square root of pi times the integral from 0 to W of $\exp(-t^2) dt$ ” And though you might consider yourself a person “amused by words,” if you don’t know much about math history, you might not be chuckling to yourself as you tussle with “early Japanese form of integral calculus” or “Irish mathematician (1826–1883) who studied quadratic forms.”

As a further hint, the first letters of the answers to the



clues spell out the author and title of the work containing the passage that constitutes the solution. So if you’re really familiar with, say, Hardy’s *Integration of Functions*, it’s a snap. Of course, then there’s the German passage, just to make it a little bit more difficult; at least its clues are in English.

But Apostol, in his introduction, cautions the faint-hearted not to be intimidated at first glance. Because the nature of acrostics is a back-and-forth process, one answer allows you to intuit quite a few missing letters and, thus, words. The solutions, at least, do consist almost entirely of common, recognizable English words. Apostol claims, “If you can guess five or six of the words correctly, you should have enough information to complete the solution.” Except maybe that German one . . .

So, for example, if you know that “facts or figures” are “DATA” and that “where QED appears” is “ENDOF-THEPROOF,” then you can put the two T’s where they belong in a nine-letter word in the solution. By the time you get that “a kind of product” could be “CROSS,” and what “often accompanies joys” is “EYESANDKAYS,” you have a C and a K for

TT CK _ _ , and can reasonably assume that the word is “ATTACKING.” Then you can fill in those extra letters (including three vowels) back under the clues, where the two A’s may help jog your memory to come up with “HADAMARD” as one of those “creators of functional analysis.” Now you’ve got several more letters—a bunch of critical consonants—to fill in where *they* belong in the solution. And so on. Apostol says, “Once you have filled in just a few letters in the diagram, you will be amazed to see words and phrases begin to take shape.” Well, make that *quite* a few letters.

Anyone up for the challenge can order Apostol’s acrostics from the Caltech Bookstore for \$9.95. Also available (for \$39.95), for those who prefer something less than total immersion, is *Patras Diary*, by Jane Apostol, Tom’s wife: an entertaining account of a semester in 1978 spent teaching mathematics in Greece—leavened with accounts of travel and delicious meals among Tom’s Greek relations. Add \$3 for postage and handling (\$4 if you order both). □

Caltech Bookstore, 1-51, Pasadena, CA 91125; phone: 626-395-6161; or e-mail: citbook@caltech.edu