Letters

We are always happy to hear from our readers; send your comments to Fernando Gouvêa at fqgouvea@colby.edu. *We can only print a representative selection of letters, and even those will have to be edited because of space constraints. We are particularly grateful for letters correcting errors.* Nostra culpa, nostra maxima culpa.

Pre-1940 Women PhDs

We would like to indicate two small errors in the August-September 2009 article "MAA Receives $24,000 Bequest from the Estate of M. Gweneth Humphreys." They both appear in the paragraph noting some of the women who received doctorates from the University of Chicago in the period 1920–35. Frances Baker is listed as having received her PhD in 1932, but the degree was awarded in March 1934. A 1933 recipient of a PhD is listed as Anna Newton; the correct spelling of her first name is Abba. More information about these women can be found in our book *Pioneering Women in American Mathematics: The Pre-1940s PhD's*, published by the American Mathematical Society and London Mathematical Society. Expanded versions of the biographical entries in the book can be found at http://www.ams.org/bookpages/hmath-34/PioneeringWomen.pdf.

Judy Green
Marymount University
Jeanne LaDuke
DePaul University

The Other AAAS!

I want to bring to your attention an error in the August/September 2009 issue of *MAA FOCUS*. On page 15, there is a short blurb, "AAAS Elects Fellows." Although the AAAS is described as the American Association for the Advancement of Science, the people you have listed were elected as Fellows for a different AAAS, the American Academy of Arts and Sciences (http://www.amacad.org/news/new2009.aspx has the information.).

The following mathematicians were elected as Fellows for the American Association for the Advancement of Science in 2008: Walter Craig, McMaster University, Robert J. Daverman, University of Tennessee, Knoxville, Richard Durrett, Cornell University, Alexander Nagel, University of Wisconsin, Jacob Rubinstein, Technion-Israel Institute of Technology, William Y. Velez, University of Arizona. Elections for 2009 Fellows are currently in progress.

Ed Aboufadel
Secretary, Section A (Mathematics)
American Association for the Advancement of Science

The Need for Algebra Skills

The letter from Joan Reinthaler, "Attacking the Problem, Not the Symptom," in the August-September issue of *MAA FOCUS* expressed an opinion that I have held for a long time, ever since teaching high school mathematics in the 1960s. Even then, there was a desire to have as many students as possible enrolled in high school calculus. A study involving several hundred students showed that calculus in high school did not improve performance in college calculus. (*The Effects of Calculus in High School on College Calculus Performance,* Rash and Luciano, National Council of Teachers of Mathematics, 1977.) At that time, we discussed the need for better algebra skills, and the same lament is being expressed today.

The mathematics department at my institution gives a placement test to entering freshman to determine their level of precalculus skills and uses this information to place students in an appropriate mathematics course. After reading the comments of Reinthaler, I plan to urge my department to have a dialog with the admissions officers about the role of calculus in the transcript as it related to admitting students. Indeed, as she remarks, a strong algebra background being the key to success in calculus is "right on," but the questions remain: How do we determine if students have a *strong* algebra background? How do we convince school administrators of the importance of algebra in the curriculum?

Agnes M. Rash
Saint Joseph's University

Calculus in High School

Several times, I have asked high school and college students "If you are constructing a building too fast and the walls on floor one are weak, then what is going to happen when you begin constructing floor two?" They have always said something like "there will be a crash" or "everything will fall down." "Exactly. Now, think about the mind that you are developing, that you are building. Do you want to build a strong solid mind at a steady pace or do you want to go too fast?" Lots of parents at that time (and lots of parents today) wanted (want) their children to learn material that they cannot understand. But many former students before and many students today understand what I was saying.

A small number of students can handle calculus in grade 12, but schools should consider only having the four basic classes (Algebra I, Geometry, Algebra II and Trigonometry with each class held one full year) or including a fifth class other than calculus that will make them even more prepared for calculus in college (logic, more applications of algebra, finite mathematics, development of algorithms, etc.).

John T. Ward
Columbia, Missouri

Why This Rush to Calculus?

Teaching AP-calculus veterans who repeat Calculus I in college because they're ill-prepared for the next course bears out all that Joan Reinthaler writes. Most of these stu-

dents were hustled through algebra with only one goal: getting them into calculus by senior year. With a shaky foundation in algebra and functions, they didn't understand calculus very well. They repeat the course in college, still lacking solid pre-calculus underpinnings. The top students in the class are often those who never saw dy/dx but are fluent in algebra and familiar with graphs of functions.

High-school calculus can be an intellectual adventure for a small percentage of students. For too many others, it's an educationally unsound ordeal. How can we convince parents that their child might not be a member of that small minority for whom accelerated algebra and high-school calculus is the right choice? Many don't even know what calculus is, but they've been told that their son or daughter must have it. But appreciating the ideas of calculus takes intellectual maturity. Few secondary-school students have this maturity yet.

Calculus is a college course. I beg high schools to prepare our future students for calculus, instead of inflicting it on them before they're ready to tackle it with enthusiasm and enjoyment.

Mary Murphy
Smith College

Stewart's House and Stewart's *Calculus*

An aphorism reminds us that a picture is worth a 1,000 words. So it is not surprising the five pictures which accompanied Ivars Peterson's article "The House That Calculus Built" established the real message. Peterson had a potentially catchy idea: a mathematics professor — calculus textbook author even — designs his new house to include curves and surfaces. Unfortunately, the article tells us almost nothing about how James Stewart's inspiration was implemented. Rather, at a time of economic distress and in an age encouraging restraint in personal consumption, the reader carries away the following facts: 24 million dollars, exotic location and materials, five stories tall, a private concert hall for 150, and open spaces worthy of a five-star boutique hotel. All this is for the daily living of one man and his family. Via the double entendre in the article's title, the reader also is reminded the house is paid for by royalties from thousands of students, the cost of whose obscenely expensive calculus texts can exceed a semester's course tuition or groceries. The article was, in fact, an interesting biographical sketch of Stewart. By including all those pictures, however, it became inappropriate for and distasteful in an academic organization's newsmagazine.

Stephen B. Rodi
Austin Community College

Overpriced *Calculus*

I found the biography of Stewart and the tale of his house interesting, but there was one aspect that troubled me. The article states that his texts outsell all others combined. We have seen an absurd and unreasonable climb in the price of textbooks over the years. I am happy for the success of Professor Stewart, but he is surely by many orders of magnitude one of the wealthiest mathematicians in the world, and he surely has some say, at this point, about what price is charged for his text. The current list price is over $170, which is outlandish for a book that sells so many copies, is in its 5th edition, and does not face distribution problems that non-textbooks might face. Yes, he has a very nice house, but students, who have little choice in the matter, have financed his house with overpriced textbooks.

Steve Edwards
Southern Polytechnic State University

Bullfeathers!

Your August-September issue has a Letter to the Editor titled "More on Late Homework," by Russ Goodman. I've never seen such bullfeathers in an MAA publication! It's simply beyond my comprehension why the matter of late-homework penalty keeps surfacing and re-surfacing. Goodman's letter alludes to "consequences" of late homework. Late homework means delayed feedback and delayed learning. Students should not receive additional punishment for late homework.

John Steinbeck, in "The short reign of Pippin IV " wondered what would have happened if Louis XVI and Marie Antoinette had *not* tried to escape during the French Revolution. Would their fate have been like that of Pippin IV — ignored but alive? Similarly, what if professors and TAs were simply happy to look at homework, whenever they did "come in?"

Years and years (and years) ago, I was a Teaching Assistant for a multivariable-calculus course. As the semester wore on, two or three students fell behind on their homework. Some weeks before the end of the semester, the students approached me. Working on older assignments, they said, would really help them to catch up on the course material. Would I accept (and grade) late homework from them? I wasn't familiar with the arcane details, if any, of the school's homework-policy. I said simply that "if you hand it in, I'll grade it." I couldn't help notice that the late students were putting a lot of effort and care into their homework. Little by little, they were catching up. I'm pretty sure I saved at least one student from failing. The professor never seemed to notice anything unusual. That was just fine with me.

Perhaps the discussion ought to turn from students being late in handing in homework to professors who are chronically late in handing back graded homework. This bad habit often leaves students "in the dark" for *weeks,* about very tough and substantial problems they'd been forced to do as homework rather than discuss in class, and whose (publisher-provided, professor-photocopied) "solutions" are sometimes even more confusing than the original problems.

Gila Eban
Cos Cob, CT