

Mitch's Corner a Continued Feature in the Mathematics Education Newsletter

Mitch Bernstein taught high school math in Philadelphia for 31 years. He taught both traditional math and the reform *Interactive Mathematics Program*, and co-authored *Algebra 1: An Integrated Approach*. He is now retired. To our delight, Mitch compiled many resources over his years of teaching, and he's ready to share them! In this issue of the Newsletter, we continue to feature samples of Mitch's resources, which include challenging problems, themed worksheets, tips for new and experienced teachers, advice on assessment, etc. ... Look for *Mitch's Corner* in this and following Newsletters!



"Quality Class" - an extraordinary international opportunity

Arcadia students and recent graduates often attend these meetings of new and soon-to-be teachers as USA delegates. The next quality class will be organized by Patizia Laiolo and Claudia Testa from the School of Specialisation in Turin (Italy) and Lambrecht Spijkerboer from APS-Utrecht (the Netherlands). As usual, visiting an international conference will be part of the experience; this time it's the CME '08 conference in Poland: www.cme.rzeszow.pl (see article below). The program will be:

13 August - traveling to Iwonicz Zdrój. Meeting in the end of the day.

14 - 22 August - scientific program, including the CME-conference.

Exact costs are still being negotiated. As you can see at the website of CME-conference, the regular registration and conference fee will be 300 €. As soon as we have more information about the prices for the students, we can let you know of additional costs and/or reduced rates. **If you have an interest in this summer's class, contact Dr. Appelbaum at appelbaum@arcadia.edu.**

Hold Your Horses!

Fantastic International Conference Opportunities

CME '08. as mentioned above, the Children's Mathematics Education Conference will be in Iwonicz-Zdrój, Poland, August 17-22, 2008. www.cme.rzeszow.pl Theme: Supporting independent thinking through mathematical education. Peter Appelbaum of Arcadia University is a plenary speaker!

ICME '08. International Congress on Mathematical Education will be in Monterrey, Mexico, July 6-13, 2008. Help shape the program with your own questions, which you can enter at the conference website! <http://icme11.org/>.

NCTM Annual Conference, "Becoming certain about uncertainty," Salt Lake City, Utah, April 9-12, 2008. <http://www.nctm.org/conferences/default.aspx?id=52>.

Certification in Mathematics

- are you taking the math courses you need?

We all know that ten mathematics content courses are required: Three semesters of Calculus, Linear Algebra, Discrete Mathematics, Abstract Algebra, Probability, Mathematical Statistics, Geometry, and History of Mathematics. But are your plans clear for when you will be taking them? Students who do not plan ahead sometimes run into problems meeting their personal time-frame for completing all of these courses. If you have any questions, *please contact Peter at Appelbaum@arcadia.edu*.

Experienced Teacher Corner

- teacher discussion groups forming for 2008-2009

What do you do if you are already certified? You join a discussion group, of course! Two possibilities already exist:

1. **FaceBook** - join the group, "Math in School is Art for Social Change," and create spontaneous acts of mathematical pleasure together with mathematics teachers from around the world.
2. Email Peter with your interest; we'll be forming **live groups for next year** over the summer.

Graduate Colloquium on Science & Justice, January 23rd

Takes place in Grey Towers Castle, 7-9 pm. Science and justice have intersected throughout history, but primarily from the 1800s to the present science began to play a larger role in judicial proceedings. Many of the historical science and justice issues were framed in religious terms: Galileo was imprisoned by the Church for heliocentrism in the 1600s, and the Scopes trial in the 1920s debated the teaching of evolution versus Biblical interpretations. By the late 20th Century, science began its greatest influence on the judicial system. For example, forensic DNA technology has created a national database, forensic files, and the solutions for countless crimes. Justice has gained a tool which has resulted in the post conviction exonerations of individuals convicted of serious crimes. What is next? Please join us for a trip through time, on justice and science, past, present, and future. Larry A. Presley, MS, MA, D-ABC, Director, Forensic Science Program, Arcadia University

Mathematical Literature Hits the Big-Time!

Have you noticed the sudden flood of mathematically-themed literature to hit the shelves recently? And most of it is astonishingly good! Try one. Consider writing a review for the Book Review section of the *Newsletter* (see below). Some suggestions (with links), none of which have yet appeared on Peter's syllabi!:

Fienberg, Anna. [Number 8](#). Walker Books, 2007.

Which Praxis Test Do I Need? – Adding an Additional Certification ... <https://www.tcs.ed.state.pa.us/PRAxis/index.asp>

Hathout, Lieth. [*Crimes and Mathdemeanors*](#). A.K. Peters, 2007.
Kazman, Alex. [*Reality Conditions: Short Mathematical Fiction*](#). MAA, 2005.
Lichtman, Wendy. [*Do the Math; Secrets, Lies, and Algebra*](#). Harper Teen, 2007.

Erica Davila 2007-2008 Advisor for Mathematics Education

You may or may not know that Peter Appelbaum is on sabbatical for the academic year 2007-2008. He is a Guest Professor at the Freie Universität in Berlin, Germany, working with the “Learners’ Perspectives” research team on international comparisons of mathematics classrooms. While Peter is away, he is, as always, available through email. However, if you need any advice, help with applying for student teaching, course selection, etc., Erica Davila has generously agreed to take on Peter’s local advising duties for the year. She is not only a friendly and helpful face, but also a wealth of information on mathematics education, especially having to do with social justice and diversity issues. Professor Davila’s office is right next door to Peter’s, in Taylor 310C; her email address is Davila@arcadia.edu; her office phone is 215-572-2114. You can also contact Dr. Steven Gulkus, Department Chair, at Gulkuss@arcadia.edu.

Book Reviews

Following up on the well-received review of *Rethinking Mathematics: Teaching Social Justice by the Numbers*, by Patricia Marnien Tresnan, Mathematics Teacher, Jenkintown Schools, Arcadia MAEd 2003, we welcome reviews of materials and resources that you have found more or less valuable in your work. Please contact Peter if you would like to have your ideas included in future issues of this newsletter. **Possible books to consider reviewing (or suggest your own!)**

D’Ambrosio, Ubiratan. 2001. *Ethnomathematics: Link between traditions and modernity*. Rotterdam: Sense Publishers.

Gellert, Uwe, and Jablonka, Eva (eds). 2007. *Mathematisation and demathematisation: Social, philosophical, and educational ramifications*. Rotterdam: Sense Publishers.

Gutstein, Eric. 2006. *Reading and writing the world with mathematics: Toward a pedagogy for social justice*. NY: Routledge.

Skovsmose, Ole. 2005. *Travelling through education; Uncertainty, mathematics, responsibility*. Rotterdam: Sense Publishers.

Walshaw, Margaret (ed). 2004. *Mathematics education within the postmodern*. Charlotte, NC: Information Age Publishing.



Mitch's Corner

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Here is one of Mitch’s famous *Problems of the Week*:

You are a newspaper carrier who delivers a newspaper to peoples’ homes every day of the

week for \$4 per week. One day Mrs. Reader offers you a different way of getting paid: "Suppose I put five bills in a bag and have you put your hand in the bag and pick one bill at random. The bills will be four \$1 bills and a \$20 bill. You keep what you get as payment for that week and you will be paid this way every week for the next fifty weeks. Of course, I will replace whatever you took the previous week so you always will be picking from four \$1 bills and a \$20 bill."

You must decide whether to accept Mrs. Reader's offer or to continue collecting \$4 each week. Your problem, then, is to decide whether you will get more money over the fifty week period by **drawing from the bag or being paid at \$4 per week**

and . . . you must tell how much more money you would **expect** to get over the fifty week period using the method you chose. **Justify (explain) your answer.**

Mitch's collected resources are being bound for availability in the Landman Library Curriculum Materials collection. You may also pick up a free CD of the same resources in Taylor 312A.

Your Advisor☺

Peter Appelbaum does not have any official office hours while on sabbatical. But email, because he will likely check his inbox regularly... appelbaum@arcadia.edu. Arcadia students needing immediate assistance should contact Ms. Mary Dress in the Education Department office, at 215-572-2938.

Mitch's Corner Solution

Since you are equally likely to choose each of the bills in the bag and since there are five bills, then the probability of picking each bill is one-fifth. Over a 50 week period you would expect to choose the \$20 bill 10 times and a \$1 bill the other 40 times.
Your expected pay drawing from the bag is $(10 \times \$20) + (40 \times \$1) = \$200 + \$40 = \$240$.
Your pay at \$4 per week for 50 weeks would be $50 \times \$4 = \200 .
If you accept Mrs. Reader's offer you would expect to get \$40 more over the 50 week period.