UI Math Club

The purpose of the club is to bring together different avenues for those who have an interest in mathematics, provide career insight for math students, and to provide a positive promotion for the math discipline. The 2005-2006 UI Math Club Officers are: President—Josie Imlay, Vice President— Nathan Bialke, and Scribe— Fred Hole. The faculty advisor is Mark Nielsen.

Math Club activities include a Math Knowledge Bowl in the Fall and a celebration of Pi Day including the "Integration Bee." Look for announcements of Math Club events. Come join the fun!

Layne Lund, Peter Marcy, and Kamran Khan

The third annual "Integration Bee" - an event like a spelling bee, but with calculus - was held as part of our "Pi Day Eve" celebration (Pi Day is March 14 - that is, 3/14.).

PETER MARCY was the champion for the third year in a row. **KAMRAN KHAN** and **LAYNE LUND** were runners up.

Math Picnic 2005

The Fall 2005 Math Department Picnic will be Wednesday, September 7th beginning at 5:00 pm at the Shattuck Amphitheater on the UI campus in Moscow.

Come celebrate the start of a new academic year, enjoy some Free Food, and meet math faculty and students.

We hope to see you on September 7th!

Teaching High School Math

Any student intending to teach math at the high school level should have at least two advisors:

- one in the Math Department
  (Cynthia Piez, cpiez@uidaho.edu or
  David Thomas, dthomas1@uidaho.edu), and
- one in the College of Education
  (contact John Davis, jcdavis@uidaho.edu)

Your advisors can alert you to changes in course offerings, tutoring and scholarship opportunities, conferences, and directed study opportunities. These various activities can be added to your professional resume and will help you become a better teacher.

There are two different routes you can take to becoming certified to teach high school mathematics in Idaho. One is to complete a degree in Mathematics through the Math Department and to take certification courses through the College of Education. You can also complete a degree through the College of Education and complete a 47 credit teaching major in secondary math education, or complete a 32- credit teaching major with a 20- credit minor. Talk to your advisors to decide the best program for you.

Congratulations Dr. Abdo!

Zaid Abdo with his major professor, Paul Joyce, at graduation in May

Judith Totman Parrish (dean, College of Science), Elna Grahn, Stacey Patchett, Monte Boisen

Outstanding Senior in Mathematics

At the Spring commencement reception **TYREL JOHNSON** and **MATTHEW PETERSEN** were each given the 2005 Outstanding Senior Award in Mathematics. This award is presented annually to the seniors that have shown exceptional mathematical talent. Each student honored is given a cash award and is recognized on an engraved plaque in the Mathematics Department office.

TYREL JOHNSON is an outstanding student. He looks for challenges and quietly excels in everything he does. His Advanced Calculus Professor, Frank Gao, said that Tyrel was the best student in his class. This course includes both undergraduate and graduate students, and is considered by many to be the most difficult undergraduate course in the university. Tyrel worked as a tutor in the Polya Mathematics Learning Center for several years. Because of his mathematical talent and his ability to explain Mathematics, the Director of Polya, Kirk Trigsted, asked him to be in charge of the Calculus Rooms. Students felt that he understood their questions and then gave an explanation that they understood.

MATTHEW PETERSEN is a Renaissance man. He wants to learn everything. He graduated with majors in Mathematics and Philosophy, and he almost has a major in History. He took advanced courses in Physics, English, Latin, and Greek. Matt excelled in Mathematics. He took graduate level mathematics courses as an undergraduate. His professors said that he has a natural feel for Mathematics. In 2003 he participated in the Putnam Competition. This is a national competition sponsored by the Mathematical Association of America. More than 3,000 mathematics students participate. Matt placed in the top 1/3 in the United States.

Elna Grahn Polya Scholar Award

At the Spring commencement reception **STACEY PATCHETT** received the Elna Grahn Polya Scholar Award.

Stacey excelled as an undergraduate student. She plans to be a high school Math teacher in Idaho. The University of Idaho derives great pride from providing the state with such a talented and dedicated young person.

This award was initiated by Professor Elna Grahn and two other donors to recognize a student who has demonstrated excellence in and commitment to the application of technology in the teaching of Mathematics. Thanks to the gifts of three major donors, we are about a third of the way to our $20,000 goal for this scholarship fund.

Elna Grahn retired in 1969 from UI as a Professor Emeritus of Mathematics. She taught here for 22 years and was a pioneer in the use of television in teaching. Through her efforts, a tutorial lab was established for students taking Mathematics classes. It was the precursor to the current Polya Mathematics Learning Center. Elna has taught mathematics at the high school, junior college, and university level. She was one of the first officers in the Women's Army Corp in WWII, leaving the service as a Major.

Dean's List

Each semester the Dean of the College of Science lists those students who have received a grade point average of 3.3 or better and have taken at least 14 credits for a letter grade. The Mathematics majors on the Spring 2005 Dean's List are:

DANIEL AGTE	PETER MARCY
NATHAN BIALKE	NICOLLE MARSELLE
RYAN BLUE	NATALIE MILLER
ERIN CASEY	JULIE MOORE
JENNIFER COFFEY	MAN KIU NG
EMILY DENN	DUSTIN NORTON
ERIC EDWARDS	STACEY PATCHETT
LEIF ELGETHUN	MATTHEW PETERSEN
JONATHAN GAFFNEY	FAUNA SAMUEL
SHANNON GRANT	MICHAEL SHAW
CORINNE HAASE	ABIGAIL SOBCZYK
JOHN HAMILTON	HOLLY STEEL
BRIAN HANSEN	ADAM SUK
FREDERICK HOLE	NICHOLAS SUMMERS
TYREL JOHNSON	KATIE TOMASZEWSKI
KYLE KING	SCOTT VOYLES
LAYNE LUND	RYAN WILLIAMS
JESSE MACLURE	NIU YANG

Congratulations!

Over the years we have taught many students that have gone on to teach in Idaho and across the country. We began compiling this list and posted the first group of teachers in the Spring 2005 Math News. Below are the new additions to the list, along with where they have since taught. Each person listed is one of our graduates!

- **DANIEL BURTON** received a B.S. and M.S. degree from UI in 2001 and 2004, respectively, and taught at the University of Idaho.

- **JIM CARLSON** received a B.S. degree from UI in 1967. He was the Chair of the Mathematics Department at the University of Utah. He is the President of the Clay Mathematics Institute.

- **DIANA CORDWELL JOHNS** received a B.S. in Mathematics from UI in 1977. She teaches internal medicine at the University of Nevada School of Medicine.

- **ELIZABETH CUNNINGHAM** received a B.S. and M.S. degree from UI in 2002 and 2004, respectively. She taught at the University of Idaho.

- **TAE DO** received a Ph.D. degree from UI in 1989 and is teaching at Yeunguan Institute of Technology in Korea.

- **GEORGE DORS** received a M.S. degree from UI in 1966 and is teaching at Eastern Washington University.

- **NEWMAN FISHER** received the first Ph.D. degree in Mathematics from UI in 1962. He is a retired faculty member at San Francisco State University.

- **MILT JACOBS** received a M.A.T. Degree in Mathematics from UI in 1981 and has taught at Gonzaga University.

- **CALVIN LONG** received a B.S. degree from UI in the 1950 and is a retired faculty member at Washington State University.

- **ERIC MACK** received a B.S. and M.S. degree from UI in 2002 and 2004, respectively, and taught at the University of Idaho.

- **BOB PARK** received a M.S. degree from UI in 1990 and has taught at at Southern Louisiana University.

- **PAUL PERDEW** received a Ph.D. degree from UI in 1975 and taught at the University of Scranton.

- **GARY PETERSON** received a M.S. degree from UI in 1974 and taught at Peninsula College, Washington.

- **JOHN REAY** received a M.S. degree from UI in the 1958 and is a retired faculty member at Western Washington University.

- **ANALEE RESEIGH** received a B.S. and M.S. degree from UI in 1995 and 1998, respectively, and is teaching at Boise State University.

- **LEO SCHOWALTER** received a B.S. degree from UI in 1975 and was Chair of the Physics Department at Rennselaer Polytechnic Institute.

- **JIM STERN** received a Ph.D. degree from UI in the 1968 and has taught at the University of Hawaii.

- **WES STONE** received a M.S. and Ph.D. degree from UI in 1966 and 1970, respectively, and has taught at Eastern Washington University.

- **JESSE JON TURNER** received a M.S. and Ph.D. degree from UI in 1977 and 1981, respectively, and has taught at American University of Beirut and Boise State University.

- **WILLIAM DRAKE WALLICK** received a M.A.T. degree from UI in 1987 and is teaching at Treasure Valley Community College.

- **YA YEN WANG** received a Ph.D. degree from UI in the 1965 and taught Mathematics and Computer Science at University of Idaho.

- **JON WELLNER** received a B.S. degree from UI in 1968 and is a professor at the University of Washington.

- **UNDUPITIYA "WIJI" WIJESIRI** received a Ph.D. degree from UI in 1995 and taught at Monmouth College.

- **MIKE ZELLER** received a B.S. degree from UI in 1973 and is teaching at DePauw University, Greencastle, Indiana.

- **CRAIG ZEMKE** received a B.S., M.S. and Ph.D. degree from UI in 1969, 1971, and 1975, respectively, and has taught at Coe College, Cedar Rapids, Iowa.

Student Honors

KATHRYN TOMASZEWSKI was awarded an internship with NASA this summer. She worked at the Goddard Flight Center in Greenbelt, Maryland.

At Commencement **TYREL JOHNSON** received the John B. George Award as the outstanding graduating senior in the College of Science. The award is based on academic achievement and service to the university community. The actual award is a 50 ounce silver bar, a cash gift, and the recipient's name engraved on a permanent plaque in the Dean's Office.

Putnam Competition

Have you ever participated in a Math contest? Now is your chance. Each year early in December the Mathematical Association of America conducts the Putnam Competition for math students throughout the United States and Canada. If you have had a variety of math courses and enjoy challenging problems see Ralph Neuhaus in Brink 302 for details. You can join our seminar (Math 400) which helps you prepare for the exam.

In the 2004 competition, **RYAN BLUE** did well. He placed in the top 35% of the more than 3700 mathematics students competing nationwide.

Congratulations on a Job Well Done!

Staff Honors

JANA JOYCE was honored at the 2005 UI Staff Awards Reception with an Outstanding Employee Award. As part of the recognition for her dedication and hard work, Jana received a plaque and a cash award.

Jana is the Financial Technician for the Math Department. She is an incredibly hard worker that helps keep the Math Department running. She truly earned this award.

Congratulations, Jana!

Math Puzzler Solutions

#1 Find The Length

The length is 10. *RS* is a diagonal of the rectangle *ORPS*, the other diagonal is *OP* which has length 10.

#2 Play This Game

You may not want to play this game. You would end up with less than 14 cents. This is not really a probability problem. After each turn you end up with either .5 or 1.5 times the amount before the turn. Your final amount will be $(1000) * (.5)^{45} * (1.5)^{55} \approx .138$.

The order in which you draw the cards is immaterial. If you drew two *wins* and then one *lose* you would have $1000 * (1.5) * (1.5) * (.5)$; if you drew a *win* then a *lose* then a *win* you would have $1000 * (1.5) * (.5) * (1.5)$.

Actuarial Science

EXAMS

The Society of Actuaries Exam P, Probability, will now be computer based. It will be offered 4 times in 2006 at various sites in the U.S. The closest sites are Spokane and Garden City, Idaho. The exam covers the material in Math 452, Probability Theory. However, the questions are phrased in terms of risk and they are not textbook questions. Students need intense preparation. A seminar, Math 455, will be offered in the Spring to prepare students for the exam.

REQUIRED COURSES

The Society of Actuaries requires that you take certain courses in Economics, Finance, and Statistics. See Ralph Neuhaus in Brink 302 for a list of these courses. He can also give you details on how these courses can be substituted for some of your degree requirements.

Recent Graduates

ZAID ABDO graduated in May 2005 with a Doctor of Philosophy degree in Bioinformatics and Computational Biology. Zaid's thesis title was "Computationally Intensive Statistical Methods for Choosing, Assessing, and Validating Statistical Models Describing Genetic Polymorphism, with Applications in Population Genetics, Phylogenetics and Microbial Ecology." His major professor was Paul Joyce.

RYAN BLUE graduated in May 2005 with a Bachelor of Science degree in Mathematics. He also earned a Bachelor of Science degree in Computer Science. He will work for the National Security Agency.

JOSEPH BOCHENEK graduated in May 2005 with Bachelor of Science degrees in Mathematics and Physics.

MARY BUCHANAN graduated in December 2004 with a Bachelor of Science degree in Mathematics.

SUZANNE CAZEAU graduated in May 2005 with a Master of Arts in Teaching Mathematics degree. She is a lecturer in the Math Department at UI.

NIRAJ CHITRAKAR graduated in May 2005 with a Bachelor of Science degree in Applied Mathematics.

EMILY DENN graduated in May 2005 with a Bachelor of Science degree in Mathematics.

JESSICA DENNEY graduated in May 2005 with a Bachelor of Science degree in Mathematics. She was commissioned an Ensign in the U.S. Navy. She received the Secretary of the Navy's Distinguished Midshipman Graduate Program award.

ANGELA DRISCOLL graduated in May 2005 with a Bachelor of Science degree in Applied Mathematics. She will attend graduate school in Economics at the University of New Mexico.

LEIF ELGETHUN graduated in May 2005 with Bachelor of Science degrees in Mathematics and Chemistry.

WAHID HAMIDY graduated in May 2005 with a Master of Arts in Teaching Mathematics degree.

NATHANIEL HINDS graduated in December 2004 with a Bachelor of Science degree in Mathematics.

TYREL JOHNSON graduated summa cum laude in May 2005 with Bachelor of Science degrees in Mathematics and Physics. He will attend graduate school in Physics at the University of Maryland.

TIMOTHY LINDSAY graduated in May 2005 with a Bachelor of Science degree in Applied Mathematics. He is attending Officer Candidate School with the U.S. Navy.

LAYNE LUND graduated in May 2005 with a Bachelor of Science degree in Applied Mathematics. He also earned a Bachelor of Science degree in Computer Science.

NICOLLE MARSELLE graduated in May 2005 with a Bachelor of Science degree in Applied Mathematics.

ERIK MENTZE graduated in May 2005 with a Bachelor of Science degree in Mathematics. He also earned a Bachelor of Science degree in Electrical Engineering.

STACEY PATCHETT graduated in May 2005 with a Bachelor of Science degree in Mathematics.

MATTHEW PETERSEN graduated in May 2005 with a Bachelor of Science degree in Mathematics.

JENNIFER PHAN graduated in May 2005 with a Master of Arts in Teaching Mathematics degree.

DAVID ROHRBAUGH graduated in May 2005 with a Master of Arts in Teaching Mathematics degree.

JOHN RUSH graduated in May 2005 with a Bachelor of Science degree in Mathematics.

JEREMY RYDER graduated in May 2005 with a Bachelor of Science degree in Applied Mathematics.

FAUNA SAMUEL graduated in May 2005 with a Bachelor of Science degree in Mathematics. She also earned a Bachelor of Science degree in Biological Systems Engineering.

VANYA SHAW graduated in May 2005 with a Master of Arts in Teaching Mathematics degree.

ADAM SUK graduated in May 2005 with a Bachelor of Science degree in Mathematics.

WOR THONGTHAI graduated cum laude in May 2005 with Bachelor of Science degrees in Mathematics and Physics. He will attend graduate school in Physics at North Carolina State University.

WEI WEI graduated in May 2005 with a Master of Science degree in Mathematics. She is a PhD candidate in Mathematics at UI.

RYAN WILLIAMS graduated in May 2005 with a Bachelor of Science degree in Applied Mathematics.

JOHNNY ZAMOR graduated in May 2005 with a Master of Arts in Teaching Mathematics degree.

XUE ZHONG graduated in May 2005 with a Master of Science degree in Mathematics. She is a PhD candidate in Mathematics at UI.

2005 Mathematics Graduates at Spring Commencement

STEVE KRONE has been promoted to Professor of Mathematics. He is well known amongst the undergraduates for his courses on Mathematical Biology and Stochastic Models. The graduate students prize his analysis courses. He was one of the founders of IBEST, Initiative for Bioinformatics and Evolutionary Studies, a collaborative research program at UI uniting researchers in Mathematics, Computer Science, and Biology. He has written numerous research articles on using mathematics to model biology. Steve's PhD student was Koffi Sampson.

FRANK GAO has been promoted to Associate Professor of Mathematics with Tenure. In June he gave an invited talk at the High Dimensional Probability IV Conference in Santa Fe, New Mexico in June.

At the Math Graduation Reception, Teaching Assistants **RYAN BAUER, SUZANNE CAZEAU, MISTI DAWN FOWLER**, and **SERGIY KRASNOZHON** were presented with Excellence in Teaching Awards.

Ryan   Suzanne   Misti   Sergiy

PAUL JOYCE, STEVE KRONE, WEI WEI, GRANT GUAN, and **RUINAN LU** attended the Microbial Population Biology Gordon Conference in July in Andover, New Hampshire.

Wei   Grant   Ruinan

DAVE THOMAS gave a presentation at the National Council of Teachers of Mathematics 2005 in Anaheim, California in April.

In June, **CYNTHIA PIEZ** conducted a workshop in Moscow for K-12 teachers on classroom assessment for math proficiency.

BROOKS ROBERTS attended the American Mathematical Society Sectional Meeting in Bowling Green, Kentucky in March.

STEVE KRONE gave an invited presentation at the National Institute of Health Symposium on Evolution of Infectious Diseases in Bethesda, Maryland in July.

DAVE THOMAS gave workshops this summer for teachers in the Coeur d'Alene Mathematics Project.

KIRK TRIGSTED attended the Center for Academic Transformation R2R meeting in Baltimore, Maryland in June.

PAUL JOYCE gave a Colloquium talk at McMaster University in March. He also gave an invited talk at the Mathematical Biosciences Institute Workshop on Recombination in Columbus, Ohio in June.

MONTE BOISEN, DAVE THOMAS, and **CYNTHIA THOMAS** traveled to Texas A&M for work on the Gateway to Calculus Project in January.

FRANK GAO gave a presentation at the Eastern Section American Mathematical Society Meeting in Newark, New Jersey and presented a Colloquium talk at the University of Connecticut in Hartford, Connecticut in March.

STEVE KRONE presented his research at the Oberwolfach Institute Workshop on Mathematical Population Genetics in Germany in August.

MONTE BOISEN attended the Mathematical Association of America's MathFest 2005 in Albuquerque, New Mexico in August.

GAIL ADELE and **CYNTHIA PIEZ** conducted a Creative Geometry workshop in August in Boise for Idaho Academy of Mathematics middle school teachers.

ZAID ABDO was appointed as Assistant Professor of Mathematics and Statistics at UI. His position will begin in the Fall of 2006. For the 2005-2006 academic year he is a Post Doctoral Fellow at McMaster University in Canada.

MELISSA VANCE joined the Mathematics staff as the new Administrative Assistant for the Polya Center. Melissa previously worked in the Philosophy Department at UI and in Student Services at WSU.

ROLAND FLEIβNER finished his Post Doctoral Fellowship position at UI in August. He is now a professor at the University of Düsseldorf in Germany.

MATT JEPSEN resigned as Administrative Assistant for the Polya Center and is now working as an Administrative Assistant for the Lionel Hampton School of Music.

TONY SHASKA has resigned his position at UI. He has accepted a position at Oakland University in Michigan, which is close to his family.

Past Graduates

MATT BENKE earned a Master of Science degree in Computer Science from UI in May. He received his B.S. in Mathematics from UI in 2003. He is a Ph.D. candidate in Computer Science at UI.

ROMAN MAKORDEY earned a Master of Science degree in Statistics from UI in May. He received his M.S. in Mathematics from UI in 2003.

ELIZABETH CUNNINGHAM has received a fellowship to graduate school in Economics at the University of California at Santa Barbara. She earned her B.S. and M.S. in Mathematics from UI in 2002 and 2004, respectively. For the past six months she has been a lecturer in Mathematics at UI.

STAN MANU earned a Ph.D. in Mathematics Education from the University of British Columbia in May. He received his M.S. in Mathematics from UI in 1997. He will work for the Ministry of Education in Tonga.

BRANDY WIEGERS has passed her Ph.D. qualifying exam at the University of California at Davis. To complete her Ph.D. in Mathematical Biology she will write her dissertation. She graduated from UI in 2002 with a B.S. in Mathematics.

ERIC SAUERACKER spent the summer teaching math to Upward Bound students on the UI campus. The Upward Bound Program helps high school students catch up on missing credits and gives high school seniors a bridge to college. Eric graduated from UI in 2004 with a B.S. in Mathematics.

Request for Alumni News

We would like to hear from you!

If you have some news/information about yourself that you would like printed in the next Math News, please send your information to Jaclyn Gotch at math@uidaho.edu or to: Department of Mathematics, University of Idaho, PO Box 441103, Moscow, ID 83844-1103.

Please include as much of the following as possible:
- Name
- Year you graduated from UI
- Degree and Major at UI
- Current Occupation
- News about yourself
- Comments, corrections, additions for newsletter
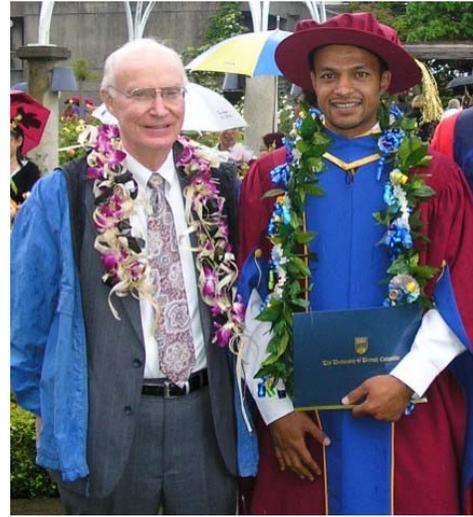
Ralph Neuhaus with Stan Manu at the University of British Columbia's graduation ceremony.
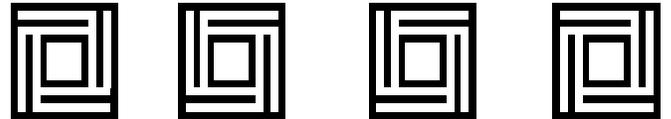
New Graduate Students

JOHN BAILLY received Bachelor's degrees in Mathematics and Physics from Montana State University in 1996. He is a M.S. candidate in Mathematics and a Teaching Assistant in Mathematics.
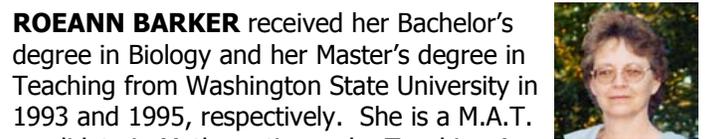
ROEANN BARKER received her Bachelor's degree in Biology and her Master's degree in Teaching from Washington State University in 1993 and 1995, respectively. She is a M.A.T. candidate in Mathematics and a Teaching Assistant in Mathematics.

ERKAN BUZBAS received his Bachelor's degree in Chemistry and Master's degree in Environmental Sciences from Bosphorus University in Istanbul Turkey in 2000 and 2003, respectively. He is a Ph.D. candidate in Bioinformatics and Computational Biology and a Research Assistant in Mathematics.
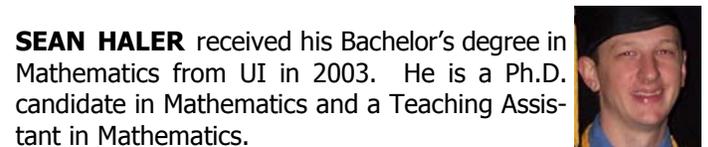
SEAN HALER received his Bachelor's degree in Mathematics from UI in 2003. He is a Ph.D. candidate in Mathematics and a Teaching Assistant in Mathematics.

LUONG DINH TRAN received his Bachelor's degree from Quynhon University of Education in Vietnam in 1985 and his Master's degree at Hanoi University of Pedagogy in Vietnam in 1998. He is a Ph.D. candidate in Mathematics and a Teaching Assistant in Mathematics.

Department of Mathematics
300 Brink Hall
PO Box 441103
Moscow, ID 83844-1103

Fall 2005

Math Puzzlers

#1 Find the Length

A point *P = (x,y)* is chosen on a circle of radius 10 at the origin. Let *R* be the point *(x,0)* and *S* be the point *(0,y)*. Find the length of RS.
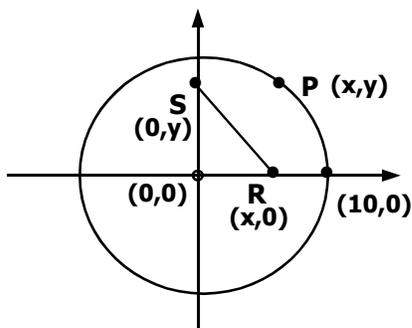
#2 Play This Game

The rules: There are 100 cards, 55 say "*win*", 45 say "*lose*". They are shuffled and are placed face down in a pile. You begin with $1000. For each card turned over you bet half your money and you either win or lose that amount of money. You must play until all the cards are turned over.

How much money do you have at the end of the game?

Math Puzzler solutions can be found on Page 4!