Backgammon: Game On at MathFest 2011

By Art Benjamin

Ath major John VanBuren never expected to come back from MathFest a few hundred dollars richer. But that's exactly what happened when he was one of the winners at the MAA's first backgammon tournament. The event took place the evening of August 4; it attracted more than 50 students and professors who competed for the chance to win more than \$1,000 in cash prizes. The event was sponsored by the U.S. Backgammon Federation (USBGF) and was free and open to all MathFest participants.

Backgammon is one of the world's oldest games of strat-



The final game at MathFest's Backgammon Night. John VanBuren (left) took home \$250, and Paul Coe won \$500.

egy, combining luck of the dice with strategic thinking. It's a two-player game where the goal is to move your checkers around a board and take them off before your opponent does. The rules of the game are easy to follow, and it can be enjoyed by children and adults. But with a few simple mathematical tools, like combinatorics and probability, you can quickly become a very strong player. Many of the attendees had never played backgammon before, so group lessons were given by experts Phil Simborg, Chuck Bower, and Frank Frigo.

"I was amazed at how quickly everyone learned the game and was impressed with the questions they were asking," said Frigo, a former world champion.

After the group lessons, players were treated to a quiz, created by myself and Jennifer Quinn (University of Washington, Tacoma), that combined elementary knowledge of backgammon and mathematics. Some of the questions appear in the box. The quiz answers are online at maa.org/pubs/FOCUSOct-Nov11_BGquiz and will appear in the December 2010/January 2011 issue of *MAA FOCUS*.

Seventy-five people took the quiz, with *Mathematics Magazine* editor Walter Stromquist earning 12 of the 13 possible points. Scoring 10 points apiece were professors David Nacin (William Paterson University) and Jonathan Kane (University of Wisconsin, Whitewater) and graduate student Liz Fitzgibbons (Boston University). Since backgammon combines skill and luck, each of the semifinalists then rolled two dice, and the total was added to their score, with Nacin winning the \$200 prize.

Then came the big event—a single-elimination tournament, directed by Phil Simborg, with 51 players competing for big prize money. Paul Coe from Dominican University won the \$500 first prize. Coe has written many papers on the mathematics of games of strategy and organized a contributed paper session on recreational mathematics. His victory brings to mind a Damon Runyon quote: "The victory is not always to the swift, nor the battle to the strong, but that's the way to bet."

John VanBuren finished second, winning \$250. VanBuren just graduated from Augustana College and will be starting graduate studies in mathematics at the University of Iowa this fall. Scott Lewis of Murray State University and junior Todd Schrader of Texas A&M University were the semifinalists, earning \$125 apiece.

Karen Davis, chairman of the USBGF Board of Directors, called the event a big success. "We are trying to raise awareness of the game of backgammon among college students and faculty. It was especially exciting to see so many bright young people get turned on to backgammon."

Davis hopes that MathFest will lead to a greater turnout at the upcoming USBGF National Collegiate Backgammon Tournament, to be held in November, where students will



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compete for scholarship money.

At the upcoming Joint Mathematics Meetings in Boston, I will coteach the MAA minicourse "Mathematics and Backgammon" with professor Bob Koca (Community College of Baltimore County), a world-class player and one of the game's best theoreticians. If you are interested in setting up a backgammon club at your college or university, then contact me or Phil Simborg (psimborg@sbcglobal.net) or visit the USBGF website, usbgf.org.

Art Benjamin (Benjamin@hmc.edu) teaches at Harvey Mudd College. He is a past winner of the American Backgammon Tour.

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