Pi Mu Epsilon
& GAMECOCK MATH CLUB

Student Seminar

The Minimum Number of Givens in
a Fair Sudoku Puzzle is 17

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Add one more reason to love the number 17☺.

McGuire, Tugeman, and Civario surprised many in the mathematics-of-sudoku community on January 1, 2012 by posting* the result of a huge computation apparently confirming the long-held suspicion that the fewest number of givens in a fair sudoku puzzle is 17. Their proof is a combination of clever programming techniques, mathematical analysis of so-called "hitting sets", and a massive supercomputer computation. We discuss how they did it, what it means, and where to go from here.

Tue. 31st Jan. 2012
6:30 pm
LeConte 101

followed by a Sudoku Championship

* See http://arxiv.org/abs/1201.0749.

☺Just for some purely mathematical examples, 17 is: a twin prime, a Mersenne prime exponent, an Eisenstein prime, a Fermat prime, the number of wallpaper (plane isometry) groups, the length of the longest Berlekamp-Graham "perfectly distributed" sequence in [0,1], the least nontrivial hexadecimal repunit prime, the number of orthogonal curvilinear coordinate systems up to conformal symmetry for which the 3-variable Laplace equation can be solved using separation of variables, and the least number that can be written as the sum of a positive cube and a positive square in two different ways.

Event supported in part by
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