

GAME SHOW "MATHEMATICAL FIGHTS"

The Seventh Annual Michigan Undergraduate Mathematics Conference will be held Saturday, Oct 30, 2004 at Central Michigan University. This one-day conference will end with a "Mathematical Fights" contest, in which teams of undergraduate students will compete for door prizes. The following is a description of that event.

This contest is a team event. Students are asked to form teams of at least three members and at most six members. **The teams that want to participate in this contest will have to register by noon on October 30.** Registration forms will be available on the day of the conference.

If more than eight teams register to participate, the main contest will be preceded by a short competition that will select eight teams to participate in the "Mathematical Fights" contest and will determine their pairing in the first round.

The "Mathematical Fights" contest will consist of three rounds of mathematical games.

HERE ARE THE GAMES FOR THE FIRST TWO ROUNDS!!!

- In the first round (the quarter-finals), the following game will be played:

Numbers $1, 2, 3, \dots, N$ are written on the board (the value of N will be chosen before each game). Two players make their moves in turn. On each move, the player erases a number of their choice and all divisors of this number. The player who will have erased the last number wins the game.

- In the second round (the semi-finals), the following game will be played:

Each square of a 4×4 array contains one or two pebbles. Two players make their moves in turn. On each move, the player chooses a row or a column of the array that has at least one nonempty square and removes one pebble from each nonempty square of this row or column. The player, who takes the last pebble, wins the game. The exact composition of the pebbles in the array will be chosen before each semi-final game.

The game for the final round will be revealed five minutes before the final begins.