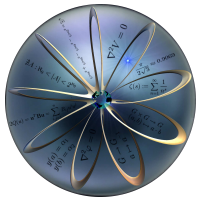

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zero-sum game

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A *zero-sum game* is a game in which only one player can win (that is, achieve the goal of the game) and the losses (the failure to obtain a goal of the game) of any player are matched by gains by another player. A zero-sum game is a finite game (a game that eventually comes to an end), and though only one player can win, the game can also end in a draw (meaning that neither side can win).

For example, in chess, when a player loses a piece captured by another player, the other player gains more open avenues on which to attack the king of the opponent. In Reversi (or Othello), a player must capture at least one of the opponent's pieces; if not, then the player must pass. In poker, all players must contribute to the pot; whoever has the best hand claims the entire pot and the losers lose everything they put in the pot.

Zero-sum games were extensively studied by John von Neumann.