

traditional tictactoe
gomoku
minimum $n \times n$ needed by q in a row
4x4x4 is in fact first-player win
5 in a row
shots/pots
6, 7, 8, 9 in a row
hales-jewett pairing
can draw 9 in a row, even 8 in a row
potentially 7 as well

<http://www.inf.u-szeged.hu/~london/publ/Gyorffy-matcos-paper.pdf>

https://en.wikipedia.org/wiki/M,n,k-game#cite_ref-vandenHerik2002_2-0

<http://web.mit.edu/6.034/wwwbob/GamesSolved.pdf>

brute-force
knowledge-base
initiative?

(1) Can perfect knowledge obtained from solved games be translated into rules and strategies which human beings can assimilate? (2) Are such rules generic, or do they constitute a multitude of ad hoc recipes? (3) Can methods be transferred between games? More specifically, are there generic methods for all category- n games ($n = 1, 2, 3, 4$), or is each game in a specific category a law unto itself?

depth-first search

analyze all cases of a specific thing

threat-space search

A section of the board is chosen where the configuration of the stones seems favorable for the attacking player. It is then decided whether enough attacking stones collaborate making it useful to search for a winning sequence. This decision is based on a "feeling", which comes from a long experience in judging patterns of stones (cf. De Groot, 1965). 2. Threats are considered, and especially the threats related to other attacking stones already on the board. Defensive moves by the opponent are mostly disregarded. 3. As soon as a variation is found in which the attacker can combine his stones to form a double threat, it is investigated how the defender can refute the potential winning threat sequence. Whenever the opponent has more than one defensive move, examination is started whether the same threat sequence works in all variations. Moreover, it is investigated whether the opponent can insert one or more fours

neutralizing the attack. 4. If only some variations do not lead to a win via the same threat sequence, examination is started whether the remaining positions can be won via other winning sequences. 5. In practical play, a winning threat sequence often consists of a single variation, independent on the defensive moves. 6. Notably, the size of the search space is considerably reduced by first searching for one side (the attacker). Only if a potential winning threat sequence is found, the impact of defensive moves is investigated. This approach is supported by the analyses given in Sakata and Ikawa (1981). When presenting a winning threat sequence, they only provide the moves for the attacker, thus indicating that the sequence works irrespective of the defensive moves. Possible fours which the defender can create without refuting the threat sequence are neglected all together.

proof-number

$\alpha\beta$ algorithm

https://en.wikipedia.org/wiki/Alpha%E2%80%93beta_pruning

https://en.wikipedia.org/wiki/SSS*