

Re: Chess

Source: <http://sci.tech-archive.net/Archive/sci.math/2004-06/1019.html>

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On 5 Jun 2004 18:34:33 -0700, chessper5@hotmail.com (chessper5) wrote:

> *Considering the same board position 3 times in a game is a draw, how
> many possible chess games is it possible to have?
> After one move for black and one for white we can have 20×20
> positions, what about n moves?
> I have heard the number of possible games is estimated to 10^{120} , how
> has this been done, how would you do it?
> What is the maximum number of moves for a game to end?
>*

10^{120} are the number of games of go.

http://home.earthlink.net/~mrob/pub/math/numbers-10.html#l_p0_115e42

(quoting)

The number of possible chess games is much higher. [It is $10^{10^{50}}$] An estimate of the number of possible chess games, given by G. H. Hardy ("Ramanujan: Twelve Lectures on Subjects Suggested by His Life and Work", 1999). (end quote)

This leads to my fantasy. Suppose that a system has a database indexed by chess position, each historic (named) player response to that position, and previous position from which a historic (named) player obtained this position in response. Playing consists of identifying who you want to play against—say Fischer for example and the database provides a Fischer response to any move you, make. With slightly higher tech, the system can ignore irrelevant parts of the board and match responses over a wider range. Using hidden markov model technology it could extrapolate from its data moves from positions never before encountered. In effect, clone the chess personality of the greats. Morphy, Alekhine, Anand, Botvinnik, Capablanca, Fischer, Karpov, Kasparov, Korchnoi, Lasker, and Tal.

Any takers? Comments on feasibility? Size needed?

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