

sci.math: Re: How long would it take a computer to completely "solve" chess?

## Re: How long would it take a computer to completely "solve" chess?

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**From:** Guy Macon (<http://www.guymacon.com>)

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(I will be starting a hot project later this week and will be limiting my newsgroup usage to reading selected posts and an occasional reply.)

Sean O'Leathlobhair <jwlawler@yahoo.com> says...

*>But if we do any pruning, can we be sure that we have not missed some  
>very obscure trick? We may have solved the game for all practical  
>purposes but if we have pruned anything, could we really say that we  
>have theoretically solved chess?*

Yes. Your objection is valid for the normal pruning that chess programs do, but there are other ways to prune which have zero chance of missing something subtle like throwing away two rooks and a queen in order to set up a forced mate in 49. Here is how:

Imagine that you are a program searching the entire move tree, looking to find wins, losses and draws.

Now add a modification; if you see a position that has a king and a rook against a king, search one ply farther to rule out stalemate or losing the rook, mark it as a win for the side with the rook, and stop searching that branch. Why? because there exists an algorithm that wins every time from that position. You just pruned without any chance of missing something subtle.

Now imagine a thousand years of humans and computers searching for more algorithms that will reduce the size of the search...

It's not just that RK vs K position that you can prune at either; you can prune at any position that has 6 men on the board (soon it will be 8); we know the result from every such position already.