

## The hardest sudokus (new thread)

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Search this topic... **Search**

1330 posts • Page 5 of 89 • [1](#) [2](#) [3](#) [4](#) **5** [6](#) [7](#) [8](#) ... [89](#)

### Re: The hardest sudokus (new thread)

by champagne » Mon Aug 23, 2010 5:11 pm

**QUOTE**

ronk wrote:

champagne wrote:

To-day, you get the final result in about 4 hours (on my computer).

Since I'm an engineer, statements like that make my hair stand up. 🙄 Everyone, is it too much to ask that execution times be normalized to ... "T" Ghz-sec? Then the rest of us could estimate execution times on our computers by dividing "T" by our CPU clock rate.

\*You are surely right, but I guess most of us have a computer with a clock around 3MGH, so the order of magnitude should not change that much.

To be as precise as possible, I have a portable PC under vista with a double core and a clock of 2.4 GHZ (32 bits registers)

The rating was run with others programs, so the overall time could be influenced by other tasks.

Anyway, the 4 hours is a rough estimate. Could be 3 (small chances), could be 5 as well.

champagne

**champagne**  
2017 Supporter  
  
Posts: 7269  
Joined: 02 August 2007  
Location: France Brittany



### Re: The hardest sudokus (new thread)

by m\_b\_metcalf » Tue Aug 24, 2010 6:52 am

**QUOTE**

champagne wrote:

m\_b\_metcalf wrote:

It was 'only' 11.4 back then. I peaked early.

This puzzle is likely the highest known rating for SE.

Gosh, if true, that would make me the reigning **World SE Champion**! 🙄

BTW, I tried to find a start for the pattern game using that pattern, but I failed.

I tried that too.

I went back to the original pattern, as an exercise using my current sw, rather than the antiques [back then](#), and found a diamond and a few others you might like for your collection.

**CODE: SELECT ALL**  
1000000020304000500060007000000203000000070000000500040007000000050000002000000001 ED=10. 4/10. 4/10. 4  
10000000203040005000600070004000300000002000000050000007000100000000030200000006 ED=10. 5/10. 5/10. 4  
1000000020304000500060007000400030000000100000005000000700000000000030200000001 ED=10. 6/10. 6/10. 4  
100000002030400050006000700040003000000020000000500000070000000000000030200000001 ED=10. 7/10. 7/10. 4

Of course, if JPF's brilliant pattern were presented in a Patterns Game today, the 11.8 would never be found and investigated.

Regards,

Mike Metcalf



**m\_b\_metcalf**  
2017 Supporter  
  
Posts: 13227  
Joined: 15 May 2006  
Location: Berlin

### Re: The hardest sudokus (new thread)

by champagne » Tue Aug 24, 2010 7:59 am

**QUOTE**

Hi mike,

I did not work on that pattern specifically to find high rating, but looking for a game start, I got also that one

**CODE: SELECT ALL**  
9.....5.7...4.1...3...8.....2.7.4.....3.....1.6.....8...3...6.1...7.5.....9 ED=10.8/10.8/3.4

I will check if some of your 4 are in the general search I am doing, but I am not ready for a quick answer.

As far as I can see, nearly all puzzles generated with that pattern have the SK loop. All in your lot have it.

champagne

**champagne**  
2017 Supporter  
  
Posts: 7269  
Joined: 02 August 2007  
Location: France Brittany



### Re: The hardest sudokus (new thread)

by coloin » Tue Aug 24, 2010 9:57 am

**QUOTE**

**CODE: SELECT ALL**  
Rating: 11.9 (ER/EP/ED=11.9/11.9/11.3)  
Poster: tarek  
Label: golden nugget

They all have the SK loop because the 16-clue base [without the central box with 4 clues] - inherently tends to have a low solution count - because some eliminations can be made with just those 16 clues.....

Puzzles which dont have a relatively low solution count with a selection of 16-clues - dont have the SK loop.

But if you dont have the low solution count - there are fewer ways to add a few clues to make a puzzle.

C

**coloin**  
  
Posts: 2325  
Joined: 05 May 2005  
Location: Devon

### Re: The hardest sudokus (new thread)

by champagne » Tue Aug 24, 2010 11:19 am

**QUOTE**

**coloin wrote:**  
**CODE: SELECT ALL**  
Rating: 11.9 (ER/EP/ED=11.9/11.9/11.3)  
Poster: tarek  
Label: golden nugget

They all have the SK loop because the 16-clue base [without the central box with 4 clues] - inherently tends to have a low solution count - because some eliminations can be made with just those 16 clues.....

Puzzles which dont have a relatively low solution count with a selection of 16-clues - dont have the SK loop.

But if you dont have the low solution count - there are fewer ways to add a few clues to make a puzzle.

C

**champagne**  
2017 Supporter  
  
Posts: 7269  
Joined: 02 August 2007  
Location: France Brittany



I agree on Golden Nugget rating. I had it, but I did not keep in ming the results, may-be because I was impressed by the "relative poor rating" for Silver Plate : ED=11.5/11.5/10.1

Regarding the SK loop, I have another way to look at it.

All examples of the SK loop I analyzed have a common piece of pattern :

- four given forming a rectangle in four boxes
- all cells in rows/columns/boxes for this rectangle unknown.

If you have that piece of pattern, then, you have a reasonable chance to find a SK loop.

champagne



**m\_b\_metcalf**  
2017 Supporter  
  
Posts: 13227  
Joined: 15 May 2006  
Location: Berlin

### Re: The hardest sudokus (new thread)

by m\_b\_metcalf » Tue Aug 24, 2010 11:24 am

**QUOTE**

**coloin wrote:**  
**CODE: SELECT ALL**  
Rating: 11.9 (ER/EP/ED=11.9/11.9/11.3)  
Poster: tarek  
Label: golden nugget

So, tarek has the **Title**!

Congrats.

Mike Metcalf

Last edited by m\_b\_metcalf on Tue Aug 24, 2010 11:33 am, edited 1 time in total.

by Pat » Tue Aug 24, 2010 11:31 am

**QUOTE**

**champagne wrote:**  
I did not work on that pattern specifically to find high rating, but looking for a game start, I got also --  
**CODE: SELECT ALL**  
9.....5.7...4.1...3...8.....2.7.4.....3.....1.6.....8...3...6.1...7.5.....9 ED=10.8/10.8/3.4  
As far as I can see, nearly all puzzles generated with that pattern have the SK loop.

looking for a game start ?  
so now, the challenge is to find an easy puzzle with this pattern ?

perhaps this should go in another Topic --  
[Intrinsically Difficult Patterns](#)



**Pat**  
  
Posts: 3977  
Joined: 18 July 2005

### Re: The hardest sudokus (new thread)

by m\_b\_metcalf » Tue Aug 24, 2010 2:15 pm

**QUOTE**

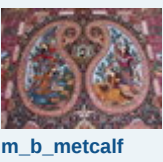
**champagne wrote:**  
... looking for a game start, I got also that one  
**CODE: SELECT ALL**  
9.....5.7...4.1...3...8.....2.7.4.....3.....1.6.....8...3...6.1...7.5.....9 ED=10.8/10.8/3.4

And there are these too:

**CODE: SELECT ALL**  
1.....2.3...4.5...6...7.....8.3.4.....6.....5.9.....7...6...8.5...3.2.....1 ED=10.7/10.7/3.4  
1.....2.3...4.5...6...7.....5.3.4.....1.....8.9.....7...6...9.8...3.2.....1 ED=11.6/11.6/3.4

Regards,

Mike Metcalf



**m\_b\_metcalf**  
2017 Supporter  
  
Posts: 13227  
Joined: 15 May 2006  
Location: Berlin

### Re: The hardest sudokus (new thread)

by ab » Sun Aug 29, 2010 12:25 pm

**QUOTE**

The Guardian published this puzzle this week:  
<http://www.guardian.co.uk/media/2010/au...ed-picture>  
I don't know if it's one of yours, or how it compares!

**ab**  
  
Posts: 451  
Joined: 06 September 2005

### Re: The hardest sudokus (new thread)

by champagne » Sun Aug 29, 2010 1:16 pm

**QUOTE**

**ab wrote:**  
The Guardian published this puzzle this week:  
<http://www.guardian.co.uk/media/2010/au...ed-picture>  
I don't know if it's one of yours, or how it compares!

- 1) that puzzle was not in my data base.
- 2) In a pattern game (that could not happen due to the fact that the puzzle has not the symmetry requirements), I would likely have rated it.
- 3) The SE rating for that puzzle is 10.6 1.2 1.2 which is not bad
- 4) it has no special pattern (SK loop, EXOCET) and I found no rank0 logic
- 5) seen by my solver  
it enters level 3 of tagging  
both run time and print size put it limit down to enter the family of hardest.  
The most difficult step uses 3 cycles of derived links

Surely an interesting puzzle for skill players as "ttt" or stevek

champagne

**champagne**  
2017 Supporter  
  
Posts: 7269  
Joined: 02 August 2007  
Location: France Brittany



### Re: The hardest sudokus (new thread)

by ronk » Sun Aug 29, 2010 1:36 pm

**QUOTE**

**ab wrote:**  
The Guardian published this puzzle this week:  
<http://www.guardian.co.uk/media/2010/au...ed-picture>  
I don't know if it's one of yours, or how it compares!

Not in my database either, so it's probably not a puzzle previously known to this forum.

**ronk**  
2012 Supporter  
  
Posts: 4764  
Joined: 02 November 2005  
Location: Southeastern USA

### Re: The hardest sudokus (new thread)

by gsf » Sun Aug 29, 2010 2:34 pm

**QUOTE**

**ab wrote:**  
The Guardian published this puzzle this week:  
<http://www.guardian.co.uk/media/2010/au...ed-picture>  
I don't know if it's one of yours, or how it compares!

google **Arto Inkala hardest sudoku**  
looks like Arto has a 15-minutes-of-fame generator  
and the media bites every time

**gsf**  
2014 Supporter  
  
Posts: 7306  
Joined: 23 September 2005  
Location: NJ USA

### Re: The hardest sudokus (new thread)

by 999\_Springs » Mon Aug 30, 2010 7:39 pm

**QUOTE**

Strange how Arto Inkala's puzzles get a lot of attention from the media whereas none of the other puzzles in this thread do. I wonder how much the media paid for it.

**999\_Springs**  
  
Posts: 585  
Joined: 27 January 2007  
Location: In the toilet, flushing down springs, one by one.

### Re: The hardest sudokus (new thread)

by champagne » Mon Aug 30, 2010 8:47 pm

**QUOTE**

**999\_Springs wrote:**  
Strange how Arto Inkala's puzzles get a lot of attention from the media whereas none of the other puzzles in this thread do. I wonder how much the media paid for it.

most surprising is that somebody can claim to have found "the hardest puzzle" publishing something similar to what each of the pattern game players generates every week.

The "hardest puzzles" published in that forum have been found 2 or 3 years ago !!!!

They are about ten times harder than that one.

champagne

**Mauricio**  
  
Posts: 1175  
Joined: 22 March 2006

**Re:**

by Mauricio » Wed Sep 15, 2010 3:00 am

**QUOTE**

Pat wrote:

champagne wrote:

I did not work on that pattern specifically to find high rating, but looking for a game start, I got also --

**CODE: SELECT ALL**  
9.....5.7...4.1...3...8.....2.7.4.....3.....1.6.....8...3...6.1...7.5.....9 ED=10.8/10.8/3.4  
As far as I can see, nearly all puzzles generated with that pattern have the SK loop.

looking for a game start ?  
so now, the challenge is to find an easy puzzle with this pattern ?

perhaps this should go in another Topic --  
[Intrinsically Difficult Patterns](#)

Here are two possible starts, though it would not be an interesting game.

**CODE: SELECT ALL**  
1.....2.3...4.5...2...6.....6.2.4.....7.....5.8.....6...4...8.3...7.2.....1  
1.....2.3...4.5...2...6.....6.7.8.....3.....9.2.....6...9...4.9...3.7.....1

< Previous

Display posts from previous: **All posts** Sort by **Post time** **Ascending** **Go**

Next >

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1330 posts • Page 5 of 89 • [1](#) [2](#) [3](#) [4](#) **5** [6](#) [7](#) [8](#) ... [89](#)

< Return to General

Jump to: **General** **Go**

