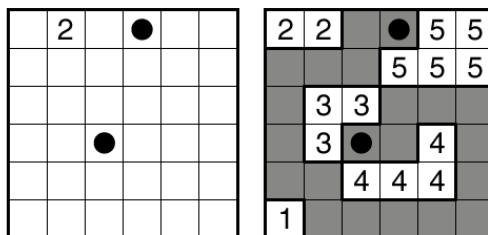


Snake Egg



Example by Serkan Yürekli

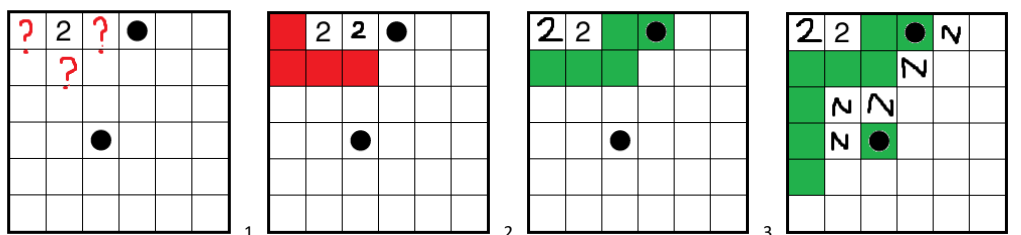
Snake Egg, a snake puzzle originally created by Serkan Yürekli, The Managing Editor at Grand Master Puzzle. The goal of this puzzle is to connect the two dots on the grid “head” and “tail” while the whitespaces of the grid must make up individually to size of 1 to 9. But before going further into it let’s take a look at its rules first.

Rules:

Draw a snake (a 1 cell-wide path) in the grid whose head and tail are given by circled cells. The snake can touch itself diagonally, but cannot touch itself orthogonally or revisit any square. Besides the snake, the remaining cells must form exactly nine white areas, one of each size from 1 to 9 (in example, 1 to 5). Numbers in the grid must be part of white areas of the indicated size.

How to solve?

The methods of solving this is by using elimination and deduction where a certain square can only be part of the snake or number. For example, if you look at the example provided above the puzzle has a confirmed grid with 2 in it. Please refer to the pictures below for visual explanation. We know that 2 can only be size of two so all the candidate squares to be part of 2 are the one to the left, right and directly below. If we assume that the right square is part of two, it will not work because the snake (red) will have to be to the left of 2 and snake cannot turn back unto itself. Hence the correct place would be left side of 2, and all squares surrounding it should be snake. And now with part of the board confirmed, we can start solving more squares by using it as a base of deduction. This is how this puzzle can be solved.



¹ Candidates of 2

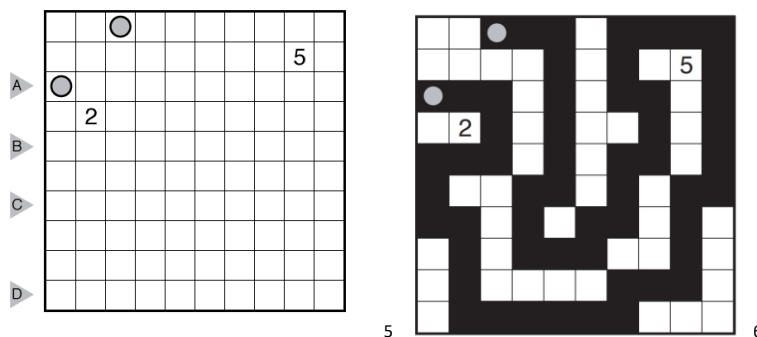
² Wrong candidate choice

³ Correct candidate choice

⁴ Using deduction and elimination, this is what next step looks like (N is number)

Why should this puzzle be included in the application?

While fun may be subjective from person to person, I personally found this really fun even though I'm not a puzzle player. The starting board itself is nice and clean without a lot of data and local rules cluttering unlike a lot of types of puzzles, the only thing players need to know is the game's rules. While it is appealing to a beginner puzzle solver or an average person like myself, this puzzle is also will be interesting and appealing to the more experienced crowd. This puzzle will always be solved as a unique solution even with minimal starting numbers grid, experienced player will love this aspect of the puzzle that such a simple board can be filled in such a unique way. For example, taking a look at a more advanced version of "Snake Egg" below.



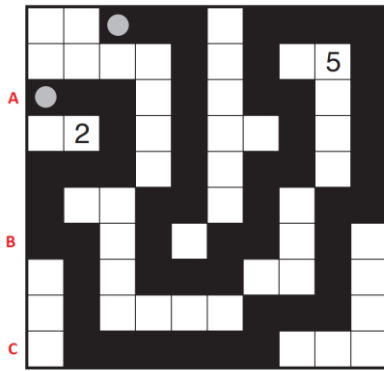
The starting board has very little to minimal information but even with such conditions the puzzle can be solved into a unique case. This is one of the charms of this puzzle, not daunting yet complex and enjoyable for both beginner and expert alike.

Generation of new puzzles and validation of solution

A computational program will be required to generate starting board for this puzzle. While the program will be moderately complex, it will not take long for our programmer team to develop one. The generation program would be similar to how the popular pentominoes puzzle can be generated. To go into further details, by placing the numbered spaces in such a way that: one numbered space doesn't connect with another, one space apart from another numbered space, and placed in such a way that the snake will still be connected and no snake squares left stranded. An expert can also advice our programmer, generating new puzzle will not be a difficult task.

⁵ Starting board

⁶ Solved board



The way this puzzle validates its solution is very simple and easy to do, since the puzzle can only be solved into only one unique position. One can count how many snake squares there are in a few chosen rows from the to-be validated board. Which in the case of the board to the left, rows taken will be A, B, and C. Which they can be represented in String format as "7, 6, 6" as in row A has 7 snake square, row B has 6 snake squares and so on.

The Puzzle's origin and licensing

This puzzle type was first created by Serkan Yürekli, The Managing Editor of Grand Master Puzzles. All works and puzzles shown in Grand Master Puzzles website are under the license CC BY-NC-ND 3.0⁷ by Creative Commons. According to legal document for license CC BY-NC-ND 3.0, the puzzle cannot be used commercially without license. The license must be negotiated and obtained from the author puzzle, Serkan Yürekli and Grand Master Puzzle. Mr. Yürekli is major contributor to Grand Master Puzzle, he himself created many puzzles so he is definitely not new to licensing out his works. Negotiate and obtaining license with Mr. Yürekli shouldn't be concern for this puzzle.

Conclusion

Snake Egg is a simple puzzle yet can be made into a complex puzzle for both beginners and experts alike to enjoy. This puzzle can be something a beginner finds challenge and an expert finds it relaxing and fulfilling to complete. In addition, with its relative ease of generating new variations and obtaining legal license, I personally believe this puzzle will be a great addition to our puzzle app.

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