Case Study

Try: A Hybrid Puzzle/Game

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Try is a new logic puzzle that juxtaposes a strategy game rule onto a solitaire puzzle. This article describes Try, some basic strategies, and the design process behind it, most importantly the creative leap that produced a novel puzzle from familiar elements.

1 Introduction

Try is a pure deduction puzzle in the same family as Sudoku, but with an additional constraint borrowed from a strategy game. The rules are as follows:

1. No number occurs more than once along any line (Sudoku rule).
2. No connected group of odd numbers touches all three sides (Y rule).

1.1 The Game of Y

The Y rule is borrowed from the game of Y, invented by Claude Shannon in the 1950s, which is one of the earliest and most fundamental connection games. The aim in Y is to complete a chain of your pieces connecting all three board sides, called a Y, as shown in Figure 1. Corners count for both incident sides.

By comparison, the solution shown in Figure 3 is illegal because the odd-valued cells (circled) form a group that connects all three sides, even though the Sudoku constraint has been satisfied and no number occurs more than once along any line.

1.2 Triangular Sudoku + Y = Try

Figure 2 shows a typical Try challenge for size N=5 (left) and its solution (right). The hint set for each challenge must be carefully chosen to give a single unique solution.

The practice of circling cells that are guaranteed to be odd helps clarify the Y aspect of a solution in progress, and will be adopted throughout this paper. A simple mnemonic is: ‘O’ is for ‘Odd’.

One of the attractive features of Y is that a winning chain of one colour that touches all three sides precludes any possible winning chain for the other; exactly one player must win each game. This means that the Y rule in Try can be rephrased as: all three sides must be connected with a connected group of even numbers.