Tentai Show

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Tentai Show is a logic puzzle in which the solver must deduce the shapes of rotationally symmetric regions within a grid, then colour certain regions to reveal a hidden picture; this is puzzle as art.

1 Introduction

Tentai Show is a pure deduction puzzle, invented for Nikoli by Japanese designer Gesaku, which first appeared in the September 2001 issue of Puzzle Tsushin Nikoli 96. It is unusual in that solving each challenge reveals a picture hidden in the hints, combining logic with aesthetics to blur the line between puzzles and art.

2 Rules

A Tentai Show challenge consists of a grid of squares, with circles and dots marked in some cells and on some grid lines. Figure 1 (left) shows a typical challenge.

The aim is to divide the grid into regions by drawing bold lines along certain grid lines, such that every region:

1. contains exactly one circle or dot, and
2. has 180° rotational symmetry.

The regions containing black dots are then coloured in to reveal a picture hidden within the challenge. For example, the challenge shown in Figure 1 has been solved to reveal an image of the numeral ‘4’ (right). Each challenge should have a single unique solution [1].

3 Example

Figures 2 and 3 show the typical working involved in solving a larger example, to demonstrate relevant tactics. Starting with the initial challenge in Figure 2 (a), it is easy to deduce some bold lines and regions based on the two rules (b), and then build on this information to deduce further bold lines and regions (c).

Figure 1. A challenge (a) and its solution (b).

Figure 2. A challenge (a), some obvious lines to start with (b) and some deductions built on them (c).