Herugolf

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Herugolf is a logic puzzle in which the solver must hit a number of golf balls from their tees to matching holes, while avoiding water hazards. It is a simple puzzle with a strong visual aspect.

1 Introduction

H ERUGOLF is a Japanese logic puzzle [1] by designer Alkali-Kojo-Cho, based on a golf theme. It first appeared in 2013 in *Puzzle Communication Nikoli* issue 142, where it was originally called 'Pro-Golfer Maru' after popular Japanese comic series *Pro Golfer Saru* which featured a champion monkey golfer.

Few would have thought that a physical sport as nuanced as golf could successfully be turned into an abstract logic puzzle. However, Pro-Golfer Maru was well-received from the start, probably due to its originality and the quirkiness of its name. It has been especially popular with young men, perhaps due to the sporting theme and the fact that manoeuvering the balls neatly from tee to hole gives a feeling of 'nice shot!'

A year and a half after its first appearance, the puzzle became a regular item in *Puzzle Communication Nikoli* from issue 148 onwards, where its name was changed to Herugolf (the prefix 'heru' means 'decrease' in Japanese). Nikoli has recently published a book of Herugolf [2].

2 Rules

The aim in Herugolf is to hit each ball from a tee with a given number into a corresponding hole, while avoiding obstacles including water hazards. The number defines the distance of each shot, and the player must deduce which hole each ball must go in. Figure 1 shows an example challenge (left) and its solution (right) from [2].

Rules of Herugolf

1. Hit each ball from its *tee* (circled) one or more times to reach a *hole* (H). Every ball must reach a different hole.

2. Each hit is shown by an arrow to its destination cell. Arrows can not cross tees, holes, lines of other arrows, or backtrack.

3. The first hit travels as many cells as the circled number, and each successive hit travels one less cell than the previous hit. Balls can only travel orthogonally, but may change direction after each hit.

4. Balls cannot leave the grid or stop in any *Ike-Pocha* (water hazard, shaded).

3 Worked Example

Herugolf has more rules than most Japanese logic puzzles, but can still be solved using basic deduction and does not require overly sophisticated solution techniques. This worked example of the challenge shown in Figure 1 demonstrates the basic strategies.



Figure 1. A Herugolf challenge (left) and its solution (right).