

A Maze with Rules

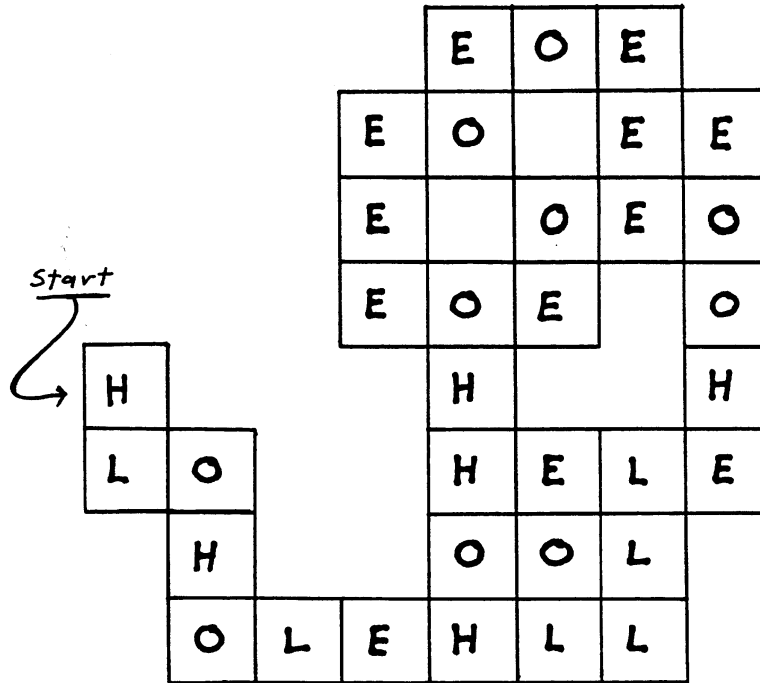
Robert Abbott

In his October 1962 column, Martin Gardner presented a puzzle of mine that involved traveling through a city that had various arrows at the intersections. He used another of my puzzles in the November 1963 column — this one involved traveling in three dimensions through a $4 \times 4 \times 4$ grid. At the time I thought these were puzzles, but later I realized they were more like mazes. Around 1980 I started creating more of these things (which I now think could best be described as “mazes with rules”), and in 1990 I had a book of them published, *Mad Mazes*.

The next page shows one of the mazes from my book. This is my manuscript version of the maze, before my publisher added art work and dopey stories. (Actually, I wrote half the dopey stories and I sort of like some of them.) I chose this particular maze because it illustrates the cross-fertilization that Martin’s columns created. I got the original idea for this maze from remembering columns that Martin wrote in December 1963, November 1965, and March 1975. These columns presented rolling cube puzzles by Roland Sprague and John Harris. The puzzles involved tipping cubes from one square to another on a grid. As Martin’s columns said, you should think of a cube as a large carton that is too heavy to slide but that can be tipped over on an edge.

In my maze, place a die on the square marked **START**. Position the die so that the 2 is on top and the 6 is facing you (that is, the 6 faces the bottom edge of the page). What you have to do is tip the die off the starting square; then find a way to get it back onto that square. You can tip the die from one square to the next, and you can only tip it onto squares that contain letters. The letters stand for *low*, *high*, *odd*, and *even*. If (and only if) a 1, 2, or 3 is on top of the die, then you can tip it onto a square with an *L*. If a 4, 5, or 6 is on top, you can tip it onto a square with an *H*. If a 1, 3, or 5 is on top, you can tip the die onto a square with an *O*. If a 2, 4, or 6 is on top, you can tip the die onto a square with an *E*.

I won’t give the solution, but it takes 66 moves.



Maze

Addendum, December 1998. Oops! My diagram is too big for this book. The diagram should be at least 6 inches square to have a die roll across it. You might try enlarging it on a copier, but you can also download it off my website. Go to <http://home.att.net/~robtabbott/roll.html>. While you're there, check out the rest of the site. I have a long write-up (with pictures) of something called "walk-through mazes-with-rules." The first of these walk-through mazes appeared at the Gathering for Gardner in January 1993. Since then the concept has grown. In the summer of 1998, several of the mazes were built as adjuncts to large cornfield mazes.