

Three puzzles from Martin Gardner (1914-2010)

By [Philip Yam](#) May 22, 2010

News of Martin Gardner's death began circulating on Saturday night. For those of you who are unfamiliar with his work, here's a taste of the kinds of puzzles he was famous for bringing to the world. Of course, he did much more: 15 years ago, I had the great honor of meeting him and his wife for a profile of him, which you can read [here](#).

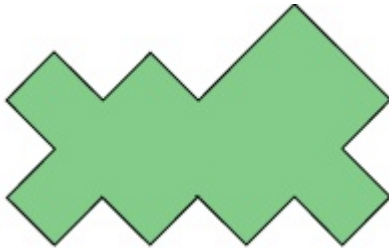
I still have the trick pen he gave me as a souvenir, one that I'll show anyone who comes by my desk. (I'll try to post a video of the pen.) It brings back fond memories of being shown his stash of magic tricks and gag gifts, his thoughtful comments on irrational beliefs, his experiences with mathematicians like Paul Erdős and the Gardners' feeding of feral kittens that came to the back deck of the house every afternoon.

Rest in peace, Martin.

1. Reversed Trousers

Each end of a 10-foot length of rope is tied securely to a man's ankles. Without cutting or untying the rope, is it possible to remove his trousers, turn them inside out on the rope and put them back on correctly? Party guests should try to answer this confusing topological question before initiating any empirical tests.

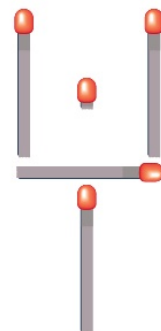
2. Crazy Cut



This one looks much easier than it is. You are to make one cut (or draw one line)—of course, it needn't be straight—that will divide the figure into two identical parts.

3. Out with the Onion

Arrange four paper matches on a table as shown at right. They represent a martini glass. A match head goes inside to indicate the onion of a Gibson cocktail. The puzzle is to move just two matches so that the glass is reformed, but the onion—which must stay where it is—winds up outside



the glass. At the finish, the glass may be turned to the left or the right, or even be upside down, but it must be exactly the same shape as before.

The figures below are not a solution, because the onion is still inside or because three matches have been moved.

