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Single-surface topology

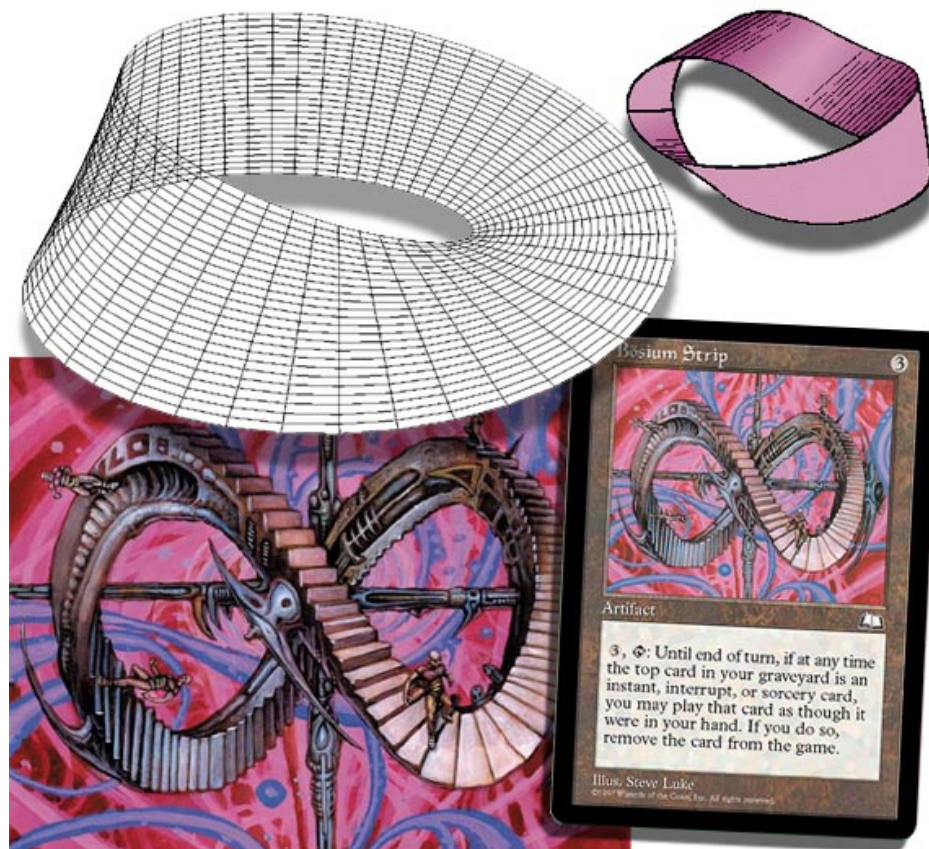
Magic Arcana
 Friday, March 29, 2002

Flavor Text Week spurred a lot of debate about the place of literature in **Magic**, but the intellectual first love of most of the people behind Magic is math. Richard Garfield has a Ph.D. in combinatorial mathematics and several member of R&D have similar math backgrounds.

So it should be no surprise that mathematical ideas find their way onto cards.

Möbius strip

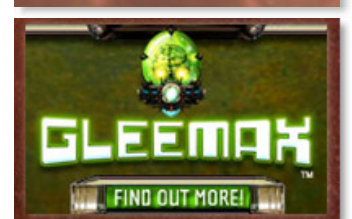
The Möbius strip is the simplest geometric shape which has only one surface and only one edge. It can be created by taking a strip of paper, giving it a half twist along its long axis, and then joining the two narrow ends together. The Möbius strip was anagrammed into the card **Bösium Strip** in *Weatherlight*.



Klein bottle

A Klein bottle is a topological space, named for the German mathematician Felix Klein. The surface is not constructible in three-dimensional Euclidean space but has interesting properties, such as being one-sided, like the Möbius strip; being closed, yet having no "inside" like a torus or a sphere; and resulting in two Möbius strips if properly cut in two.

By intersecting surfaces, a close approximation to the "real" 4-D Klein bottle can be made in 3-D space. This 3-D representation is what is found on the card **Elkin Bottle** from Ice Age, the name of which is another crafty anagram. For more info on "real" Klein Bottles, visit kleinbottle.com.





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