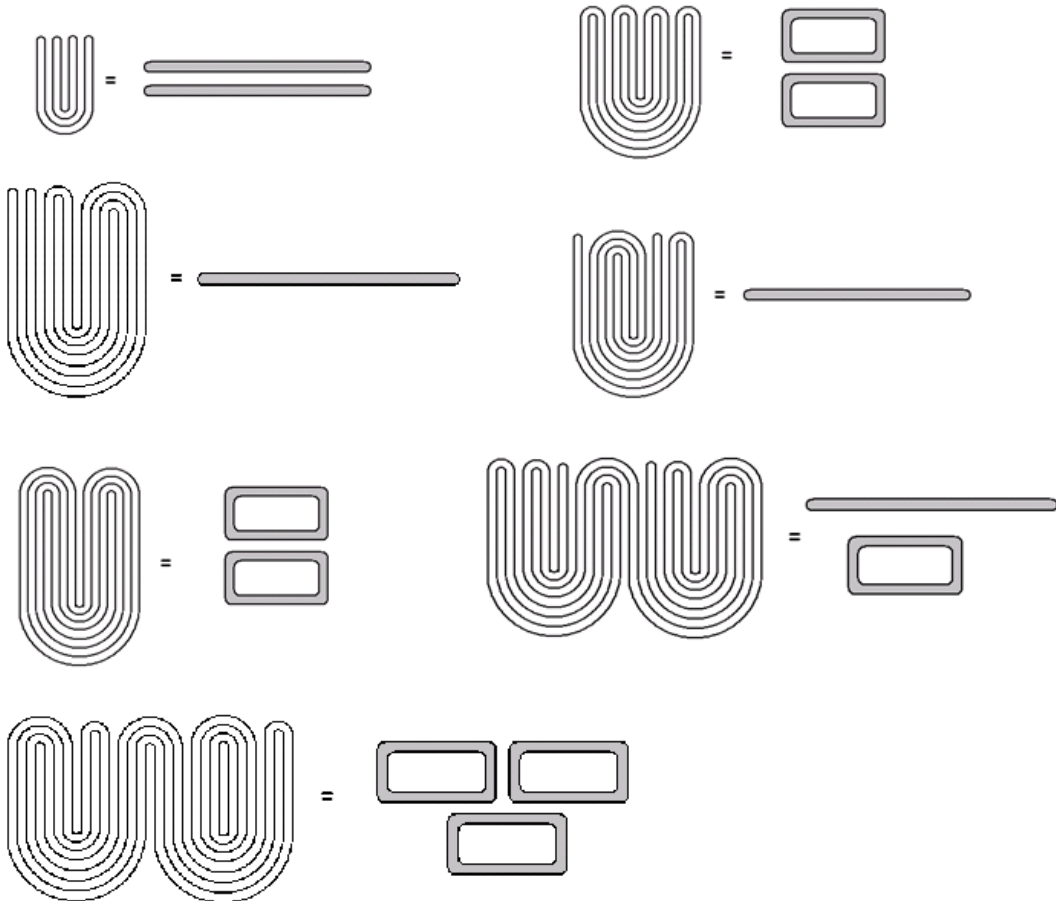


MORE WITHOUT WORDS

Mathematical Puzzles to Confound and Delight

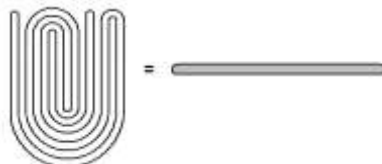


MWW 1: SOLUTION



It is sometimes hard to count, even identify, the pieces of a diagram!

The field of *topology* in mathematics studies the basic structure of shapes without worrying about the specific locations and lengths of their parts. For example, in this picture



it is actually more meaningful and helpful to think of the object on the left as a single tube, as shown on the right.

A topologist would say that a coffee cup is the same in shape and structure as a donut. Do you see what she might mean by this?