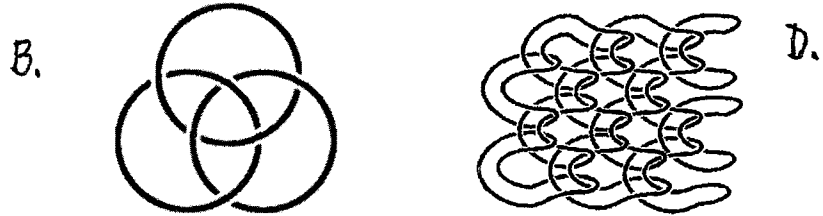


The Math Circle at Canisius,  
 Tuesday April 1, 4102 (*just fooling!*)

faculty contacts:  
 Barbara Burns & Terry Bisson  
 themathcircle@canisius.edu



**Links to Rubber-Band Braiding:**  
 With figures from “Knots and how to tie them,”  
 a book by Walter B. Gibson, and from an article  
 “Brunnian Clothes...: not for the bashful,”  
 by Colin Adams, Math. Monthly, Nov. 2004

- Figure A shows a loose overhand knot. Try to draw a picture of it but with its ends joined together. It’s the simplest example of a “knotted circle”. In a rubber-band you would need to cut and refasten...



- A common way to tie two string-ends together is to hold the two ends together side-by-side and tie them as one into a tightened overhand knot. Use this method to join together the two ends of a piece of string to form a “circle” made of string. We may want to use this idea later.

- Figure B is called the Borromean rings, used in an Italian family crest from the renaissance. In figure B the circles can’t be pulled apart, but if any of them is cut, the others separate. Start with two rubber bands; can you pass a piece of string amongst them correctly, so that joining together its two ends forms something like this.

- Figure C is a square knot. Make a long chain of rubber-bands linked by square knots. This gives one way to braid rubber bands...

- Here is another way to braid rubber bands. Try for a long chain of rubber-bands linked as shown here: or try for the linked surface in figure D.

