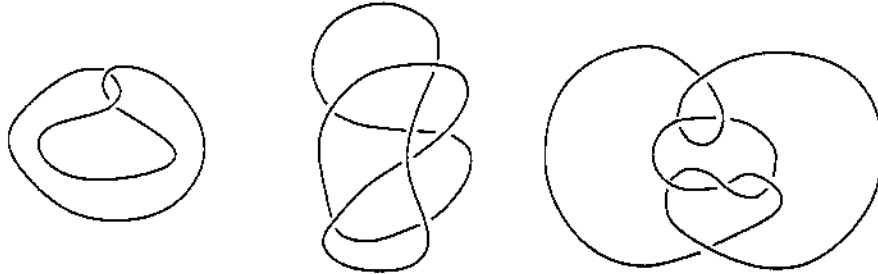


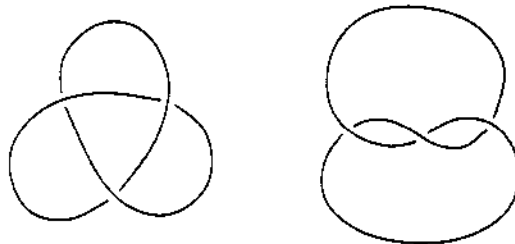
Math 364 Problem Sheet 5: Due Oct. 30

**Problem 1.** Show by simple drawings that all of the following diagrams represent the unknot:



**Problem 2.** Draw all possible knot diagrams with one or two crossings and verify that all of them represent the unknot. Conclude that there is no knot with crossing number 1 or 2.

**Problem 3.** Both of the following knot diagrams represent the right trefoil knot. Start with the diagram on the left and apply a sequence of Reidemeister moves to obtain the one on the right:



**Problem 4.** The following knot diagrams are mirror images of one another. Verify that both of them represent the same knot by showing that one diagram can be deformed to another.

