

IMO95 PUZZLES



In the September 1995 issue of *CRUX*, two puzzles were given about the logo for the 1995 IMO. The second puzzle, attributed there to Mike Dawes of the University of Western Ontario, asked:

Suppose that you take a physical model of this logo, and manipulate it to turn the infinity sign into a circle. What does the circle turn into?

It turns out that the same question occurred to several other people at the same time, including some members of the Netherlands team at IMO 95.

Less than half an hour prior to the start of the competition, the 1995 IMO logo inspired one of the contestants (RvL) to pose the following problem:

Consider the logo as a knot composed of a blue string forming the infinity-sign and a red string forming the zero. Can the knot be rearranged so that the blue string forms the zero and the red string forms the infinity-sign (without using scissors)?

The contestant solved the problem shortly after the competition and, upon returning home, wrote a program together with one of the other members of his team (DG).

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The program was sent by the Leader of the Netherlands team (Johannes Notenboom) to the Editor-in-Chief (in his role as Chief Operating Officer of the 1995 IMO). We were so impressed by the program that we have had it made available on the IMO95 WWW site. You may download this program (zipped) by going to: <http://camel.math.ca/IMO/IMO95/>.

Ronald has pointed out the the IMO 95 logo is, in fact, the Whitehead Link. See, for example, L.H. Kauffman's book: *On Knots*, Annals of Mathematics Studies, 115, Princeton University Press, 1987, p. 14.

