SCIENCE NEWS®

The Weekly Newsmagazine of Science

Letters

Fruitful connection

Having participated in the Geometry Supercomputer Project, I was glad to see "The Color of Geometry" (SN: 12/23&30/89, p.408). I wish to comment on the caption for the cover, which claims, "Mathematicians . . . study geometric forms ranging from knots to figures embedded in hyperbolic space."

Although knots and hyperbolic space may seem to have little to do with each other at first glance, there are actually some very useful connections between them. One method of studying a knot involves studying its complement, the space outside of the knot. For many knots, hyperbolic structures can be placed on their complements, and these hyperbolic structures are useful in distinguishing between different knots. Computers, combined with some serious mathematical theory, are very useful in this approach, which is another thing studied in the Geometry Supercomputer Project.

Sometimes connections between seemingly unrelated areas of mathematics turn out to be very fruitful.

Martin V. Hildebrand
Graduate student, Dept. of Mathematics
Harvard University
Cambridge, Mass.

Molecular monickers

The name buckminsterfullerene for the 60-carbon molecule described in "Making chicken wire of molecular size" (SN: 12/23&30/89, p.406) is not entirely fair to Archimedes, because the corresponding solid object is the truncated icosahedron, one of the 13 "semiregular" solids discovered by that great mathematician.

The 80-carbon molecule on chemist Orville Chapman's wish list and illustrated in your article does not correspond to an Archimedean or semiregular solid, in which, by definition, all the vertices are congruent but not all the faces. Perhaps the 80-vertex solid should be called "demisemiregular" because the vertices fall into two classes instead of only one.

I.J. Good
Professor of Statistics
Virginia Polytechnic
Institute & State University
Blacksburg, Va.

CORRECTION
The caption for the Jan. 6 cover photo erroneously describes the cost of the Hubble Space Telescope as $2 million. The correct figure is $2 billion, as stated in the article.