Problem: Prove there is no distance preserving map from a spherical cap to the plane.

Solution: (by Hubert Desprez, Paris, France)

Let $\varphi : \pi \to \pi'$ such a map, and (C) a circle as boundary of cap of sphere, and (ABC) an equilateral triangle in (C).
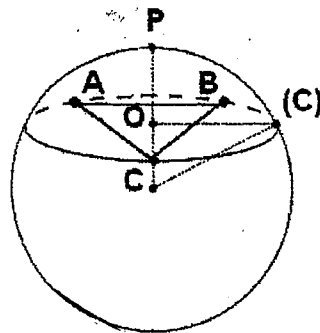
$OA = OB = OC$ and $PA = PB = PC$ imply that O' and P' are both circumcenters of triangle $A'B'C'$: a contradiction with $O'P' = OP > 0$, so there is no such φ.

The problem was also solved by:

<u>Undergraduates</u>: Kaibo Gong (Sr. Math)

<u>Graduates</u>: Dat Tran (Math), Yu Tsumura (Math), Tairan Yuwen (Chemistry)

<u>Others</u>: Manuel Barbero (New York), Gruian Cornel (Cluj-Napoca, Romania), Tom Engelsman (Tampa, FL), Talal Al Fares (Hasbaya, Nabatieh, Lebanon), Elie Ghosn (Montreal, Quebec), Steven Landy (Physics Faculty, IUPUI), Sorin Rubinstein (TAU faculty, Israel), Steve Spindler (Chicago)