

I U P U I
MATH CLUB TEASER #53

November 12, 2010
(due November 19, 2010)

The insouciant Professor Zerep has a large bag of black beans, and a pot with 238 black and 137 white beans. Every now and then, the Professor removes two beans from the pot and inspects them. If there is a black one, it is discarded, and the other bean is dropped back in the pot. If both beans are white, the Professor discards them and puts a black bean from the bag into the pot.

At each turn the number of beans in the pot goes down by one. What is the color of the last bean?

The IUPUI Math Club invites everybody to submit solutions to its weekly recreational mathematics problem. Interested individuals and teams of up to four participants must submit a cover sheet (available at jagmath.usg.iupui.edu) together with their written solution. At the end of the semester, every IUPUI student that sent a correct solution will receive a certificate of merit. Prizes will be distributed among the IUPUI undergraduate teams that submit the most correct solutions.

Solutions are due one week after each problem is posted, and should be faxed to (317) 274-3460, dropped off in person at LD 270, or sent by campus or U.S. mail to:

Math Club Teaser
Dept. of Mathematical Sciences
IUPUI, LD-270
402 N. Blackford Street
Indianapolis, IN 46202