

I U P U I
MATH CLUB TEASER #46

September 10, 2010
(due September 17, 2010)

You are given 20 white marbles and 20 black marbles along with two identical jars. You have to place all 40 marbles into the jars in any way you choose. Afterwards you will be blindfolded, the jars will be shaken and put side to side. Then you will select a jar and take out one marble. If it is white you win a prize.

How can you arrange the marbles at the beginning to maximize the probability of drawing a white marble?

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
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