

I U P U I  
MATH CLUB TEASER #15

March 6, 2009  
(due March 13, 2009)

The Good, the Bad, and the Ugly are engaged in a *truel* (a duel between three people). The Good is a perfect shot, always hitting every single target; the Bad hits two out of every three shots in average; and the Ugly is successful in only one out of three shots.

The judges have decided to have the truelists take turns until only one is standing. Because of the difference in skill, they will let the Ugly fire first, passing the turn to the Bad and then to the Good.

Where should the Ugly shoot first, and what is the expected outcome?

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](http://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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