

Mathematics Problem of the Week

Problem Number: 284

Posted on Monday, September 19, 2016

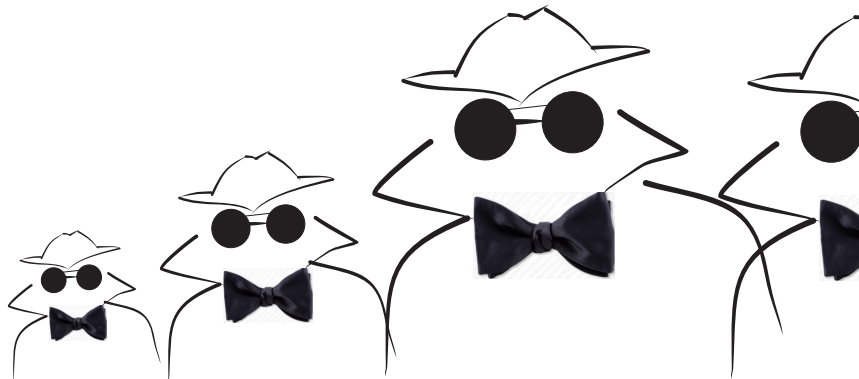
Deadline: Monday, September 26, 2016 at noon

Four Robbers

Four bank robbers of different ages have a treasure of 200 gold bars. On their get apart vehicle, they decided to split the bars using this scheme:

- The oldest robber proposes how to share the bars, and ALL robbers (including the oldest) vote for or against it.
- If 50% or more of the robbers vote for it, then the bars will be shared that way. Otherwise, the proposing robber will have to leave the group for good, and the process is repeated with the remaining robbers.
- As robbers tend to be ruthless, if a robber would get the same number of bars if he voted for or against a proposal, he will vote against so that the robber who proposed the plan will be removed from the group.

Assuming that all four robbers are intelligent, rational, greedy, and do not wish to leave the group, (and are rather good at math for robbers) what should the oldest robber propose to get as much gold bars as possible without having to leave the group?¹



¹For immediate assistance with this problem, email Asiyeh at asiyeh.sanaei@kpu.ca or Vicky at siqi.wei@kpu.ca.