



Problem of the Week

Problem D

Game Theory

Five video game players are preparing for a team tournament. Each player has mastered a unique secret strategy for the game. To win the finals, every player needs to know all five strategies.

Because of the tournament's practice facility rules, players can only practice in 1v1 private matches. So during a team practice round, two separate 1v1 matches happen simultaneously (involving four players total with two players in each 1v1), while the fifth player sits out. When two players play a 1v1 match, they teach each other all the strategies they currently know, including ones they learned from opponents in previous practice rounds.

What is the minimum number of practice rounds required for all five players to learn all five secret strategies?



This problem was inspired by a past [Beaver Computing Challenge \(BCC\)](#) problem.
