

The Social Golfer Problem (golfers)

— [Run LPL Code](#) , [HTML Document](#) —

Problem: In a local golf club, there are 16 social golfers, each of whom plays golf once a week, and always in groups of 4. Find a schedule of 5 weeks, such that no golfer plays in the same group as any other golfer on more than one occasion, if it exists. If it does not exist, then find a schedule of “maximal socialisation”, that is, as few repeated pairs as possible. (Found at: <http://www.csplib.org/Problems/prob010/>).

Questions

1. Solve the (8-4-7) problem instance then a (8-4-8) problem. What do you observe?
2. Specify the constraint that certain golfers may not play against each other. Consider, for example, in the (5-3-5) instance golfer 1 refuses to play against 3, and 5.
3. Model the constraints that (A1) golfer 1 and 7 want to play in the fourth week in the same group, (A2) golfer 3 and 4 do want to be in the same group before week 3, (A3) golfer 1, 2, and 9 should never be together in the same group.

References

- [1] MatMod. Homepage for Learning Mathematical Modeling : <https://matmod.ch>.