This is an ungraded exercise, but it counts towards your participation. We’ll pick some representative papers among your solutions to go over in the writing workshop in Monday 2/1/2021. Please upload your solution to Canvas by midnight of Friday 1/29/2021. Note that you should work individually for this exercise, and your paper should be anonymous.

1. (5 points) In class, we learned about the dating problem and the 5-card trick. Prove that the trick protects the privacy of Bob.

   **Note:** In Latex, you can write ♠️ and ♦️ using the commands `\heartsuit` and `\clubsuit` respectively.