1. Two players are competing as a team on a game show. They have together won a total of $10,000. At the end of the show, the two players individually get to decide whether to split the prize 50-50 (call this Cooperate) or take the money and run (call this Defect). The players make the decisions simultaneously without discussing ahead of time.

- If Player A and Player B both choose to Cooperate, then they each leave with $5,000.
- If Player A Cooperates and Player B Defects, then Player A gets no money and Player B leaves with the whole prize (and vice versa).
- If Player A and Player B both choose to Defect, then both players leave with no money.

(a) Fill in the payoff matrix in terms of money won by each player (assume the rows represent strategies of Player A and the columns represent strategies of Player B).

<table>
<thead>
<tr>
<th></th>
<th>Cooperate</th>
<th>Defect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperate</td>
<td>(5000, 5000)</td>
<td>(0, 10000)</td>
</tr>
<tr>
<td>Defect</td>
<td>(0, 0)</td>
<td>(0, 0)</td>
</tr>
</tbody>
</table>

(b) Find the Nash equilibrium of the game. (Hint: there is only one Nash equilibrium.)

(Defect, Defect)
also ok: (Defect, Cooperate) or (Cooperate, Defect)

(c) This game is more similar to (circle one):

**PRISONER’S DILEMMA**  **STAG HUNT**

(d) Briefly describe how this game is similar to the answer that you circled in the previous question.

If acting only to maximize their own payoffs, both players benefit from defecting. However, mutual defection is the worst case in terms of total payoff.