

1. Exercise A.1

2. For each of the following zero-sum games:

- convert the game into a linear programming problem (include both the primal and the dual, and state clearly which corresponds to the row player, and which to the column player);
- solve the corresponding linear programs (via Excel spreadsheet, for instance);
- convert the solutions to the linear programs to mixed strategies for each of the row and column players; and
- show that the mixed strategies satisfy the equalizing payoffs criterion.

(a) $\begin{pmatrix} 2 & 6 \\ 4 & 3 \end{pmatrix}$ (example from class)

(b) $\begin{pmatrix} 1 & 0 & 3 \\ -2 & 3 & 0 \\ -4 & 5 & -6 \end{pmatrix}$

(c) $\begin{pmatrix} -2 & 3 & 0 & 5 & -6 \\ 3 & -4 & 5 & 0 & 7 \\ -4 & 5 & -6 & 7 & 0 \end{pmatrix}$