[12] 3. The matrix below shows the rewards to the column player in a standard zero-sum matrix game.

$$G = \begin{bmatrix} -1 & 4 & 2 \\ 7 & -1 & 1 \end{bmatrix}$$

- (a) Set up a linear program to find the optimal mixed strategy for the column player.
- (b) Solve the LP in part (a). (Do at most four pivots.)
- (c) Find the optimal mixed strategy for the row player.