

- [10]    **3.**    For every real  $\alpha$  find the value and equilibria strategies for the matrix game:

$$\begin{bmatrix} 1 & 2 \\ 3 & \alpha \end{bmatrix}.$$

Graph the value of the game as a function of  $\alpha$ . Find the duality gap for the announce (pure strategy) game as a function of  $\alpha$ .