1. Derive the recipe for $x^*$ in finding an equilibrium point for any 2x2 non-cooperator Two-person Non-zero Sum Game. (If you have forgotten what it was all about, see Appendix 2B in course notes).

2. Consider the following Non-cooperative Two-person Non-zero Sum Game.

\[
\begin{pmatrix}
(1, 1) & (0, 0) \\
(2, -1) & (-1, 2)
\end{pmatrix}
\]

(a) Find a security level mixed strategy for each player.
(b) Check whether the security level strategies found in (a) give an equilibrium pair.
(c) Find all equilibrium pairs by the graphical method.
(d) For each equilibrium pair and the security level pair, give the expected payoff to each player.