Homework 2: Due Monday October 26.

Q1:
Solve the following 2-person zero-sum games:

\[
\begin{bmatrix}
6 & 2 & 4 \\
5 & 2 & 5 \\
4 & 1 & -3
\end{bmatrix}
\quad \begin{bmatrix}
2 & 1 & 1 & 0 & -1 \\
4 & 3 & 2 & 1 & -1 \\
1 & 1 & 0 & -1 & 1 \\
2 & 1 & 1 & -2 & -2 \\
4 & 1 & 0 & -2 & -3
\end{bmatrix}
\]

Q2:
Players A and B choose integers \(i\) and \(j\) respectively from the set \(\{1, 2, \ldots, n\}\) for some \(n \geq 2\). Player A wins if \(|i - j| = 1\). Otherwise there is no payoff. Solve the game.

Q3:
Player B chooses a number \(j \in \{1, 2, \ldots, n\}\) and A tries to guess what it is. If A guesses correctly then A wins 1. If A guesses too high then A loses 1. If A guesses too low there is no payoff. Solve the game.