University of Toronto MATB61 – Linear Programming and Optimization

Quiz 6

First Name:
Last Name:
Student Number:

1) Reduce the following matrix by dominance:

$$\begin{bmatrix} 26 & 18 & 19 & 12 & 13 & 15 \\ 15 & 21 & 14 & 10 & 21 & 15 \\ 21 & 21 & 22 & 17 & 11 & 10 \\ 16 & 24 & 23 & 21 & 15 & 21 \\ 21 & 28 & 25 & 22 & 25 & 26 \\ 30 & 24 & 29 & 24 & 23 & 28 \end{bmatrix}$$

- 2) Column player has three cards $\{1,2,3\}$ and select 1 card. The row player has one chance to guess the card number correctly. If row player's guess is right, he wins the number of his guess; otherwise he loses half of the sum of column player's choice and his guess.
 - (a) Set up the payoff matrix.
 - (b) Find the LP problem (in "standard from") of row player's optimal strategy.