Strategic Behavior
Fall, 2022
Solution to Problem Set 1.

Problem 1.2 in textbook:

For player 1 (the row player), T dominates B.

After eliminating B, in the reduced 2×3 matrix, we see that for player 2 (column player) R dominates C.

After eliminating C, we are left with a 2×2 game in which no strategy is dominated. So, strategies T and M for player 1 and L and R for player 2 survive iterated elimination of dominated strategies.

Nash equilibria: $(M, L), (T, R)$.

Other problems:

1. Strategy A for player 1 strictly dominates strategy C. In the reduced game obtained after eliminating C, strategy R for player 2 strictly dominates strategy L. In the reduced game obtained after eliminating L, strategy A for player 1 strictly dominates strategy B. In the reduced game obtained after eliminating B, strategy R for player 2 strictly dominates strategy M. In the reduced game obtained after eliminating M, strategy D for player 1 strictly dominates strategy A. The unique pair of strategies that survive iterated elimination of strictly dominated strategies is (D,R). This is also the unique Nash equilibrium of the game.

2. No strategy is strictly dominated.

Nash equilibria: (T,L), (B,R).