Mixed Strategy Nash Equilibria in Repeated, Two-player, Symmetric Games
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Suppose the strategy set \( S = \{ A, B \} \) is available to both players. If player 1 plays \( A \) with probability \( p \) and \( B \) with probability \( (1 - p) \) and player 2 plays \( A \) with probability \( q \) and \( B \) with probability \( (1 - q) \), then \((p, q)\) is a mixed strategy Nash equilibrium MSNE if the following hold:

1. If \( 0 < p < 1 \) then,
   \[ \pi_1(A, q) = \pi_1(B, q) \]

2. If \( 0 < q < 1 \) then,
   \[ \pi_2(A, p) = \pi_2(B, p) \]

3. If \( p = 0 \) then,
   \[ \pi_1(B, q) > \pi_1(A, q) \]

4. If \( p = 1 \) then,
   \[ \pi_1(A, q) > \pi_1(B, q) \]

5. If \( q = 0 \) then,
   \[ \pi_2(B, p) > \pi_2(A, p) \]

6. If \( q = 1 \) then,
   \[ \pi_2(A, p) > \pi_2(B, p) \]