

HW2- Additional Problems

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AP(i) Let $Y = \emptyset$. Find

- (a) $\mathcal{P}(Y)$
- (b) $\mathcal{P}(\mathcal{P}(Y))$
- (c) .. and if you like ... continue for a bit ... (not counted for completeness:)

AP(ii) [**Rock-Paper-Scissors**] We consider the two-person game, where each player has three strategies, namely rock, paper and scissors. Those are 'played' by symbols of the players' hands, namely as follows:

- Rock: closed fist.
- Paper: flat hand.
- Scissors: second and third fingers are held out while the others are folded in a partial fist.

Upon both players saying simultaneously Rock-Paper-Scissors both players choose (simultaneously) one of the three strategies. The winner is determined as follows: Scissors (winner) cut paper (looser), paper (winner) wraps rock (looser), rock (winner) smashes and bends scissors (looser). If both player show the same, the the play ends in a draw.

- (a) Find the strategic form of this game in form of a table.
- (b) Find the best replies $R_I(R)$ and $R_I(S)$.
- (c) Find all Nash Equilibria.